

**Agua Fria National Monument
and
Bradshaw-Harquahala
Proposed Resource
Management Plans
and
Final Environmental
Impact Statement - May 2007**

BLM

Phoenix District



**Agua Fria National Monument and Bradshaw-Harquahala
Proposed Resource Management Plans and Final Environmental Impact Statement**

Errata Sheet

Dear Reader: At the time of publication, we discovered some errors in the document. We wish to make you aware of these errors, which are described below in this errata sheet. Please note that the corrected versions of the following maps are consistent with the text in the associated document sections.

Please note that the document contains the following errors. Corrected versions of the maps are available online at www.blm.gov/az/st/en.html or www.blm.gov/eplanning/az_pn/.

- Map 2-83, Black Canyon Management Unit Multiple Resource Allocations, Alternative E; Map 2-84, Castle Hot Springs Management Unit Multiple Resource Allocations, Alternative E; and Map 2-86, Harquahala Management Unit Multiple Resource Allocations, Alternative E.

These maps depict route designations within areas proposed to be managed for wilderness characteristics and as Areas of Critical Environmental Concern. In the corrected versions, references to route designations have been deleted from these maps. The Proposed RMP does not contain specific, proposed route designations in the Bradshaw-Harquahala Planning Area. Proposed route designations will be developed in a future phase of plan implementation. The public will have the opportunity to contribute to the identification of issues and the development of route designation alternatives and travel management plans for these areas.

- Map 2-90, Morgan City Wash Road, Alternative E. The Proposed RMP does not include an area to be managed for wilderness characteristics immediately west of Lake Pleasant. This designation has been deleted in the corrected version of this map.
- Chapter 5, Section 5.3.3 includes a statement that “a copy of all comments received by the Phoenix District is available on a CD included with this document.” The public comment letters are not included on a CD. They are being posted online at www.blm.gov/az/st/en.html and are available for review at the BLM Phoenix District Office.
- The following parcels are shown on Map 2-79 but are not listed in Appendix R, Lands Available for Disposal. Add the following parcels to Appendix R: Township 2 North, Range 3 West, Section 14, E ½, 320.00 acres; and Township 2 North, Range 3 West, Section 26, N ½, 320.00 acres.

ABSTRACT

The Agua Fria National Monument and Bradshaw-Harquahala Proposed Resource Management Plans and Final Environmental Impact Statement (PRMPs/FEIS) describes and analyses five alternatives for managing approximately 967,000 acres of Public Land in Central Arizona, north and west of Phoenix, AZ. Information provided by the public, other agencies and organizations, and BLM personnel has been used to develop and analyze the Alternatives in this PRMPs/FEIS. *Alternative A* is the No Action alternative and represents continuation of current management. *Alternative B* emphasizes recreation and resource development. *Alternative C* makes land available for recreation and resource development with greater opportunities to experience natural settings than in *Alternative B*. *Alternative D* emphasizes preservation of undeveloped primitive landscapes and opportunities for non-motorized recreation. *Alternative E*, the agency Proposed Alternative, provides for a balance between authorized resource use and the protection and long-term sustainability of sensitive resources.

Major issues addressed in the PRMPs/FEIS include identification of lands that would be made available for disposal, management of recreation and public access, designation and management of Special Designations, management of areas having wilderness characteristics, and management of visual resources.

**Agua Fria National Monument
and
Bradshaw-Harquahala Planning Area
Proposed Resource Management Plans
and
Final Environmental Impact Statement**

Prepared by

**U.S. Department of the Interior
Bureau of Land Management
Phoenix District Office
Arizona**

June 2008

Elaine Y. Zielinski

**Elaine Y. Zielinski
State Director, Arizona**



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Hassayampa Field Office
21605 N. 7th Avenue
Phoenix, Arizona 85027



In reply refer to: 1610-5.G.1.4

May, 2008

Dear Reader:

Enclosed for your review are the Proposed Resource Management Plans (PRMPs) and Final Environmental Impact Statement (FEIS) for the Agua Fria National Monument and Bradshaw-Harquahala Planning Area. The PRMPs/FEIS were prepared by the Bureau of Land Management (BLM) in consultation with cooperating agencies, taking into account public comments received during this planning effort. They provide a framework for the future management direction and appropriate use of these planning areas, located in Maricopa County and Yavapai County, Arizona. The document contains both land use planning decisions and implementation decisions to define the BLM's management of the Agua Fria National Monument and the Bradshaw-Harquahala Planning Area.

These PRMPs and FEIS have been developed in accordance with the National Environmental Policy Act of 1969 (NEPA), and the Federal Land Policy and Management Act of 1976. The PRMPs are largely based on Alternative E, the preferred alternative in the Draft Resource Management Plans/Environmental Impact Statement (DRMPs/DEIS), which was released on January 6, 2006. The PRMPs/FEIS contains the Proposed Plans, a summary of changes made between the DRMPs/DEIS and PRMPs/FEIS, a summary of the written and verbal comments received during the public review period for the Draft RMPs/DEIS, and responses to the comments.

Pursuant to BLM's Planning regulations at 43 CFR **1610.5-2**, any person who participated in the planning process for these PRMPs, and has an interest which is or may be adversely affected, may protest approval of this PRMP and the land use planning decisions therein within 30 days from the date the Environmental Protection Agency publishes the Notice of Availability of the FEIS in the *Federal Register*. Please see the accompanying protest regulations in the pages that follow. E-mailed and faxed protests will not be accepted as valid protests unless the protesting party also provides the original letter by either regular or overnight mail postmarked by the close of the protest period. Under these conditions, the BLM will consider the e-mailed or faxed protest as an advance copy and will afford it full consideration. If you wish to provide the BLM with such advance notification, please direct faxed protests to the attention of Brenda Hudgens-Williams, BLM protest coordinator, at 202-452-5112, and e-mailed protests to: Brenda_Hudgens-Williams@blm.gov.

All protests, including the follow-up letter (if e-mailing or faxing) must be in writing and mailed to the following address:

Regular Mail:

Director (210)
Attention: Brenda Hudgens-Williams
P.O. Box 66538
Washington, D.C. 20035

Overnight Mail:

Director (210)
Attention: Brenda Hudgens-Williams
1620 L Street, N.W., Suite 1075
Washington, D.C. 20036

The regulations comprise critical elements of your protest. Take care to document all relevant facts. As much as possible, reference or cite the planning documents or available planning records (e.g. meeting minutes or summaries, correspondence, etc.) To aid in ensuring the completeness of your protest, a protest check list is attached following this letter. This is also available online at <http://www.blm.gov/>.

The BLM Director will make every attempt to promptly render a decision on each protest. The decision will be in writing and will be sent to the protesting party by certified mail, return receipt requested. The decision of the BLM Director shall be the final decision of the Department of the Interior.

Before including your address, phone number, e-mail address, or other personal identifying information in your protest, be advised that your entire protest – including your personal identifying information – may be made publicly available at any time. While you can ask us in your protest to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Unlike land use planning decisions, implementation decisions are not subject to protest under the BLM planning regulations but are subject to administrative remedies and review, primarily through appeals to the Office of Hearings and Appeals (OHA), Interior Board of Land Appeals pursuant to 43 CFR, Part 4 Subpart E. Implementation decisions generally constitute the BLM's final approval allowing on-the-ground actions to proceed. Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by specific resource program regulations after the BLM resolves the protests to land use planning decisions and makes a decision to adopt or amend a Resource Management Plan (RMP).

These administrative remedies for final implementation decisions usually take the form of appeals to OHA, though for certain proposed or non-final implementation decisions, such as proposed grazing decisions, the regulations provide for an internal agency review (usually a protest to the Authorized Officer) which must be completed before the final implementation decision can be appealed to the OHA. This type of protest to the Authorized Officer should not be confused with the protest of land use planning decisions to the BLM Director.

Upon resolution of all land use plan protests, the BLM will issue two Approved RMPs and two Records of Decision (RODs). The Approved RMPs and RODs will be mailed or made available electronically to all who participated in the planning process and will be available to all parties through the "Planning" page of the BLM national website (<http://www.blm.gov/planning>), or by mail upon request. The Approved RMPs and RODs will include the appeals process for implementing decisions that may be appealed to the Office of Hearing and Appeals following its publication.

Sincerely,

Steven Cohn
Field Manager, Hassayampa Field Office

[Code of Federal Regulations]
[Title 43, Volume 2]
[Revised as of October 1, 2002]
From the U.S. Government Printing Office via GPO Access
[CITE: 43CFR1610.5-2]

[Page 20]

TITLE 43--PUBLIC LANDS: INTERIOR

CHAPTER II--BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR

PART 1600--PLANNING, PROGRAMMING, BUDGETING--Table of Contents

Subpart 1610--Resource Management Planning

Sec. 1610.5-2 Protest procedures.

(a) Any person who participated in the planning process and has an interest which is or may be adversely affected by the approval or amendment of a resource management plan may protest such approval or amendment. A protest may raise only those issues which were submitted for the record during the planning process.

(1) The protest shall be in writing and shall be filed with the Director. The protest shall be filed within 30 days of the date the Environmental Protection Agency published the notice of receipt of the final environmental impact statement containing the plan or amendment in the Federal Register. For an amendment not requiring the preparation of an environmental impact statement, the protest shall be filed within 30 days of the publication of the notice of its effective date.

(2) The protest shall contain:

- (i) The name, mailing address, telephone number and interest of the person filing the protest;
- (ii) A statement of the issue or issues being protested;
- (iii) A statement of the part or parts of the plan or amendment being protested;
- (iv) A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record; and
- (v) A concise statement explaining why the State Director's decision is believed to be wrong.

(3) The Director shall promptly render a decision on the protest. The decision shall be in writing and shall set forth the reasons for the decision. The decision shall be sent to the protesting party by certified mail, return receipt requested.

(b) The decision of the Director shall be the final decision of the Department of the Interior.

Resource Management Plan Protest Critical Item Checklist

**The following items *must* be included to constitute a valid protest
whether using this optional format, or a narrative letter.**

(43 CFR 1610.5-2)

BLM's practice is to make comments, including names and home addresses of respondents, available for public review. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment--including your personal identifying information--may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so. All submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations and businesses, will be available for public inspection in their entirety.

Resource Management Plan (RMP) or Amendment (RMPA) being protested:

Name:

Address:

Phone Number: ()

Your interest in filing this protest (how will you be adversely affected by the approval or amendment of this plan?):

Issue or issues being protested:

Statement of the part or parts of the plan being protested:

Chapter:

Section:

Page:

(or) Map:

Attach copies of all documents addressing the issue(s) that were submitted during the planning process by the protesting party, OR an indication of the date the issue(s) were discussed for the record.

Date(s):

A concise statement explaining why the State Director's decisions is believed to be wrong:

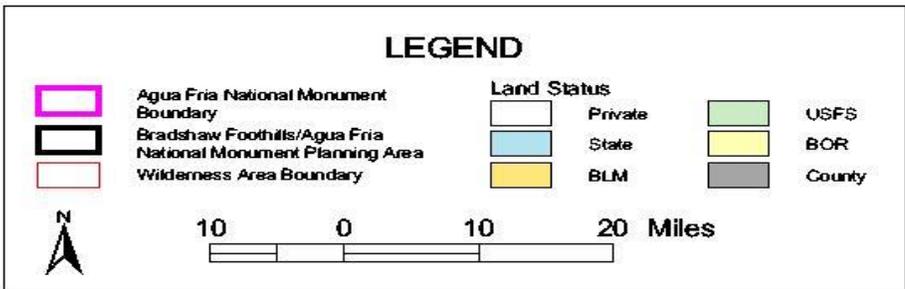
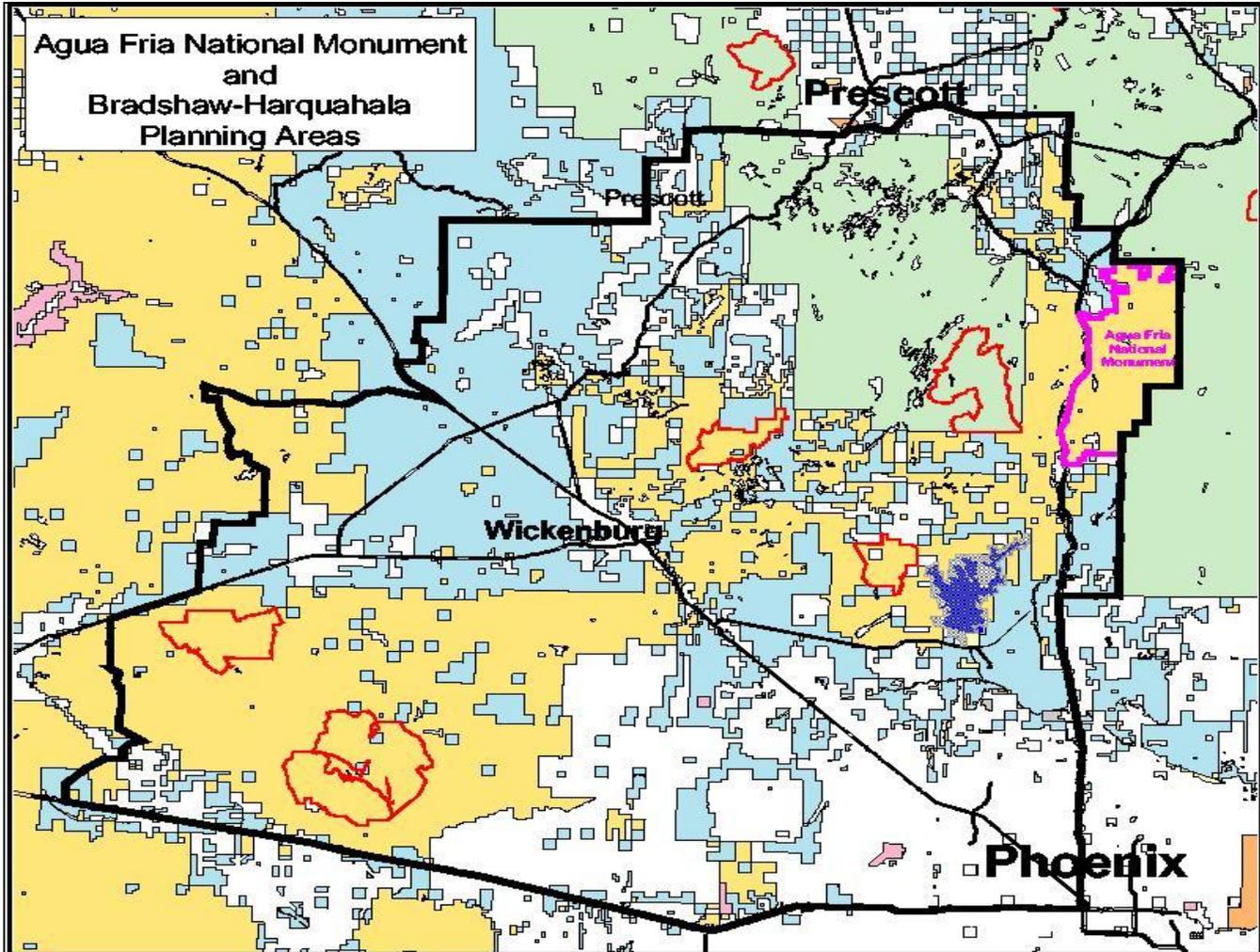
EXECUTIVE SUMMARY

Introduction

The Agua Fria National Monument and Bradshaw-Harquahala Resource Management Plans and Environmental Impact Statement (PRMP/FEIS) have been prepared to provide guidance on current and future management decisions for the Hassayampa Field Office, a unit within the Phoenix District of the Bureau of Land Management (BLM). These plans represent the culmination of many months of concerted planning efforts on the part of Phoenix District staff, Arizona State Office staff, representatives of communities located within the planning areas, cooperating and collaborating government agencies, special interest and user groups, and many hundreds of concerned citizens. The proposed Resource Management Plans will enable the BLM to manage both the Agua Fria National Monument (AFNM) areas surrounding Phoenix metropolitan area through a comprehensive plan that will guide BLM management actions for years to come.

Combined, the Agua Fria National Monument and Bradshaw-Harquahala Planning Areas encompass more than 3,000,000 acres in a complex mosaic of land ownerships and jurisdictions. BLM manages the resources on approximately 967,000 surface acres within these planning boundaries, including the entire 70,900 acres of the Agua Fria National Monument, and retains subsurface (mineral) rights to an additional 725,100 acres. The Agua Fria National Monument and Bradshaw-Harquahala RMPs/EIS are vital to creating a framework for future planning and decision-making efforts within the context of such complex ownership. These lands are unique. Located within these planning boundaries are archaeological sites and artifacts found nowhere else on earth, providing researchers with critical insights into the lifestyles of the peoples who first settled this region of the southwest. The lands are home to pronghorn antelope, mule deer, white-tailed deer, bighorn sheep, mountain lion, black bear, javelina, countless native songbirds, migratory waterfowl, and endangered and special-status species such as bald eagle, southwestern willow flycatcher, Sonoran desert tortoise, and native fish species such as Gila chub and desert pupfish. Vegetation throughout the area ranges from creosotebush in the desert flats to ponderosa pine at higher elevations. The varied panorama of mountains, mesas, grasslands, and high and low desert vistas provides many thousands of residents and visitors each year with unparalleled recreational opportunities, and many thousands more rely on these lands for their livelihood through mining, grazing, and tourism. As the population of the Phoenix metropolitan area continues to grow, the BLM-administered lands located within the Agua Fria National Monument and Bradshaw-Harquahala Planning Areas will undoubtedly receive increasing pressure. After considerable deliberation on the part of the BLM, its partners, and local communities, we believe a broad consensus to wisely guide management of these very valuable resources.

This Proposed Plan/FEIS was prepared under the authorities of the Federal Land Policy and Management Act of 1976, in accordance with BLM planning regulations, 43 code of Federal Regulations (CFR) 1610.2(f)(3) and National Environment Policy Act (NEPA) regulations, 40 CFR 1502.9(a).



Purpose and Need

The purpose of preparing the Agua Fria National Monument and Bradshaw-Harquahala RMPs is to provide plans that will guide future land management actions within the planning areas. These documents must provide not only adequate guidance for management actions but also show that actions taken were supported by the appropriate National Environmental Policy Act (NEPA) and Federal Land Policy and Management Act (FLPMA) processes.

The need for the preparation of the RMPs has been established by three principal factors: the Presidential Proclamation creating the monument as a discrete management unit, the degree of urban expansion and population growth in the planning areas and vicinity, and the time that has elapsed (approximately 15 years) since the last major planning efforts that encompassed the Agua Fria National Monument and Bradshaw-Harquahala Planning Area.

Planning Issues and Management Concerns Identified During Scoping

The most important step in developing a RMP is to identify relevant issues and concerns. An issue is defined as an opportunity, conflict, or problem regarding the use or management of public lands. All comments received during the public scoping process were assigned, based on content, to one of 12 designated issue categories. Comments were further divided into various sub-issues within each category. All comments were read, evaluated, and manually entered into an analytic database. Figures 1 and 2 depict the most frequently mentioned issues for each planning area, which reflected a wide range of public concerns.

Agua Fria National Monument

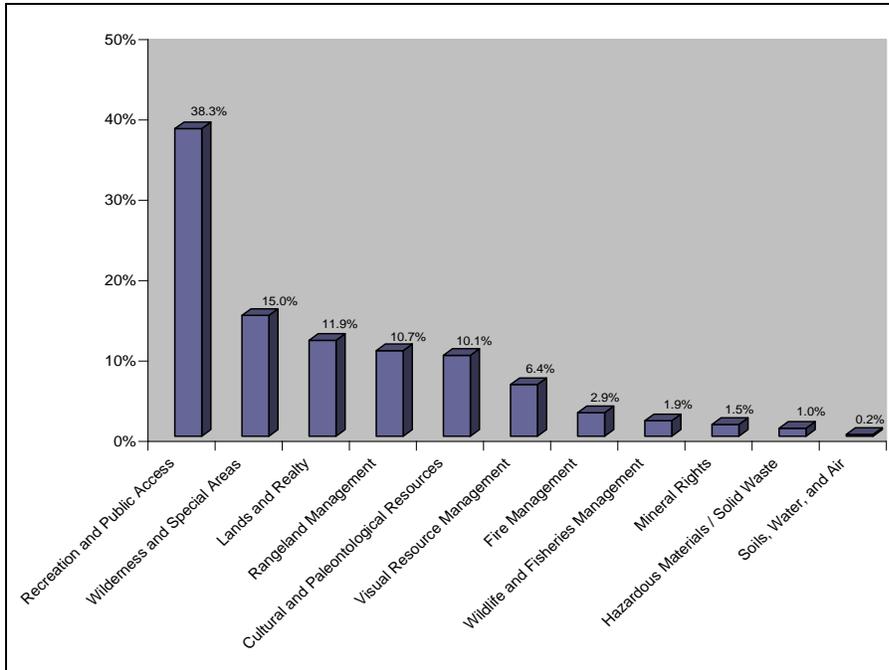


Figure 1. Public Response by Issue – Agua Fria National Monument Planning Area

Recreation and Public Access

Management of, and continued access for recreation use of the monument, while protecting the resources it was created to protect, is a major issue in the plan. The RMP explores options to allow and manage recreation uses.

Special Area Designations

The EIS discusses the possibility of Areas of Critical Environmental Concern (ACEC) and the segments of the Agua Fria River previously recommended suitable for Wild and Scenic River designation.

Wilderness Characteristics

A citizen based wilderness study area proposal was submitted. Much of the monument was not previously inventoried for resource values associated with wilderness characteristics because the lands were not under BLM jurisdiction when the last round of inventories was done. BLM conducted an inventory as directed by Section 201 of FLPMA and found some areas to have wilderness character. The EIS explores alternative ways to manage these areas.

Lands and Realty

Lands within the monument must be retained, but private lands within the boundary could be acquired. In addition, alternative options for management of a utility corridor along the western boundary of the monument are discussed in the EIS.

Rangeland Management

Grazing within sensitive riparian habitat is a concern within the monument. In addition, fences used to manage livestock are a potential barrier to pronghorn movement.

Use of native species in mitigation and restoration, and diligence in preventing infestations of invasive species was an issue among some citizen groups.

Cultural and Paleontological Resources

The Agua Fria National Monument was created to preserve the outstanding cultural resources within its boundaries, both historic and prehistoric. The educational and scientific use of the resources, along with the preservation of the sites is of major interest. Alternatives in the EIS explore varying scenarios for achieving this balance.

Visual Resource Management

Preservation of the natural appearance of the landscape is of concern within the monument. In addition, maintaining the existing natural views in some areas is also of interest.

Fire Management

Most of the monument is within a fire dependent ecosystem. Prescribed fire is currently used to maintain the high desert grasslands. There is an interest in re-establishing natural fire cycles, but the monument is also adjacent to a couple of small communities that could be vulnerable to wildfires.

Wildlife and Fisheries Management

The monument contains habitat for several listed or candidate species, including the Gila Topminnow. In addition, several sensitive wildlife species are on the monument, including a small isolated population of pronghorn that are dependent on the central Arizona grassland ecosystem, including the monument, for their survival.

Minerals

Though the monument is withdrawn from mining laws, two active mining claims continue to exist. These claims are held by prospecting clubs.

Hazardous Materials and Solid Waste

Though there is one abandoned mine within the monument known to have hazardous material problems, it is on a patented mining claim and currently poses minimal hazard to BLM-managed lands or users due to limited public access. The greater issue is with trash dumping on and around the monument. Besides the unsightliness of the dumping, the potential exists for risks to public health and safety from household or other hazardous waste.

Water

The proclamation awarded BLM a Federal reserved water right within the Agua Fria National Monument. Water, and the riparian vegetation it supports, contributes considerably to the values described in the proclamation. The question of how we will quantify and protect the water right is of concern.

Bradshaw-Harquahala Planning Area

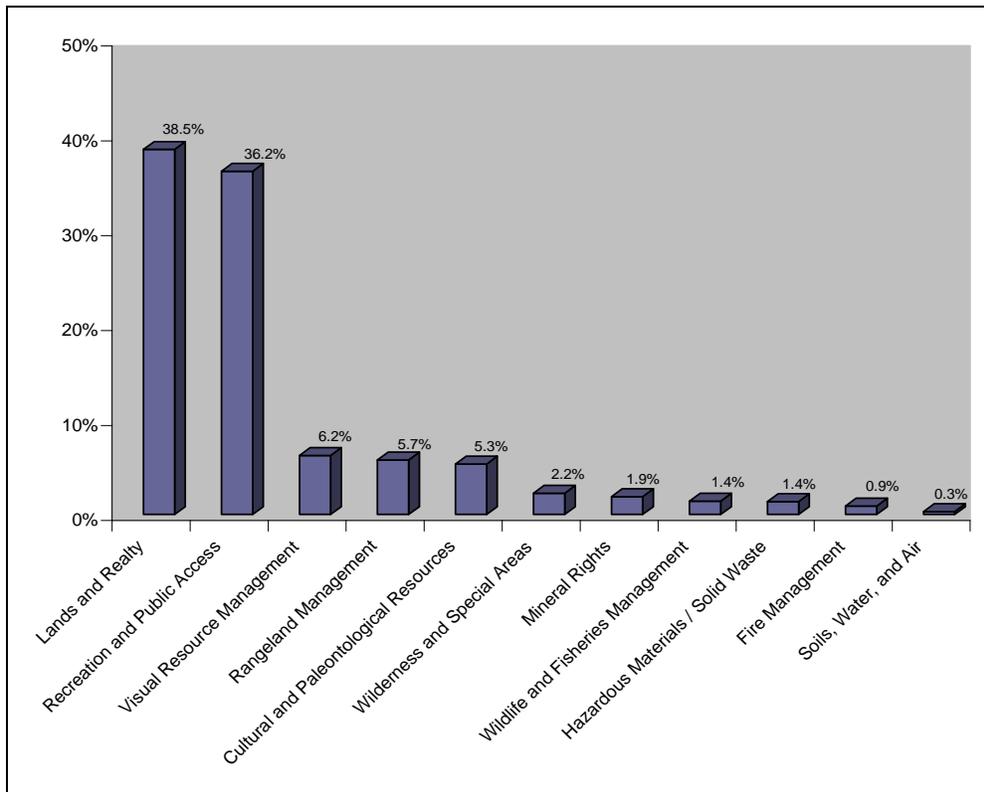


Figure 2. Public Response by Issue – Bradshaw-Harquahala Planning Area

Lands and Realty

The most common comment received regarding the Lands and Realty category was pertaining to land tenure. In general, the public wants the public lands to remain public. Transfer of land title to private land owners was generally considered undesirable.

Recreation and Public Access

In general, public sentiment expressed was in favor of maintaining public access to public lands, and to manage for diverse recreation experiences. Off Highway Vehicle (OHV) use is increasing, and owners of these vehicles want continued access to BLM administered land and some assurance they will have a place to enjoy their recreation pursuits in the future.

Visual Resources

Rapid urban growth in central Arizona has increased the public's awareness of open space and scenic quality. Citizens have expressed an intense interest in keeping the landscapes on land as natural appearing as possible.

Rangeland Management

Public sentiment generally supports continuation of grazing in this region. Concern was expressed about the health of riparian areas and the spread of invasive species infestations.

Cultural and Paleontological Resources

Comments concerning this issue generally centered on increasing protection for sites and halting site vandalism. The potential for livestock damage to sites was also an item of comment.

Special Designations

Comments were received concerning the protection of sensitive resources and habitats within existing or new special management areas, such as Areas of Critical Environment Concern.

Minerals

Locatable mineral extraction within the planning areas is localized and influenced by fluctuating prices for metals. However, there is intense interest in the recreational pursuit of gold as evidenced in the large participation in clubs such as the Gold Prospectors Association of America and the Roadrunners Gold Prospectors Club.

In addition, the rapid growth in the urban area is increasing demand for sand, gravel, and decorative rock. These saleable materials can often be found on non-Federal lands, but interest in extraction from Federal

lands is increasing. It is estimated that between 60 and 70% of the decorative rock produced in the Phoenix Metro Area come from Public Lands (Donaldson 2006).

There is widespread abuse and/or misunderstanding of the 1872 Mining Laws, as it is concerned with mining claims and occupancy. Occupancy is governed by the 43 CFR 3715 regulations and approval for occupancy must be obtained from BLM prior to occupying the public lands.

Wildlife and Fisheries Management

The preservation of land for both game and non-game wildlife is increasing. As the urban area expands, habitat is lost for many wildlife species. Development is also fragmenting habitat, reducing the viability of what remains. Many species in the Sonoran Desert require large land areas. Long term preservation of species, especially Sensitive, Threatened, and Endangered species, will require preservation of large areas of unfragmented habitat and focused management of sensitive and uncommon habitats such as riparian.

Hazardous Materials and Solid Waste

Illegal dumping of household waste is an increasing problem within both planning areas. Besides being unsightly, there is a potential for hazardous materials to be dumped as well. In addition, there are many abandoned mines within the Bradshaw-Harquahala Planning Area that pose the potential for containing hazardous materials.

Fire Management

Allowing natural fire cycles to reestablish on appropriate lands is a public concern. At the same time, the wildland-urban interface (WUI) is expanding as population increases in central Arizona bring residences closer to areas vulnerable to wildfires. Identifying and conducting the appropriate fire management for specific locations are concerns.

Water and Air

Protecting surface water from declining quality and quantity is an issue. Also, since a large part of central Arizona is within a PM₁₀ nonattainment area, managing BLM-managed lands to maintain air quality standards is also of concern.

Wild Burros

Management of a wild burro herd in the Harquahala and Bighorn Mountains area was of concern to the Arizona Game and Fish Department (AGFD).

Alternatives

NEPA regulations and BLM planning regulations require the formulation of a reasonable range of Alternatives that seek to address the identified issues and management concerns. The BLM developed five Alternatives, including the “No Action” and “Preferred” Alternatives. The Preferred Alternative, modified in response to public comment, is now the Proposed Plan. Each of the five Alternatives varies in both context and intensity of management actions and comprises a set of Desired Resource of Future Conditions, special designations, land use allocations, and the management actions needed to implement the alternative. Alternatives must meet the purpose and need for the EIS and the purpose and significant statement for the monument; must be reasonable; must provide a mix of resource protection, use, and development; must be responsive to the issues; and must meet the established planning criteria. Each Alternative is a complete land use plan that provides a framework for multiple use management of the full spectrum of resources, resource uses, and programs present in the planning area. Under all Alternatives the BLM will manage the public lands in accordance with all applicable laws, regulations, and BLM policy and guidance.

Alternative A (No Action) is the current management situation for both the monument and the Bradshaw-Harquahala Planning Area. *Alternative A* serves as a baseline for comparison with the other Alternatives.

Alternative B entails increased public use and more recreation-related development, consistent with protection of monument resources. It also allows visitation and development within the Bradshaw-Harquahala Planning Area while ensuring resource protection is not compromised.

Alternative C provides visitors with opportunities to experience the natural landscapes and cultural resource setting of the monument with more restrictive decisions than *Alternative B*. In the Bradshaw-Harquahala Planning Area, there is greater emphasis under *Alternative C* on identifying and protecting undeveloped landscapes than in *Alternative B*.

Alternative D emphasizes the preservation of undeveloped, primitive landscapes on the monument, resulting in limited public use and the withdrawal of authorized grazing. The Bradshaw-Harquahala Planning Area emphasizes natural landscapes and non-motorized recreation, with more management dedicated to maintaining primitive recreation opportunities than under the other Alternatives.

Alternative E (Proposed Plan) combines elements selected from the other Alternatives that have subsequently been studied and further refined. This Alternative is designed to respond in the most comprehensive manner possible to each of the issues and management concerns identified throughout the planning process. BLM has determined that the management actions presented in *Alternative E* will provide the optimal balance between authorized resource use and the protection and long-term sustainability of sensitive resources within each of the planning areas.

Table E-1 Comparison of Key Alternative Components

	Alternative A Acres	Alternative B Acres	Alternative C Acres	Alternative D Acres	Alternative E Acres
Land Tenure	15,274 acres for Sale, 39,100 acres for Exchange, 54,370 acres total.	58,400 acres for Sale or Exchange	49,100 acres for Sale or Exchange	None	29,870 acres for Sale, 9,525 for Exchange, 39,395 acres total
Areas of Critical Environmental Concern (ACEC)	Two for 9,660 acres	One for 640 acres	Ten areas for 56,520 acres	Nine areas for 205,870 acres	Four areas for 89,970 acres
Congressionally Designated Wilderness	Five Areas for 96,820 acres				
Lands allocated to maintain wilderness characteristics	None	One area for 56,040 acres	Eight areas for 107,843 acres	Eighteen areas for 140,235 acres	Nine areas for 88,179 acres
Special Recreation Management Areas and Recreation Management Zones (SRMA and RMZ)	None	Nine areas for 149,760 acres	Nine areas for 182,800 acres	Seven areas for 56,240 acres	Fifteen areas for 678,835 acres
Mineral Withdrawal or Closure	Closed to: Location – 171,680 acres Lease – 171,680 acres Sale – 172,510 acres	Closed to: Location – 171,680 acres Lease – 171,680 acres Sale – 268,260 acres	Closed to: Location – 188,450 acres Lease – 188,190 acres Sale – 325,970 acres	Closed to: Location – 457,664 acres Lease – 464,734 acres Sale – 480,864 acres	Closed to: Location – 171,940 acres Lease – 171,680 acres Sale – 172,780 acres

Public Involvement

The Bureau of Land Management (BLM) decision-making process is conducted in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, U.S. Council on Environmental Quality (CEQ) regulations, and Department of the Interior (DOI) and BLM policies and procedures implementing NEPA. NEPA and the associated regulatory and policy framework requires that all Federal agencies involve interested groups of the public in their decision-making, consider reasonable alternatives to proposed actions, and prepare environmental documents that disclose the potential impacts of proposed actions and alternatives.

The Phoenix District holds as a priority, collaborative management that engages local communities, organizations, and citizens. Public involvement, consultation, and coordination have been at the heart of the planning process leading to these Proposed Resource Management Plans (RMPs) and Draft Environmental Impact Statement (EIS). This was accomplished through public meetings, informal meetings, individual contacts, news releases, planning bulletins, a planning Web site, and *Federal Register* notices.

Very early in the planning process, the BLM contracted with James Kent Associates (JKA) to work with residents and community groups in the planning areas regarding their issues and concerns. JKA's staff and BLM employees visited the communities of Wickenburg, Yarnell, Buckeye, Tonopah, Castle Hot Springs, New River, Black Canyon City, Cordes Junction, Mayer, Dewey, Humboldt, and Prescott Valley. They visited Phoenix, Flagstaff, and Prescott, talking with environmental and recreation groups. Citizens discussed their concerns with land use management and suggested ideas for improving current management practices. Residents in some areas even conducted their own community surveys in order to provide input and guidance to BLM in the planning process.

Ten scoping meetings were held in central Arizona communities. The meetings were structured to have an open house period, followed by a meeting/presentation where speakers could voice their concerns. BLM resource specialists were available to provide information and respond to questions. During the scoping meetings, 564 people registered their attendance with 169 offering to speak. Comments from the public were collected during the scoping meetings and throughout the scoping period through a variety of methods including mail, fax, and email.

BLM continued collaboration efforts by including communities in the formulation of Alternatives. Workshops were held throughout the planning area to give citizens the opportunity to refine issues, discuss visions for the public lands, and begin exploring alternative ways to manage the lands and resources. Citizens also submitted formulated Alternatives, as well as vision statements, for specific community areas or resources. These were also considered in the range of Alternatives and analyzed in the EIS.

When the Preliminary Draft Alternatives had been developed, BLM distributed Alternatives to the public and held four additional public meetings. The public responded with nearly 2,000 comments concerning the measures developed in those alternatives. Public comments were taken into consideration as the planning team prepared the Alternatives later published in Draft RMPs/EIS.

After publication of the Draft RMP/EIS on January 6, 2006, the public and cooperating agencies had a total of 90 days to comment on the Preliminary Draft. The document was distributed throughout the planning area and was also available through e-planning (an interactive online database). Prior to the formal public comment meetings, BLM held a total of six e-Planning workshops throughout the planning

area to help the general public get acquainted with this new medium of reading and commenting on the Draft RMPs/EIS.

BLM held a total of eight formal public meetings throughout the planning area during the 90 day comment period. The primary objective of these meetings was to receive comments from the public. Similar to the scoping meetings, BLM specialists were available to provide information and responses to questions. Meeting attendees had the option of either verbally speaking to the BLM staff at the meeting, or they could write and hand in comment sheets at the meeting. The meetings had as few as six attendees in Buckeye to over 85 attendees in the Dewey-Humboldt community.

The 90 day public comment period ended on April 6, 2006. A total of 431 individual comment letters and 1,046 form letters (consisting of six separate form letters) were received by the Phoenix District. In order to properly analyze all of the comments received, the BLM followed the USDA Forest Service Content Analysis Team (CAT) process for comment analysis. After all of the comment letters were parsed, separated, and grouped according to the concern and rationale, they were responded to by the resource specialist at the Phoenix District. For a more detailed analysis of this process, please refer to Section 5.3.3 Comment Analysis Process.

Affected Environment

This section provides an overview of existing conditions in the affected environment of the Agua Fria National Monument and Bradshaw-Harquahala planning areas.

Special Designations

Within the entire planning area there are five designated wilderness areas totaling 96,820 acres, one Back Country Byway, two Areas of Critical Environmental Concern (totaling 9,060 acres), and three segments of the Agua Fria River determined to be suitable for Wild (12.1 miles) or Scenic (10.3 miles) designation under the Wild and Scenic Rivers Act.

Lands and Realty

Eight utility corridors criss-cross the planning area, providing available locations for current and future energy delivery to the urbanizing Phoenix Metropolitan area. Meetings with the public and energy utilities indicated the existing corridor system was sufficient to meet future demands.

Though central Arizona is one of the fastest growing population centers in the United States, adequate lands to support community growth exist in both Arizona State Trust and private ownership.

Soil Resources

Soils in the planning areas tend to be shallow and of various textures. Many of the soil types are vulnerable to disturbance from such activities as driving off-highway vehicles away from existing roads. Surface disturbances are slow to recover in the desert environments, leaving exposed soil vulnerable to accelerated wind and water erosion.

Air Quality

EPA has designated three nonattainment areas in central Arizona, one for particulate matter up to 10 microns (PM_{10}), one for ozone, and one for carbon-monoxide (CO). The primary sources of particulates in urban areas are construction and dust from vehicle travel. On public lands, tailpipe emissions from various types of motorized vehicles contribute to overall levels of particulates and carbon monoxide. Though any surface disturbance can increase production of dust from BLM-administered lands, motorized vehicles on unpaved roads are the primary source. The nonattainment areas generally encompass the urbanized zone with only a few thousand acres of public land within them. Maricopa County has developed standards for implementing the Arizona State Implementation Plan (SIP) for achieving attainment and BLM must comply with county standards on lands within the nonattainment areas.

Water Resources

The planning areas lie within the drainages of two major river systems, the Hassayampa River in the west and the Agua Fria River in the east. In the Sonoran Desert, surface water— especially reliable perennial surface water— is a rare and particularly valuable resource. Most of the historical locations of reliable surface water have been lost to urbanization and the remaining locations serve as the most important wildlife habitats in the region. Groundwater pumping in the region may be affecting surface water availability by lowering water tables that support spring production and aquifers that occasionally emerge in river bottoms. Surface water quality, where it remains, has been determined by the Arizona Department of Environmental Quality (ADEQ) in most cases to be “limited”, containing pollutants above Environmental Protection Agency (EPA) standards. The most common pollutants contributing to these “limited” streams are fecal coliforms, arsenic, and turbidity.

Biological Resources

The planning areas contain primarily Sonoran Desert, Desert Grassland, and Interior Chaparral vegetation communities and animals associated with them. Of all habitats within the planning areas, the 140 miles of riparian corridors are most important, supporting a variety of rare plants, vertebrates, invertebrates, and native fishes; including listed and candidate threatened and endangered species. The list of known species includes the bald eagle (*Haliaeetus leucocephalus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), southwestern willow flycatcher (*Empidonax traillii extimus*), desert pupfish (*Cyprinodon macularius*), Gila topminnow (*Poeciliopsis occidentalis*), and Gila chub (*Gila intermedia*).

Upland areas contain some of the finest examples of Sonoran Desert vegetation communities, including paloverde-saguaro cactus, easily accessible to residents of central Arizona. The most sensitive wildlife species dependent on these uplands is desert tortoise. The planning areas contain 93,616 acres of desert tortoise habitat classified as Category I; 419,529 acres classified as Category II; and 136,671 acres classified as Category III.

Cultural and Paleontological Resources

The Agua Fria National Monument was created primarily to preserve the outstanding cultural resources within its boundary. Over 400 sites, including prehistoric pueblo ruins and spectacular rock art, are known within the monument. Thousands of undiscovered sites may also be there. Outside the monument, there is an abundance of both prehistoric and historic cultural resources including archaic hunter-gatherer sites up to 6,000 years old, and mining and ranching sites from the late 1800's. Sites both on and off the monument are recognized on the National Register of Historic Places (NRHR), including the Perry Mesa Archaeological District and the Harquahala Peak Smithsonian Observatory. The planning area contains no known significant sites for vertebrate or invertebrate fossils.

Recreation

The planning areas are on the northern and western fringes of the rapidly urbanizing Phoenix metropolitan area. Population growth from 1990 to 2000 exceeded 40 percent in the region. As the population grows, recreation demand grows as well. Studies indicate the rate of growth in recreation demand exceeds the rate of population growth. As the planning effort began, demand for motorized

recreation in the forms of four-wheel-drive vehicles (like jeeps and Humvees), ATVs, and motorcycles had been increasing rapidly. These recreation uses are expected to continue to increase disproportionate to population growth. As urban development gets closer and closer to public lands, unmanaged indiscriminate recreation use, such as unsafe practices of target shooting, creates conflict with natural resources and traditional public land users.

Visual Resources

Visual Resource Management (VRM) provides a basic tool for BLM to manage a major component of open space. VRM inventory has discovered that, as natural landscapes are converted to rural and urban development, the public sensitivity to visual change on public lands increases. The public desires open and natural appearing landscapes on BLM-managed lands. Poorly designed activities that create large visual intrusions could diminish the quality of life that has attracted new residents to central Arizona.

Rangeland Management

There are 101 grazing allotments in the planning areas, where leases or permits allow the annual grazing of 83,060 animal unit months (AUMs), or approximately 11,690 animals (cattle, horses, and sheep). During seasons with extraordinary production of forage from annual grasses and forbs, additional AUMs are authorized for ephemeral use.

Mineral and Energy Resources

Mineral development of gold, copper, and other metals has been limited within the planning area for the last 15 to 20 years. Some areas of moderate mineral potential exist, but development beyond casual use has not occurred. The primary locatable mineral development has been by individuals or small operations conducting small-scale prospecting activities. No leases for oil or gas drilling have been issued in over 15 years. As population growth and development continues, demand for building material also grows, which has increased the number of requests for sales of mineral materials such as sand, gravel, and decorative rock from public lands.

Energy resources include electric transmission lines and natural gas pipelines. Several major transmission lines and pipelines pass through the planning area to provide energy resources to Phoenix and other urban areas in Arizona and California. A major hub of transmission lines, the Palo Verde Nuclear Generating Station, is located just south of the planning area boundary along Interstate Highway 10 west of Phoenix. As urban areas continue to grow, it is expected that the BLM will receive more applications for new utility lines within utility corridors.

Fire and Fuel Resources

The Sonoran Desert biome presents few opportunities for fire use. The ecosystem is sensitive to fire and suppression of fires is generally considered desirable. Vegetation communities at higher elevations, interior chaparral and desert grasslands, do have some fire use potential and prescribed burning is currently conducted in some of these areas. Population growth and urban expansion is increasing the

extent of Wildland Urban Interface, (WUI) which presents increased challenge in the protection of private property and public safety.

Wild Horses and Burros

The Lake Pleasant burro herd is managed in accordance with provisions in the Lake Pleasant Herd Management Plan. That plan established an appropriate management level (AML) of 208 burros within the Lake Pleasant Herd Management Area. Burros are gathered as needed to maintain the AML or to remove nuisance animals. The Harquahala Herd Area, though large in extent, has few burros as determined by aerial count. These animals spend much of their time on private agricultural lands near BLM-administered lands. Previous management plans have prescribed complete removal of these animals. A manageability analysis of the herd determined the small number and frequent use of private land renders this herd not manageable as a sustained herd over the long term.

Travel Management

Route inventory has been undertaken in both planning areas to identify existing travel routes. Inventory is complete in the national monument and 171 miles of motorized route have been detected and mapped. In the Bradshaw-Harquahala Planning Area, inventory is still underway. Based on the current inventory and other route sources, estimated motorized route mileage for the Bradshaw-Harquahala planning area is 2,240 miles.

Wilderness Characteristics

Inventories of BLM-administered land to determine areas containing wilderness characteristics were conducted by BLM in 1980 and 2002. The Arizona Desert Wilderness Act of 1990 set aside 96,820 acres within the Bradshaw-Harquahala Planning Area in five wilderness areas. For this planning effort, the inventories of 1980 for areas not added to the National Wilderness Preservation System were reexamined to determine their current relevance. In addition, BLM received inventories conducted by private citizens and a proposal for protection of areas containing wilderness characteristics.

Social and Economic Conditions

Social and economic data suggest the region has seen a shift from rural communities relying on public lands for economic products, to urban communities with more diverse economies. In the urban areas, public lands are an increasingly important source of recreation opportunities, as well as a place of traditional uses, such as ranching and mining. Many rural communities within the planning area cling to their rural identities and continue to be dependent on public lands for economic stimulus. Many of these are shifting from mining and ranching towns to service providers for the recreation seeking urban dwellers. On a regional basis, the economic contribution from rural communities is only a small proportion of money generated. However, the economic contribution of public land use may be a large proportion of dollars flowing in many rural communities.

Environmental Justice

The planning area has several communities with minority populations exceeding county averages. In addition, several communities have above average numbers of households below the poverty level.

Summary of Proposed Decisions and Environmental Consequences

Chapter 4 analyzes the consequences of proposed allocations and management actions for the five management Alternatives, on the natural and social environments of the planning areas. Table 2-8 includes a summary comparison of impacts by Alternative. The Proposed RMP for each planning area consists of *Alternative E*, with some changes made in response to public and agency comments. Section 2.1.1 provides a summary of changes from the Draft to the Proposed RMPs/EIS.

Special Designations

In the Agua Fria National Monument, the proposed plan eliminates two existing Areas of Critical Environmental Concern (ACECs) and provides for evaluations of the suitability of eight eligible tributaries of the Agua Fria River for designation under the Wild and Scenic Rivers Act. The current ACECs in the Agua Fria NM would receive equal or higher levels of management and protection under the Monument Proclamation and management plan. In the Bradshaw-Harquahala area, the plan creates four new ACECs to protect important natural and cultural resources: Tule Creek ACEC (640 acres); Vulture Mountain ACEC (6,120 acres); Black Butte ACEC (8,260 acres); and Harquahala Mountains ACEC (74,950 acres). Limiting motorized use to designated routes and recreation allocations focused on managing rapidly increasing recreation demand will generally benefit resources within Special Designations.

Lands and Realty

The Bradshaw-Harquahala area includes 39,395 acres identified as potentially suitable for disposal, while the remaining lands in both planning areas would be retained in public ownership. The lands identified for potential disposal consist of scattered small parcels, including many in urban interface zones. Though scattered parcels would be made available for potential disposal through sales, leases or exchanges, ample lands for future development are available from sources other than disposal of public land.

Proposed utility and transportation corridors would meet increasing energy demands for urban expansion in central Arizona. The proposed plans maintain existing corridors, while creating a wider corridor in the Black Canyon area to accommodate new facilities while avoiding any new construction in the national monument. Existing state and federal highways could be maintained and widened. The proposed plan also establishes the Wickenburg Bypass and Canamex transportation corridors west of Phoenix.

Soil Resources

Management proposed in all Alternatives provides measures to reduce soil erosion and maintain or enhance soil productivity.

Air Quality

The proposed plans support actions to monitor air quality and mitigate impacts from vehicle travel and other sources of dust. Management practices generally would improve air quality throughout the planning areas. Although the BLM's contribution to air pollution in the region is negligible, proposals to limit motorized vehicles to designated routes and allocations, or special designations that limit expansion of route networks, will result in production of target pollutants at or reduced from current levels.

Water Resources

Management practices proposed in all Alternatives are designed to promote or improve water production and water quality. Most water related issues in Arizona are a result of rapid population growth, compounded by long periods of drought in the past few decades. Although the BLM's management actions have only limited effects, proposals to manage motorized vehicles, management actions designed to improve vegetation cover, and actions to protect or enhance riparian vegetation communities are expected to improve or maintain water production and quality.

Biological Resources

Management of riparian areas is a priority in all Alternatives. Various management alternatives are explored to balance the demands on riparian habitats with maintaining or enhancing their productivity. In all alternatives, limitations to motorized vehicles, implementation of Arizona Land Health Standards (ALHS), and management of recreation resources are designed to reduce disturbance to riparian areas and improve their functioning condition.

Management of desert tortoise habitat is a priority and most management actions are common to all Alternatives. Actions designed to maintain or improve conditions for desert tortoise should help their populations and avoid their listing as threatened or endangered.

Cultural Resources

Management of both planning areas places a priority on identification and protection of cultural resources. Selected sites or areas could be allocated to public use for interpretive development. Approximately 86% of the Agua Fria National Monument would be excluded from interpretive development. Sites could be developed for interpretive uses in six zones of the Bradshaw-Harquahala planning area. Proposed management actions provide protection for cultural resources and mitigation of impacts to sites developed for public use.

Paleontological Resources

There are no known significant resources in the planning areas. Management actions are designed to inventory and protect fossil sites if they are discovered in the course of normal management activities.

Recreation

In the National Monument, the Proposed RMPs emphasizes resource protection and non-motorized activities, while accommodating recreational activities and facilities within the Front Country zone that are consistent with resource protection. The Front Country zone includes 11,900 acres that receive higher visitation levels due to proximity to major highways and roads. The Back Country zone of 57,650 acres would be the focus of undeveloped and self-directed visitor experiences in primitive landscape settings. The plan proposes to prohibit recreational target shooting in order to protect monument resources and public safety. Hunting would continue to be allowed in accordance with Arizona laws and regulations.

In the Bradshaw-Harquahala area, the proposed plan offers a mix of recreational opportunities that attempts to meet the wide variety of recreation demands, while reducing conflict with other natural resources and traditional public land uses. The plan establishes management zones that encompass a range of landscapes and opportunities. It allocates 15 areas, totaling 678,835 acres, as Special Recreation Management Areas and Recreation Management Zones, each with specific Desired Future Conditions, benefits, and management actions. The remaining areas will be managed as Extensive Recreation Management Areas, where activities will be monitored but facilities would be limited. The plan emphasizes community partnerships to develop recreational opportunities in support of resource protection and public education.

Visual Resources

Visual Resource Management (VRM) classifications range from Class I, which involves minimal change to the existing landscape, to Class IV which allows for more changes associated with development. The proposed plan allocates 59,000 acres to VRM Class II in the Agua Fria NM, including the Back Country zone and areas managed for wilderness characteristics. The Front Country zone is allocated to VRM Class III. The Bradshaw-Harquahala area includes 96,820 acres within five existing wilderness areas, which are allocated to VRM Class I. Other proposed allocations include 488,250 acres to VRM Class II, 278,540 acres to VRM Class III, and 103,390 acres to VRM Class IV. These allocations minimize visual impacts while protecting scenic landscapes and meeting demands for public land resources.

Rangeland Management

The proposed plan limits livestock grazing in riparian areas to the winter season in the Agua Fria NM. In both planning areas, management changes will be implemented as needed to meet standards and bring riparian areas toward proper functioning condition. Changes in livestock grazing will primarily result from implementation of the Arizona Standards for Rangeland Health and the Guidelines for Grazing Management. These changes would result from individual allotment evaluations to determine if the standards are being met and adjustments designed to meet the standards. In certain areas, some reduction in AUMs might be required to achieve riparian management goals.

Mineral and Energy Resources

There are 171,940 acres proposed to be closed to mineral location; 171,690 acres closed to mineral leasing; and 172,780 acres closed to mineral materials sales. These closures incorporate the combined area of 167,720 acres within the Agua Fria NM and five designated wilderness areas. Therefore, there

would be little effect on existing mining operations. Sales of such mineral materials as sand and gravel, boulders and decorative rock could be limited by management for desert tortoise and varying allocations for primitive recreation use, but it is expected that in any case, regional demand will have to be met from non-BLM-managed lands.

Fire and Fuel Resources

The plan proposes to implement fuels management and suppression tactics that limit disturbance to the landscape. It would implement a range of appropriate vegetation treatments to maintain and restore habitats and to reduce and control wildfires. The plan supports actions and partnerships to protect communities in wildland-urban interface areas. Although the plan includes allocations for large undeveloped areas, few impacts to management of fire suppression or fire use are anticipated.

Wild Horses and Burros

Management within the two areas containing wild burros is not expected to change from current management. Burros in the Lake Pleasant Herd Management Area would continue at current numbers with occasional removal of animals to maintain herd numbers and remove nuisance animals. Burros in the Harquahala Herd Area would eventually be removed from public lands.

Travel Management

The proposed plan for the Agua Fria NM includes a network of designated travel routes, designed to protect monument values and resources while allowing for compatible uses and resource management activities. Of the 171 miles of existing inventoried routes, 52 miles would be closed to use by motorized and mechanized vehicles. There would be 25 miles limited to administrative use only, and 94 miles would remain open to travel. The plan proposes no new routes or scenic byway designations in the monument.

In the Bradshaw-Harquahala area, all motorized and mechanized vehicles (with the exception of wheeled game carriers) would be limited to designated open routes. Travel is currently limited to inventoried routes, pending the development and implementation of travel management plans with public comment and review. Designated travel routes, clearly marked and reinforced by public education and law enforcement, will protect natural and cultural resources while allowing for public enjoyment of recreational opportunities, authorized land uses, and access to state and private property.

Wilderness Characteristics

The proposed plan allocates 20,900 acres to be managed to maintain wilderness characteristics (outstanding opportunities for naturalness and solitude) in the Agua Fria NM. These areas include much of the Back Country zone on Perry Mesa and in the Agua Fria River Canyon and its tributary canyons. In the Bradshaw-Harquahala area, the plan allocates 13,490 acres to be managed for wilderness characteristics in the Black Canyon Management Unit and 53,789 acres to be managed as such in the Harquahala Management Unit within the Big Horn and Belmont mountain ranges.

Social and Economic Conditions

Impacts to social and economic conditions from BLM management actions on a regional basis are expected to be small. Changes in mineral closures would not result in loss of current jobs or reduction in current economic development, but may result in opportunity costs for future mining possibilities.

Environmental Justice

Implementation of the proposed plans would not result in a disproportionate impact to any minority or low income group.

Cumulative Impacts

Cumulative impacts are discussed for Population Growth and Development, Recreation/Visitation, Air Quality, Soils, Water Resources, and Wild Horse and Burro Management. Generally, the cumulative affect of BLM management activities in addition to the rapid population growth and urban expansion of central Arizona indicates the contribution of public land management to change in the region is very small. It was determined that BLM management activities are not expected to result in a cumulatively significant impact to the environment.

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Chapter One



Chapter One - Introduction

1.1 Introduction

The Agua Fria National Monument Resource Management Plan (RMP), the Bradshaw-Harquahala RMP, and their joint Environmental Impact Statement (EIS) have been prepared to provide guidance on current and future management decisions for the Bureau of Land Management's (BLM) Phoenix District (PD). These plans represent the culmination of many months of planning on the part of BLM's PD staff, BLM Arizona State Office staff, representatives of communities within the planning areas, cooperating and collaborating Government agencies, special interest and user groups, and several hundreds of concerned citizens. The decisions outlined in the pages that follow, as a distillation of the combined thought, effort, and research from all those involved, will enable BLM to manage the Agua Fria National Monument as well as other BLM-managed lands north and west of the Phoenix metropolitan area. These plans will also consolidate management decisions, now contained in several existing plans, in one comprehensive plan to guide BLM's management actions for years to come.

Combined, the planning areas encompass more than 3 million acres in a complex mosaic of land ownerships and jurisdictions. BLM manages the resources on 967,000 surface acres within these planning boundaries, including the entire 70,900 acres of Agua Fria National Monument. In addition, BLM retains subsurface (mineral) rights to 346,300 more acres within the planning area boundaries. Another 181,200 acres of subsurface mineral rights north and east of the planning areas are also addressed in this plan. The Agua Fria National Monument and Bradshaw-Harquahala RMPs/EIS are vital to creating a framework for future planning

and decision-making within the context of such complex ownership.

The planning areas are rich in resources. Their unique public lands contain archaeological sites and artifacts unlike those anywhere else on earth; providing researchers with critical insights into the lifestyles of the peoples who first settled this region of the Southwest. The lands are home to pronghorn antelope, mule deer, white-tailed deer, bighorn sheep, mountain lion, black bear, javelina, countless native songbirds, migratory waterfowl; and endangered and special-status species, such as the bald eagle, southwestern willow flycatcher, and Sonoran desert tortoise, and native fish species including the Gila chub and desert pupfish. Vegetation throughout the area ranges from creosotebush in the desert flats to ponderosa pine at higher elevations. The varied panorama of mountains, mesas, canyons, grasslands, and high and low desert vistas provide thousands of residents and visitors each year with unparalleled recreation opportunities. Thousands of local residents rely on these lands for their livelihood through mining, grazing, and tourism. The Agua Fria National Monument is also a part of the BLM's National Landscape Conservation System, comprised of designated areas that preserve natural landscapes for public use and enjoyment.

As the population of the Phoenix metropolitan area continues to grow, BLM-administered lands within the planning areas will receive increasing pressure, especially for recreation uses. The management decisions set forth in these plans, after much deliberation on the part of BLM and its partners, provide the broadest possible consensus to wisely guide management of these valuable resources.

1.2 Purpose and Need

The purpose of the Agua Fria National Monument and Bradshaw-Harquahala RMPs is to guide future land management actions within the planning areas. These documents must not only give adequate guidance for management actions but also ensure that actions comply with the National Environmental Policy Act (NEPA)

and Federal Land Policy and Management Act (FLPMA).

The need to prepare the RMPs has been established by three main factors:

- The Presidential Proclamation creating the national monument as a discrete management unit.
- The degree of urban expansion and population growth in and around the planning areas.
- The time that has elapsed since the last major planning that encompassed the planning areas.

The planning areas are now being managed under three land use plans (LUPs). While these plans include both planning areas, they also cover a much larger section of western and southwest Arizona. These plans are the *Phoenix RMP and EIS* (BLM 1988a); the *Lower Gila North Management Framework Plan* (BLM 1983); and the *Kingman Resource Area RMP and Final EIS* (BLM 1993a).

On January 11, 2000, President William J. Clinton signed Proclamation 7263 establishing Agua Fria National Monument (Appendix A). The signing of the proclamation represented "new or revised policy and changes in circumstances affecting the entire plan or major portions of the plan" (43 Code of Federal Regulations [CFR] 1610.5-6). The proclamation restates the need to develop plans for managing the monument. Later that year, the requirement to develop a stand-alone plan for managing all national monuments was affirmed and issued to all BLM's State offices in Instruction Memorandum 2001-022, Planning Guidance for National Monuments and National Conservation Areas (BLM 2000).

Additionally, Sections 201 (43 United States Code [USC] 1712) and 202 (43 USC 1713) of the Federal Land Policy and Management Act and Section 1610.5-6, Revised (43 CFR 1610.5-6) of BLM's regulations establish the requirement for plans to reflect existing conditions through maintenance or revision.

A need for consolidating and revising the existing plans is revealed in the following:

- changes in BLM's planning process,
- growth and development in the planning areas, and
- changes in the environment of the Bradshaw-Harquahala Planning Area since completion of the last planning efforts.

An internal study completed in September 2000, which evaluated the Phoenix District's land use plans, concluded that the plans had not adequately kept pace with changing conditions and needed to be revised to reflect the current land use and expected future conditions.

1.3 Planning Area and Map Setting

Agua Fria National Monument, 40 miles north of metropolitan Phoenix, encompasses 70,900 acres of BLM managed land and 1,444 acres of scattered private parcels. It is entirely within Yavapai County, Arizona, to the east of Interstate Highway 17 (I-17), northeast of Black Canyon City, and southeast of Cordes Junction (Map 1-1). The monument is being managed in accordance with the following:

- Proclamation 7263 (Appendix A), establishing Agua Fria National Monument.
- The *Phoenix RMP and Final EIS* (BLM 1988a).
- Department of the Interior Instruction Memorandum No. 2002-008, Interim Management Policy for Bureau of Land Management National Monuments and National Conservation Areas (BLM 2001a).
- Agua Fria National Monument Current Management Guidance (BLM 2002).

The Bradshaw-Harquahala Planning Area, encompassing 896,100 acres, is located within Maricopa, Yavapai, and La Paz Counties (Map1-1). Adjoining the Phoenix metropolitan area, this planning area has recently experienced significant population growth. The population of Maricopa County increased by 35 percent in the last decade; during this same period the City of Peoria has annexed more than 59,000 acres, including more than 16,000 acres of BLM-managed land. The size of the City of Phoenix has increased by more than 19,000 acres, including nearly 700 acres of BLM-managed land. These are only two of the growing cities and towns expanding their borders toward and into the Bradshaw-Harquahala Planning Area. The increased pressure on public lands for recreation, rights-of-way, mineral rights, and other uses; resulting from urban expansion, requires BLM to readdress its land use plan decisions.

Scattered, isolated BLM-administered parcels are located outside the planning areas but within the BLM Phoenix District's administrative district (Map 1-2). Combined, these parcels consist of 5,200 surface acres. In addition, BLM retains subsurface (mineral) rights on 181,200 acres of lands to the north and east of the planning areas (Map 1-2). Surface rights on these lands are held by the following entities:

- The Bureau of Reclamation.
- The State of Arizona.
- Counties (through Recreation and Public Purposes Act (R&PP) agreements).
- Private parties.

A summary of surface management acres within the planning areas is described in Table 3-2. Besides surface management acres, within the entire planning area there are 594,600 acres of BLM managed mineral estate with non-Federal surface ownership. Both the scattered parcels and subsurface lands are included in this plan because BLM remains responsible for managing them.

1.4 Process

1.4.1 Collaboration and Cooperation

Collaboration and cooperation are areas of emphasis in BLM's approach to the planning process. The main parties involved in these processes are the general public and interest groups, cooperating agencies, tribal governments, and collaborating agencies and groups. These participants, their roles, and impacts on the planning process are described below.

1.4.2 Community Collaboration and Community Vision

To establish valuable communication relationships before beginning specific planning, James Kent Associates (JKA), under contract to BLM, met with residents and community groups in or next to the planning areas. In addition to building communication networks for the formal planning process, JKA received citizens' inputs on issues and concerns related to BLM's land management practices and helped citizens gain a better understanding of the land use planning process. JKA's staff informally visited with residents in the following settings:

- in community settings,
- in civic and social group meetings, and
- in the communities of Wickenburg, Yarnell, Buckeye, Tonopah, Castle Hot Springs, New River, Black Canyon City, Cordes Junction, Mayer, Dewey, Humboldt, Prescott Valley, and Phoenix.

Contacts were also made in Flagstaff and Prescott, Arizona.

Once established, communication networks served as an integral link between BLM, citizens, and communities by fostering interest

and participation in the planning process. When BLM's managers and staff communicate and collaborate with communities on RMPs and planning issues, the plans are considerably more successful than those prescribing a process or those that do not consider the issues, needs, insights, assets, or resources of local communities.

To begin preparing the Agua Fria National Monument and Bradshaw-Harquahala RMPs and EIS, a series of workshops for both scoping and development of the Alternatives described in Chapter 2 and in the Introduction, were held in central community locations. The series of informal meetings provided the citizens and the BLM's managers with time to reflect on the local issues between discussions. At the same time, citizens' interests were viewed side by side with BLM's management concerns, allowing planners to integrate management concerns with community interests in ways that fostered collaboration and; more importantly, shared land stewardship.

These workshops encouraged citizens to do the following:

- refine issues,
- discuss visions for the future of public lands, and
- begin exploring alternative ways to manage public lands and resources.

BLM considered citizen's input, from both groups and individuals, as they developed the Alternatives. Additionally, citizens could submit formulated Alternatives as well as vision statements for specific community areas or resources. These ideas were also considered in the range of Alternatives, and analyzed in the EIS.

The BLM's planning process has fostered the climate for effective community visioning of their future in relationship to public lands. In many cases those visions have been integrated into local, regional, and other planning efforts. Those visions have thus expanded the value of the collaborative environment supported by the BLM's planning process.

Overall, the collaborative environment has resulted in open communication. Additionally, this environment has created an increased sense of public ownership of the following:

- the planning process,
- the decisions that result from it, and
- the importance of collaborative stewardship as a strategy for implementation.

1.4.3 Community Vision Statements

As part of an extensive community collaboration throughout the planning process, several communities prepared community vision statements. These statements played an integral role in developing the overall vision for these plans. Following are the vision statements developed by each community.

These statements are presented not as an endorsement by BLM, but rather to show the interrelationship between BLM-managed lands and the people who live, work, and recreate around these lands. These statements do not reflect the visions of all members of the community. They are the collective thoughts of citizens who chose to participate in the planning process. Furthermore, certain vision statements propose actions that are beyond the scope of BLM's legal authority to influence or implement.

1.4.3.1 Black Canyon City

The ultimate desire of the citizens of Black Canyon City is the preservation of the rural nature of our community and the natural beauty of our surroundings. Coincidental to that desire is the retention of open space to be used for designated public recreational activities. The community would like a sufficient amount of BLM-managed lands surrounding the town dedicated to future development of public trails, nature preserves, and riparian areas. A sufficient amount of land would be a minimum depth of five miles from the private property

lines around the community. The State Trust Lands within that area would be purchased by BLM for inclusion in the designated open space.

The community would like the viewshed protected from the town to the mountaintops in all directions. Limiting further commercial or residential development will also help protect the limited water supply in our area. In support of these considerations, many residents have expressed an interest in working with BLM and other communities to assure continued protection, cleanliness, access, and enjoyment of the public lands in our area.

1.4.3.2 Castle Hot Springs

Our community has a vision to maintain our remote yet reachable lifestyle, yet we also recognize that recreational use will increase and needs to be accommodated. This is not only an enforcement issue for the BLM, Yavapai and Maricopa counties, and the City of Peoria, but also an increasing social issue for our community. With this in mind, our community embraces the following as a means to maintain our way of life, as well as deal with increased outside pressure:

- Existing, historically described roads on BLM land must be mapped, legally described, and dedicated so as to ensure that residents and property owners can continue to access and use their lands into perpetuity.
- We need to seriously consider a recreational-user fee, earmarked for the local community, imposed on non-residents to help fund the substantially increasing costs associated with recreational uses.
- Existing roads (whether public, private, or easement) located in areas subject to occasional inundation will be exempt from permitting requirements for continued maintenance in this area.
- In considering changes in the use of private property in this area, the county or city will not be permitted to consider

federal goals and objectives for the surrounding property.

- All federal lands in the Lake Pleasant area are to be treated the same as private property with regard to obtaining new or perfecting existing legal and physical access.
- Mineral rights retained by BLM in this area under private property will be transferred gratis to the surface owners.
- We want a community-based stewardship group to proactively plan and later provide expertise, labor, and cultural wisdom with BLM on all recreational uses, including but not limited to non-motorized and motorized trails.
- Many of the existing water wells are in the "younger alluvium" as currently defined by recent case law.
- Encourage the re-establishment of a northern loop road around Lake Pleasant linking to Table Mesa Road at I-17 for health/safety/welfare purposes.
- Target shooting needs to be encouraged in appropriate and safe areas. Our community is willing, as a stewardship group, to counsel BLM on appropriate areas for target shooting.
- Encourage appropriate discreet cell-site development to provide for better law enforcement telecommunications.

1.4.3.3 Dewey Humboldt - Friends of the Agua Fria River Basin

Our vision is based on the overwhelming grassroots support for retaining public lands for open space made during BLM's scoping comment process. Imagine living here a half a century from now. What would we like our public lands and our communities to look like? The following vision is written as if today is in the year 2050. It describes what can be seen and what took place back in 2003 to make that a reality. Please share in this dream for the future. In the year 2050, we envision the following:

The BLM Bradshaw-Harquahala Planning Area (including the local communities of Dewey, Humboldt, Mayer, Spring Valley, and Cordes Lakes) represents preserved and protected tracks of open space that have sustained their natural health, diversity, and productivity throughout the first half of the 21st century. These tracts of land are crowded by an uncontrolled urban sprawl. This development explosion stretches from Phoenix to Black Canyon City and continues toward the west and north along the highway corridors to Prescott and Flagstaff. The Agua Fria National Monument and the expanded BLM-managed lands in the Cordes Junction, Mayer, Dewey, and Humboldt areas (referred to as the Upper Agua Fria Basin) are the only open space areas along major roadways. Not surprisingly, these open spaces have been a significant factor in maintaining the rural character within a large section of central Arizona.

BLM continues to work with the Yavapai County Board of Supervisors to support a staunch conservation of the natural and human ecological relationships within the county. The Bradshaw-Harquahala Planning Area has become a showcase of ecological and rural community sustainability. It provides numerous recreational opportunities for the large and growing urban areas within the state of Arizona, as well as examples of sound traditional agricultural enterprises. These multiple uses of the land include protection of human antiquities, continued environmentally sustainable ranching, hunting, fishing, hiking, equestrian use, bird watching, planned off-road vehicle access, wild river designations, and ecologically responsible mining.

BLM has continued to successfully manage these lands to preserve water flow and water recharge. They have done this by ensuring that all riparian tributaries and supporting uplands feeding the Agua Fria River and monument have remained in their natural state. Wildlife habitat (and corridors) has been identified and protected predominately through the expansion of lands under BLM supervision. This expansion of BLM-managed lands took place almost half a century ago (around 2003-04). At

that time, all lands originally identified for disposal under the old management plan were reclassified and retained as open space under federal ownership.

BLM then furthered their commitment to protecting open space for multiple uses by either forming partnerships with state and other federal agencies, or directly acquiring wide strips of land on either side of the existing BLM-managed lands within Yavapai County. This allowed BLM to successfully buffer their original parcels from development and encroachment. It is interesting to note that in the early part of the 21st century BLM honored the wishes of the people they served (to keep public land public and to protect open space). This visionary and courageous action resulted in preserving a large section of central Arizona for the native flora and fauna, as well as the use and enjoyment of many generations of Arizonans.

1.4.3.4 New River

The Bradshaw-Harquahala Planning Area maintains the wild and scenic character of today, while continuing to provide an array of public opportunities in the future for visual resources, water, education, recreation, and exploration within the framework of a healthy, properly functioning landscape. This does include grazing and/or other commercial endeavors, if they are consistent with and support the overall vision. Emphasis is on maintaining the scenic views and recreational opportunities while protecting the watershed function.

1.4.3.5 Wickenburg

The Wickenburg Outdoor Recreation Committee seeks to establish a system of world-class equestrian trails surrounding Wickenburg that will buffer the area from Phoenix valley urban sprawl, and preserve the open space value of the local landscape. The area of this trail system will afford a multitude of opportunities for all recreational enthusiasts, and serve to enhance the lifestyles of all community members.

1.4.4 Collaborating Agencies and Other Stakeholder Groups

A variety of entities played a vital role in the planning process. These collaborating groups did the following:

- attended meetings,
- made databases and information available,
- provided peer reviews, and
- helped develop Alternatives.

These included people from the following organizations:

- Arizona Game and Fish Department (AGFD),
- Arizona Department of Transportation (ADOT),
- Maricopa County,
- Yavapai County,
- City of Phoenix,
- City of Peoria,
- Tonto National Forest,
- Prescott National Forest, and
- Luke Air Force Base.

Representatives from the following organizations also met to discuss issues directly related to future communication right-of-way needs:

- American Tower Corporation,
- Campbell A&Z, LLC,
- Phoenix Planning Department;
- Crown Castle,
- Delta Group International,
- Ironwood Real Estate for Verizon Wireless,
- QWEST Wireless LLC,
- Tierra Right-of-Way,
- T-Mobile, and
- West & Company.

Representatives from the following organizations met to discuss future utility rights-of-way (ROW) needs:

- Arizona Public Service (APS),
- Bureau of Reclamation, Arizona Projects Office,
- Phoenix Planning Department,
- El Paso Natural Gas Company,
- Kinder Morgan,
- Salt River Project (SRP); and
- Southwest Gas.

Representatives from the following organizations met to discuss future transportation right-of-way needs:

- ADOT,
- City of Peoria, Phoenix Planning Department,
- Phoenix Street Transportation Department,
- Copland Associates,
- Federal Highway Administration,
- Maricopa Association of Governments,
- Town of Buckeye, and
- Yavapai County.

1.4.5 Tribal Coordination and Consultation

During the scoping period, BLM began consulting with Indian tribes who have oral traditions or cultural concerns relating to the planning areas, or who are documented as having occupied or used portions of these areas during historic times. These tribes include the following:

- Fort McDowell Yavapai Nation,
- Yavapai-Prescott Tribe,
- Yavapai-Apache Indian Community at Camp Verde,
- Hopi Tribe,
- Gila River Indian Community,
- Salt River Pima-Maricopa Indian Community,
- Ak-Chin Indian Community,

- Tohono O'odham Nation,
- Colorado River Indian Tribes, and
- Fort Mojave Indian Tribe.

The planning areas include tribal lands near Prescott, administered by the Yavapai-Prescott Tribe.

Tribal leaders were first contacted by certified mail. Copies of that contact letter were also sent to tribal cultural heritage program leaders and specialists. Follow-up contacts included meetings, field tours, and presentations to representatives of tribal heritage programs. BLM staff gave planning updates at meetings with tribes through the various stages of the planning process, including scoping, development of Alternatives, and release of the Draft RMPs/EIS.

1.4.6 Cooperating Agencies

U.S. Council on Environmental Quality (CEQ) regulations, which are contained in 40 CFR 1501.6 and 1508.5, implement the NEPA mandate that Federal agencies responsible for preparing NEPA analysis and documentation do so "in cooperation with State and local governments," and other agencies with jurisdiction by law or special expertise (42 USC 4331(a), 4332(2)). In support of this mandate, BLM invited a broad range of local, State, tribal, and Federal agencies to attend a series of meetings with the aim of developing Memoranda of Understanding (MOU) that would establish cooperating agency status with BLM. Cooperating agency status allows interested agencies to assume responsibilities beyond attending public meetings, and to both review and comment on plan documents.

MOUs describe the responsibilities of BLM and the cooperating agency during the planning process. For example, city and county planners are particularly well acquainted with methods for predicting growth patterns within their communities. A city or a county government may be willing to share that expertise and would do so through the support of a cooperating agency MOU. To date, the ADOT,

AGFD, Yavapai County, Tonto National Forest, Prescott National Forest, City of Peoria, and Luke Air Force Base each have MOUs in some stage of completion from draft to signed, agreeing to become cooperators for the Agua Fria National Monument and Bradshaw-Harquahala RMP and EIS.

1.5 Mission and Goals

BLM's mission is to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

In keeping with its mandate for developing multi-use management plans, BLM developed overall goals for both the Agua Fria National Monument and the Bradshaw-Harquahala Planning Areas. These goals support a rich variety of public experiences, while simultaneously providing for long-term protection of the natural resources within each planning area. The goals for each planning area have been carefully developed in consideration of BLM's overall mission and with careful regard to the communities and groups that will be affected by future BLM management's decisions for the planning area.

1.5.1 Agua Fria National Monument

The Agua Fria National Monument was created to protect an array of cultural, historical, biological, geological, and hydrological objects. These objects, both individually and collectively, in the context of the natural environment that supports and protects them; are referred to as "monument objects," "monument resources," or "monument values" throughout this document.

Purpose, significance, mission, and goal statements clarify the intent of the monument's proclamation and are used to shape the development of a management plan. The purpose statement clarifies why the monument was set aside as a unit for special management. The significance statement addresses what

makes the area unique. Lastly, the mission and the goal statements reflect ideal conditions which managers should strive to attain. The BLM developed goal statements for the Bradshaw-Harquahala Planning Area based on management principals identified by FLPMA of 1976, as amended.

1.5.1.1 Purpose

Agua Fria National Monument was established to preserve and protect, for present and future generations, its exceptional scientific and historic resources. These resources are defined in the monument's proclamation (Appendix A) as the objects to be protected:

- Archaeological remnants of prehistoric villages, rock art, agricultural systems, and other sites that composed one of the few remaining systems of prehistoric pueblo communities in central Arizona during the period A.D. 1250 to 1450.
- A cultural landscape that encompasses several hundred archaeological sites of diverse types within an undeveloped setting. These resources provide outstanding opportunities for scientists to study the interrelationships among prehistoric communities in their social and environmental contexts.
- Historic sites that reveal the progression of ranching and mining in a rugged area that posed environmental challenges to early settlers.
- A diverse set of topographic features that support an expansive mosaic of semi-desert grassland, transected by ribbons of rare and valuable riparian forest.
- A diversity of vegetation communities and water sources that provide habitat for a wide array of wildlife species.

1.5.1.2 Significance

Agua Fria National Monument includes a large portion of the Perry Mesa Archaeological District, which is listed on the National Register of Historic Places. The district was established to recognize and protect a particularly well-

preserved system of prehistoric communities that were inhabited between A.D. 1250 and 1450.

The spatial interrelationships among hundreds of irreplaceable archaeological sites are preserved on the monument's landscape. These resources offer unprecedented opportunities for scientific research, public education, and the preservation of ancestral sites and heritage values that are important to Indian tribes.

The monument contains a large component of the Agua Fria watershed, with free-flowing reaches of perennial streams and associated riparian zones that have become rare environmental features in Arizona.

The Agua Fria River, which crosses the monument through rolling hills and the Agua Fria River Canyon, has been determined to be suitable for designation to the National Wild and Scenic Rivers System (WSR) by virtue of its outstandingly remarkable scenic, cultural, and wildlife values.

The mesas support one of the largest undeveloped expanses of desert grassland in Arizona. Herds of pronghorn, which are at risk in much of Arizona, inhabit these grasslands. The monument offers valuable opportunities for sustaining these important resources and for the scientific study of grassland ecosystems, environmental changes related to the effects of wildfires, and the use of prescribed fires to achieve resource management objectives.

The mesas, canyons, and streams support an uncommon diversity of vegetation communities. This variety provides habitat for many wildlife species including desert tortoise, lowland leopard frog, Mexican garter snake, common black hawk, Gila chub, longfin dace, speckled dace, and desert sucker.

Despite its closeness to urban areas, the monument contains remote, primitive areas that offer excellent opportunities for solitude and the appreciation of outstanding scenic values. Several remote canyons are oases that feature

springs and unusually lush growth of riparian plants and rare species.

1.5.1.3 Mission

BLM will protect and sustain the extraordinary combination of cultural, natural, and scientific resources within Agua Fria National Monument and, to the extent consistent with resource protection, will provide opportunities for scientific research, public education, recreation, and other activities compatible with resource protection.

1.5.1.4 Goals

Natural and cultural resources and associated values are protected, restored, and maintained in good condition and managed within the broader context of ecosystems and cultural landscapes. The protection of cultural, biological, and physical resources, which the monument was created for, receives the highest priority in project planning and the management of resources and land uses.

Cultural resources are protected and managed for scientific, heritage, and educational values. Selected archaeological sites are developed for public visitation and interpreted to explain how humans have used and modified the desert grasslands over the past 2,000 years.

Diverse habitats, vegetation communities, and corridors of connectivity are conserved, and restored to sustain a wide range of native species. Habitats for special status and sensitive species are protected and recovered to support viable populations.

The Agua Fria River and its tributaries are managed to sustain and enhance their free-flowing character, water quality, and associated riparian values.

As a focus of scientific studies, the monument supports the following:

- relevant research priorities in the natural and social sciences,

- interdisciplinary studies, and
- the development of effective resource management strategies.

Decisions about resource and visitor management are based on scientific information.

Visitors have opportunities to view scenic vistas, wildlife, and archaeological sites through a variety of appropriate and sustainable activities. The preservation of natural quiet and primitive settings is emphasized in zones possessing these values. The public receives the information needed to ensure safe and enjoyable experiences.

Facilities, such as parking areas and trails, are developed so they ensure visual enjoyment and public safety, while protecting monument values.

The public understands and appreciates the purpose and significance of Agua Fria National Monument and the benefits of protecting its resources for present and future generations.

BLM respects valid existing rights and manages authorized uses and facilities to protect monument resources.

BLM enters into active partnerships with local and regional communities, Government agencies, Indian tribes, academic institutions, and organizations. These partnerships foster management practices that protect resources, support communities, and promote public education. Volunteers significantly contribute to resource protection, scientific studies, and public outreach.

1.5.2 Bradshaw-Harquahala Planning Area

Within the Bradshaw-Harquahala Planning Area is an opportunity to support the development of sustainable ecosystems with long-term productivity. This opportunity allows local communities to identify with and have a relationship with the surrounding landscape. This sense of community also extends to the

public wishing to escape the urban environment and enjoy the rural qualities and sense of solitude within this planning area. In addition to this sense of solitude, this planning area offers abundant multi-use opportunities. These opportunities include an array of increasingly popular recreation activities, along with more traditional or historical uses, which need to be managed to avoid degrading the land and its resources. Establishing and encouraging a sense of stewardship among each of its many users will ensure availability of all resources for future generations.

1.5.2.1 Goals

In cooperation with community partners and collaborating agencies, BLM has developed the following list of overall management goals for the Bradshaw-Harquahala Planning Area:

- Engage communities and encourage partnerships with those who have a stake in the management and protection of resources in the planning area. Provide opportunities for public education, volunteerism, visitation, and enjoyment of resources in a manner consistent with resource protection.
- Form partnerships in cooperative management adjacent and intermingled lands.
- Provide for cooperative management of contiguous public lands for recreation and maintaining/restoring wildlife habitats.
- Support public understanding, enjoyment, and appreciation of public lands and resources, and promote visitor safety.
- Work with communities and other interests to meet the need for resources, and infrastructure for growing communities in the planning area.
- Manage lands to contribute to the social, economic, and environment health and sustainability of communities.
- Develop outreach programs that encourage thoughtful use and social responsibility, for stewardship of BLM-administered lands.
- Restore and maintain the natural environments that characterize a healthy, unfragmented landscape.

- Support a diverse, flourishing community of plants and wildlife.
- Restore and maintain the area's capacity to capture, store, and safely release water.
- Retain the scenic quality of the area as a legacy for current and future generations of residents and visitors.
- Sustain a diversity of recreation benefits and opportunities, while minimizing harm to natural and cultural resources.

1.6 Planning Issues

1.6.1 Introduction to the Scoping Process

For this planning effort BLM emphasized compliance with the public involvement requirements in the following:

- CEQ regulations in 40 CFR 1501.7
- FLPMA Section (a) of 43 USC 1713
- BLM regulations in 43 CFR 1610.2

The process also followed the provisions of Executive Order 12898 ("Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations") and later BLM's guidelines in Instruction Memorandum 2002-164 on environmental justice.

Several procedures encouraged public participation in the scoping process. Public outreach began before the planning actions were initiated, by publishing the Notice of Intent (NOI) in the *Federal Register* on April 24, 2002 (67 FR 20148). This outreach established lines of communications with a spectrum of community and user groups in and around the planning areas. These lines of communication facilitated public participation when the RMP planning requirements were defined. This activity is explained in detail in the Community Collaboration and Community Vision section of this chapter. Planning bulletins, including sections specific to soliciting public input, were

periodically distributed throughout the planning process.

The formal scoping process began with the publication of the NOI, and ended on November 15, 2002. The NOI briefly described the project and announced BLM's intent to develop RMPs for both Agua Fria National Monument and the Bradshaw-Harquahala Planning Area. Although there is a formal end date to the public comment period in this initial scoping phase, BLM's policy is to accept public comments and other input throughout the planning process. Results of the formal scoping phase are included as Appendix B.

1.6.2 Issues and Management Concerns

Issues were identified for both planning areas through a combination of the following:

- public input,
- BLM's knowledge of the land and management requirements, and
- coordination with local Native American tribes and with Federal, State, and local agencies.

These issues were summarized in the *Scoping Report for the Agua Fria National Monument/Bradshaw-Harquahala Planning Areas* (Jones & Stokes 2003), which was released to the public through a variety of means. Also included in the scoping report were the outcomes of coordination with local Native American tribes and Federal, State, and local agencies. Table 1-1 (located in the Additional Tables section) lists issues that reflect the scope of planning decisions addressed in the formulation of the Alternatives in Chapter 2. Table 1-2 also lists management issues that reflect the scope of planning decisions addressed in Chapter 2.

1.7 Laws, Regulations, Policies, Planning Criteria, and Existing Land Use Plans

The BLM's planning process is governed by Federal Land Policy and Management Act (FLPMA) (43 USC 1711) and 43 CFR 1600, which governs the administrative review process for most BLM's decisions. Land use plans ensure that BLM-administered public lands are managed in accordance with the intent of Congress as stated in FLPMA and under the principles of multiple use and sustained yield. As required by FLPMA, public lands must be managed in a manner that protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, preserves and protects certain public lands in their natural condition and provides food and habitat for fish and wildlife and domestic animals; and provides for outdoor recreation and human occupancy and use by encouraging collaboration and public participation throughout the planning process. In addition, public lands must be managed to help meet our Nation's needs for domestic sources of minerals, food, timber, and fiber from public lands.

Land use plans are the main mechanism for guiding BLM's activities to achieve the mission and goals outlined in the BLM's Strategic Plan (BLM 1997). The Agua Fria National Monument and Bradshaw-Harquahala Planning Area RMPs were produced in accordance with Federal statutes and regulations (Appendix C). The selected planning approach is consistent with the requirements in FLPMA and BLM regulations, as most currently defined in the revised BLM's *Land Use Planning Handbook* (H-1601-1). The process also complies with the set of instruction memoranda, information bulletins, and other BLM's manuals, handbooks,

and strategic plans that embody the most current BLM's business practices on conduct of the process and the content of any resulting documents.

As part of the BLM's planning process, resource specific Strategic Plans are developed at the national level that establish the overall direction for programs within the BLM. These plans are guided by the requirements of the Government Performance and Results Act of 1993, cover a 5 year period, and are updated every 3 years. They are consistent with FLPMA and other laws affecting the public lands.

Several management plans, programmatic documents, and standards and guidelines were considered in the preparing the RMPs. These documents include the following:

- *Phoenix Resource Management Plan* (BLM 1988a);
- *Lower Gila North Management Framework Plan* (BLM 1983);
- *Kingman Resource Management Plan* (BLM 1993);
- *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (BLM 1997);
- *Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement* (BLM 1994b); and
- *Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air quality Management* (BLM 2004).
- *Approved Amendment to the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan and Decision Record* (BLM 2005).
- *Executive orders 11644 and 11989 Off-Road Vehicles on the Public Lands (1972 and 1977)*

BLM has examined these documents not only to ensure proper integration and compliance, but also to determine which information is still suitable for including in the RMPs and which decisions are still valid and can be carried forward into the RMPs being prepared. BLM has also considered activity plans that have been

tiered off the existing land use plans. These activity plans may need to be revised to conform to the new RMPs.

1.8 Relationship to Other Plans

Title II, Section 202 of FLPMA guides BLM's land use planning coordination with Native American tribes, other Federal departments, State agencies, and local governments. BLM is instructed to do the following:

- stay informed of State, local, and tribal plans;
- ensure that it considers these plans in its own planning; and
- help resolve inconsistencies between such plans and BLM's planning.

The provisions of this section of FLPMA are repeated in Section 1610.3 of BLM Resource Management Planning regulations.

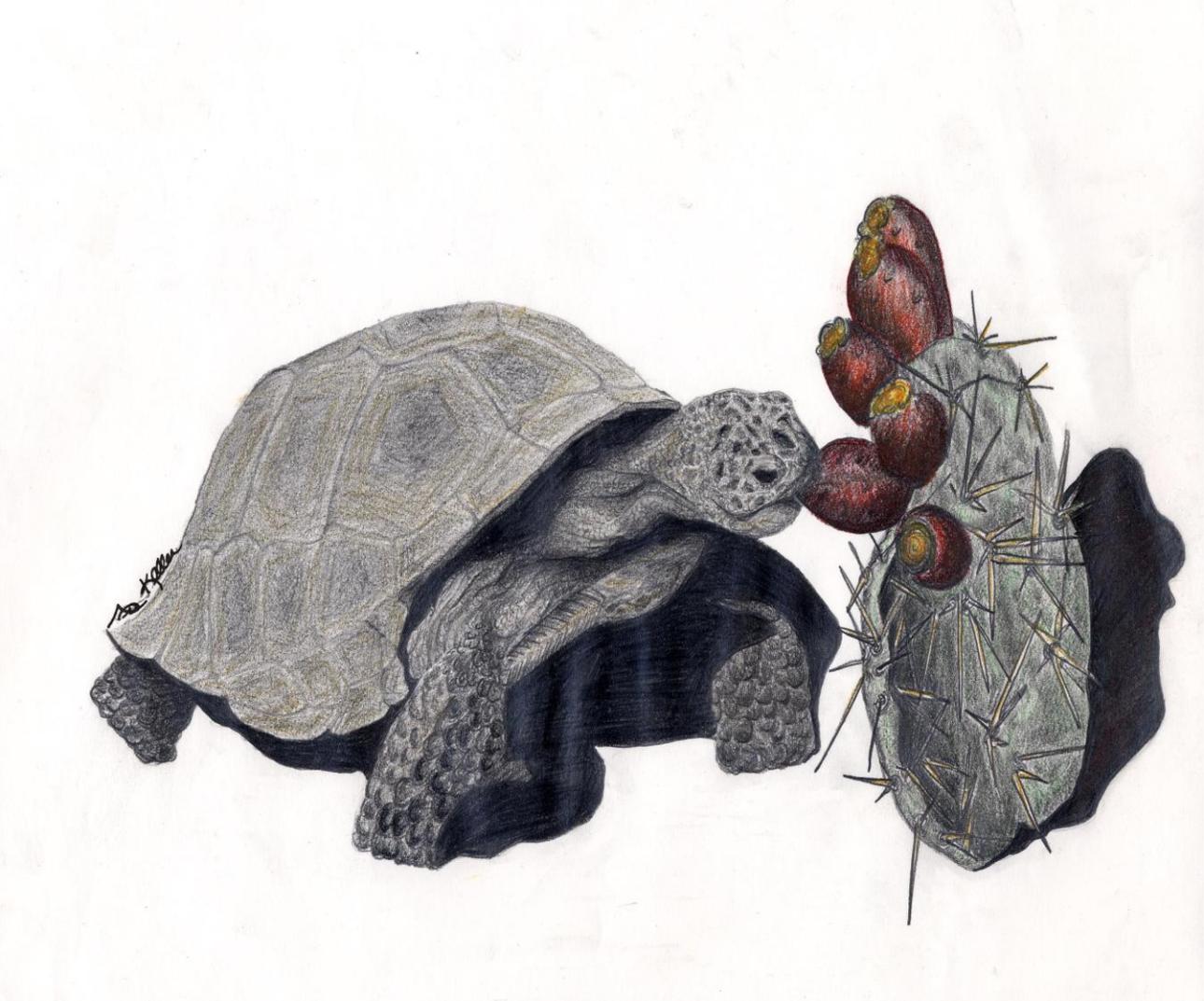
In keeping with the provision of this section, BLM informed State, local, and tribal officials of the planning process through the previously described mailings and meetings. The following is a list of plans reviewed during the Agua Fria National Monument and Bradshaw-Harquahala planning efforts.

- *Prescott National Forest Proposed Action: Forest Plan Amendment*, November 2001.
- *Wildlife 2006: The Arizona Game and Fish Department's (AGFD) Wildlife Management Program Strategic Plan for the Years 2001-2006*, Finalized January 22, 2001.
- *Maricopa Association of Governments: Desert Spaces Environmentally Sensitive Development Areas (ESDA) Policies and Design Guidelines*, June 2000.
- *Maricopa County 2020, Eye to the Future Comprehensive Plan*, Adopted October 20, 1997, Revised August 7, 2002.
- *Maricopa County Mobile Planning Area Land Use Plan*, Adopted August 12, 1991.

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- *Yavapai County General Plan*, Adopted April 7, 2003.
- *City of Peoria General Plan*, December 2002.
- *City of Phoenix General Plan*, Adopted December 5, 2001.
- *Town of Wickenburg General Plan*, Adopted 1988.
- *Town of Buckeye General Development Plan*, Adopted September 18, 2001.
- *Town of Prescott Valley General Plan*, Adopted January 17, 2002.
- *Management Plan for the Sonoran Desert Population of the Desert Tortoise in Arizona*, Arizona Interagency Desert Tortoise Team, December 1996.
- *Desert Pupfish Recovery Plan*, 1993.
- *Final Recovery Plan, Southwestern Willow Flycatcher*, August 2002.
- *Southwestern Bald Eagle Recovery Plan*, 1982.
- *Draft Gila Topminnow Revised Recovery Plan*, 1998 (original approval: March 15, 1984).
- *Spikedace Recovery Plan*, 1991.

Chapter Two



Chapter 2 - Alternatives

2.1 Introduction

The purpose of this chapter is to present the combinations of public land uses and resource management practices that address issues identified during the scoping process. This chapter describes in detail the No-Action (current management) Alternative and four Action Alternatives for the Agua Fria National Monument and the Bradshaw-Harquahala Planning Areas (Map 1-1). Each Alternative varies in both perspective and intensity of management. In addition, each Alternative consists of a set of land use allocations and management actions needed to implement the Alternative. The components of each Alternative are later reviewed for potential environmental impacts. The results of this review are presented in *Chapter 4*.

In addition to the Agua Fria National Monument and Bradshaw-Harquahala Planning Areas, this document addresses several scattered, isolated parcels of BLM-managed Federal lands, even though they are not within either planning area. These scattered parcels, shown in (Map 1-2), are discussed in detail in the Management Common to All Action Alternatives section of this chapter.

This document analyzes management goals and objectives that BLM is proposing for Federal lands under our authority. However, lands under the jurisdiction of BLM are not always under complete Federal ownership. These lands, referred to as "split estate" lands, can be managed by BLM in accordance with the goals and objectives stated here only to the extent that the public has direct ownership of the land.

Split estate lands limit BLM's ability to manage for minerals, visual resources, wildlife habitat

and surface occupancy. When reviewing this document or using any final land use plan prepared by BLM, the reader is advised to research land status to determine the extent of BLM's control and to ascertain the extent to which a land use plan may be applicable to a particular parcel of land. There is a total of 594,600 split estate acres with Federal mineral ownership and non-Federal surface ownership. Out of this total, 181,200 acres are outside the planning areas to the north and east (Map 2-1).

Each Alternative represents a general theme; in that, the actions to implement its land use allocations have been selected to promote a unifying theme. However, all allocations and associated actions must meet BLM's overarching principles of multiple use and sustained yield. The complete management guidance for each Alternative includes management from the Management Common to All Action Alternatives section that follows the detailed discussions of *Alternatives B, C, D, and E*. Please pay particular attention to the definitions of allocations, Desired Future Conditions (DFC), and management actions that apply to all Alternatives. The complete management of any Alternative must include the actions in the Management Common to All Action Alternatives section of this chapter.

Alternative A Current Management:

Alternative A is the current management situation for both the Agua Fria National Monument and the Bradshaw-Harquahala Planning Area. *Alternative A* will serve as a baseline for most resource and land use allocations. The current management Alternative contains the decisions guiding BLM's management today. This Alternative is often called the No-Action Alternative because it represents the way BLM would manage within the planning areas if the Resource Management Plans/Environmental Impact Statement (RMPs/EIS) effort were not conducted. These decisions have been organized to make them as consistent as possible with the way the "action" *Alternatives B, C, D, and E*, have been organized. This organization will provide the reader with an approach to compare current

management with that suggested in each Alternative.

Alternative B Management for Increased Recreational Use: *Alternative B* plans for increased public use and includes more recreation-related development, consistent with protecting monument resources. *Alternative B* also allows visitation and development within the Bradshaw-Harquahala Planning Area while ensuring that resource protection is not compromised.

Alternative C Management for Use and Landscape Protection: *Alternative C* would give visitors opportunities to experience the natural landscapes and cultural resource setting of the monument. Generally, *Alternative C* would impose more restrictive decisions than would *Alternative B*. In the Bradshaw-Harquahala Planning Area *Alternative C* would put more emphasis on identifying and protecting undeveloped landscapes than *Alternative B*.

Alternative D Management for Primitive Landscape Protection: *Alternative D* emphasizes protecting undeveloped, primitive landscapes in the monument, resulting in limited public use and the withdrawal of authorized grazing. In the Bradshaw-Harquahala Planning Area *Alternative D* emphasizes natural landscapes and non-motorized recreation, with more management dedicated to maintaining primitive recreation opportunities than under the other Alternatives.

Alternative E Management for Use and Resource Sustainability: *Alternative E* is a combination of elements selected from the other Alternatives that were later studied and further refined. *Alternative E* is BLM's Proposed RMP Alternative. This Alternative is designed to respond most comprehensively to each of the issues and management concerns identified in the planning process. BLM has determined that the management actions in *Alternative E* would provide the optimal balance between authorized resource use and the protection and long-term

sustainability of sensitive resources within the planning areas.

The Alternatives presented in this chapter address the Agua Fria National Monument Planning Area first, followed by the Bradshaw-Harquahala Planning Area. To facilitate development and presentation of management scenarios, the planning areas have been divided into distinct geographical units called Management Units (MUs). In size and planning scale, Agua Fria National Monument is itself a Management Unit. The MUs within the Bradshaw-Harquahala Planning Area provide a geographic orientation and a community focus for management. These units roughly correspond to the Community Resource Units (CRUs) that were mapped as part of the collaborative planning process, with boundaries adjusted to include areas of resource management challenges in those units.

Special Designations Used in this Document

Several designations within the national monument and specific MUs distinguish the land use under various Alternatives.

Special Designations - The following are special designations for protecting one or more sensitive resources:

- Areas of Critical Environmental Concern (ACEC), designated by the BLM, which include:
 - Outstanding Natural Areas (ONAs): ACECs that contain unusual natural characteristics and are managed mainly for educational and recreation purposes.
 - Research Natural Areas (RNAs): ACECs that contain natural resources of scientific interest and are managed mainly for research and educational purposes.
 - Biological or Cultural ACECs: ACECs that contain cultural or biological resources that are of

at least regional significance and are mainly managed to preserve these values. An ACEC could contain combinations of the aforementioned values and be managed to simultaneously preserve or enhance all resources within it.

- Wilderness Areas - Areas designated by Congress as wilderness and added to the National Wilderness Preservation System.
- Wild and Scenic Rivers (WSRs) - River systems that meet eligibility and suitability requirements may be designated by Congress to preserve their free-flowing condition and to protect their water quality and identified outstandingly remarkable values.
- Back Country Byways - Routes designated by the BLM because of the scenic quality of the landscape or interpretive opportunities for various levels of vehicular travel.
- National Recreation Trails - The National Trail System Act of 1968 (Public Law 90-543) authorized creation of a national trail system comprised of National Recreation Trails, National Scenic Trails, and National Historic Trails. National Recreation Trails may be designated by the Secretary of Interior to recognize exemplary trails of local and regional significance.

Land Use Allocations Used in This Document

In addition to the special designations described above, several BLM allocations were used to focus management in certain areas to address particular resource needs. The following is a list of the allocations used:

- Wildlife Habitat Areas (WHAs) – General areas that are managed to enhance the habitat of one or more wildlife species.

- Special Cultural Resource Management Area (SCRMA) - An area containing cultural resources that are of special importance for public use, scientific use, and traditional use or other uses as defined in BLM's Manual 8110.4.
- Special Recreation Management Areas (SRMAs) - Areas of intensive recreation use that will be managed to retain the recreation opportunities while protecting other resources and reducing user conflicts.
 - Recreation Management Zones (RMZs) - Areas within SRMAs with particular recreation management focus or resource challenges.
 - Front Country RMZ - Recreation management zone where management will focus on maintaining multiple types of access for recreation and interpretive opportunities.
 - Back Country RMZ - Recreation management zone where management will focus on maintaining the natural landscape and primitive recreation opportunities.
 - Passage RMZ - Recreation management zone that provides for motorized access and vehicle-based activities such as dispersed camping through the Back Country RMZ.
- Extensive Recreation Management Areas (ERMAs) - Areas that are not allocated to SRMAs are allocated to ERMAs. These are areas where recreation management is limited to custodial actions.
- Lands Allocated to Maintain Wilderness Characteristics - Areas that contain resource values of naturalness, outstanding opportunities for solitude and primitive, unconfined recreation

- where maintaining these values represents a major management focus.
- Visual Resource Management Classes (VRM) - These allocations are to establish standards for managing visual change to the landscape when management or development activities are proposed. The VRM Classes and standards are described in Section 2.7.1.8 discussion of the Management Common to All Action Alternatives.
 - Off Highway Vehicle allocations of Open, Closed, and Limited (OHV) - All BLM's lands will be allocated to one of these levels of OHV use as described in the BLM's Land Use Planning Handbook H-1601-1, Appendix C II D.

These land use allocations are described in detail for all the Alternatives. Areas that are not afforded special management by the designations and allocations described above will be administered according to the management actions described in Section 2.7, Management Common to All Action Alternatives, and in the Management Units sections of this chapter.

2.1.1 Summary of Changes from the Draft to the Proposed RMPs/Final EIS

This section is included to describe the changes made in format or content of the documents in response to public and other state or Federal agency comments and concerns, as well as BLM management review to ensure consistency with laws and regulations

Based on public comments the following changes were made to the Proposed Alternative:

- In Section 2.6.2.2.3.1 Backcountry Byways were deleted
- Outstanding Natural Areas (ONA) were deleted from Proposed Alternative
- Deleted enhance from “enhance and/or maintain wilderness characteristics”
- Phoenix Field Office (PFO) changed to Phoenix District (PD)
- Wilderness characteristics acreage reduced
- In Chapter 3 Air Quality section was updated
- Chapter 4 was edited to reflect the impacts from inclusion of the Lower Gila Amendment to Alternative A and changes made to the Preferred (Proposed Alternative). Additionally, Chapter 4 was edited to remove inconsistencies with text in Chapter 2 (impacts described from route closures outside the national monument were eliminated).
- Table 2.8 was revised to reflect current content of the impact analysis
- Added appendices **R**-Lands Management, **S**-Benefits Based Recreation, **T**-Off-Highway Vehicle Mitigation Examples, **V**-Additional information for the Black Canyon Utility Corridor, and **U**-Special Status Species.
- Section 2.2.2.2 Lands and Realty, added additional land tenure adjustments comments.
- Section 2.2.2.4 Biological Resources, added comments referencing big horn sheep lambing areas with fencing and monitor livestock use of these key areas, livestock and burros at dirt tanks, firewood management, and desert tortoise.
- Changes were made in 2.2.2.6, Recreation Resources; a Special Recreation Management Area would be allocated for the Vulture Mountains. Special Resources Management
- Vision statements were added to the following sections: 2.3.2.2.1; 2.3.2.2.3; 2.3.2.2.5; 2.4.2.2.2; 2.4.2.2.4; 2.4.2.2.6; 2.5.2.2.2; 2.5.2.2.4; and 2.5.2.2.6.
- In Section 2.6.1.1 Special Designations the Bloody Basin Road is not being considered for designation as a Back Country Byway under *Alternative E* and Wild and Scenic River eligibility has been addressed for Agua Fria tributaries.

- In Section 2.6.1.4, the Rollie site in the Agua Fria NM was changed from a High Public Use area to a Moderate Public Use area. An error on Map 2-73 in the Draft RMP/EIS, which identified the Teskey Homestead Public Use area as proposed for the Moderate Public Use level, was corrected to indicate an allocation to High Public Use.
- In the Biological Resources sections new text has been added.
- Section 2.7.1.4 new text has been added to Administrative Actions-Gila Topminnow, Gila Chub and Desert Pupfish.
- Section 2.7.1.11 new text has been added to Recreation Settings; Primitive, Semi-primitive Non-motorized, and Semi-primitive Motorized.
- Section 2.7.3.1 Management Units has been deleted and renamed Special Designations, all sections following have new section numbers.
- Section 2.7.3.7 Travel Management – Management Actions has new text added.
- Section 2.10.2 Monitoring has new text added.
- Section 2.13 Interrelationships has new text added.
- Added Section 4.25 Mitigation for Effects of Routes and Appendix W containing information on proposed management of motorized travel in the Agua Fria National Monument.

The following changes were made but are not substantial:

- *Alternative E* (Proposed Alternative) would adjust the boundary of the Black Canyon corridor as shown on Map 2-79.
- In *Alternative A* (No Action) the Bradshaw-Harquahala Planning Area is managed in accordance with the Phoenix RMP (BLM 1988a) as amended in the Approved Amendment to the Lower Gila North Management Framework Plan and the Lower Gila

South Resource Management Plan (BLM 2005) and the Lower Gila North Management Framework Plan (MFP) (BLM 1983).

2.2 Alternative A (Current Management)

Current management or the No-Action Alternative for each planning area describes the management decisions within existing management plans that would continue if no new decisions were made to alter them.

2.2.1 Agua Fria National Monument

BLM prepared an interim management policy for newly designated BLM national monuments (Instruction Memorandum No. 2002-008) following the signing of Proclamation 7263 (Appendix A) on January 11, 2000. In general, actions that are not precluded by the proclamation and do not conflict with the purposes of the monument may continue. Allowed activities can be restricted only under the following general conditions:

1. BLM, through processes required by law, recognizes places where such uses should be restricted or prohibited to protect the Federal lands and resources, including the objects protected by the monument designation; or
2. BLM finds a clear threat from such a use to the Federal lands and resources, including the objects protected by the monument designation, and the circumstances call for swift protective action.

In May 2002, BLM released the Agua Fria National Monument Current Management Guidance (BLM 2002). This document is

consistent with the Monument Proclamation and the Interim Management Policy for BLM's National Monuments and National Conservation Areas (NCAs) (Instruction Memorandum 2002-008) (BLM 2001a). The guidance describes the following by resource:

- Management decisions that conform to existing management plans and may be implemented.
- Decisions that do not conform to these plans and may not be implemented.
- Decisions that require further consideration and are analyzed within this RMP/EIS.

This guidance gives BLM the direction necessary to inform the public about ongoing uses and activities acceptable within the monument. The Current Management Guidance is a temporary document that will be replaced by the RMP developed through this planning process. The guidance includes the valid decisions and management actions brought forward from planning documents in use at the time of the proclamation. These documents include the following:

- *Phoenix Resource Management Plan (BLM 1988a).*
- *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (BLM 1997).*
- *Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement (BLM 1994b).*
- *Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air quality Management (BLM 2004).*
- *Statewide Plan Amendment of Land-Use Plans in Arizona for Implementation of Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (BLM 1997b).*

Several activity plans have been developed for the area that is now within the Agua Fria National Monument. They formulate more detailed decisions than the plans listed above and, where they are not in conflict with

decisions made in this new plan will continue to be valid. Any decisions from the following plans listed in this document are implementation level decisions.

- *Black Canyon Habitat Management Plan (revised) (BLM 1993b).*
- *Black Canyon Tobosa Grassland Prescribed Burn Environmental Analysis (BLM 1993c).*
- *Coordinated RMP for the Horseshoe Ranch Grazing Allotment (BLM 1998).*

Following are the management decisions from existing plans and guidance documents that are relevant to Agua Fria National Monument.

2.2.1.1 Special Designations

Under *Alternative A*, two ACECs and suitable wild and scenic river segments would remain under current management. These areas are listed below and shown in Map 2-2. In addition to the special designations, the map shows the location of the Perry Mesa National Register District, which extends onto the Tonto National Forest and is listed on the National Register of Historic Places.

Areas of Critical Environmental Concern

Larry Canyon ACEC (80 acres)

Management Actions

Close to motorized vehicles (there are no motorized routes within this ACEC).

Prohibit livestock grazing.

Prohibit Land Use Authorizations.

Withdraw 80 acres from Mineral Entry.

Prohibit surface occupancy for oil and gas development.

Perry Mesa ACEC (9,580 acres)***Management Actions***

Limit motorized vehicles to designated roads and trails.

Acquire 8,484 acres of State and private lands.

Wild and Scenic Rivers

Nearly the entire length of the Agua Fria River within the monument, totaling 22.4 miles in three segments, has been determined as suitable for designation to the national Wild and Scenic Rivers System. The upper segment, from Sycamore Creek to Bloody Basin Road, is 7.7 miles long and classified as scenic (largely undeveloped but crossed by roads). The middle segment, including 10.3 miles dominated by the river's deep canyon, is classified as wild for its primitive character and lack of development. The lower segment, from an existing well and pump house to Larry Canyon, is 4.4 miles long and classified as scenic.

Following the guidance in BLM Manual 8351, until Congress makes a decision regarding designation, these river segments will be managed to protect the outstandingly remarkable wildlife, scenic, and cultural values that define their suitability for wild and scenic designation. Management actions will apply to the 20.8 river miles on public lands.

No new roads, or other facilities that would damage the primitive character, will be permitted in river areas classified as wild. Motorized travel could be restricted in areas classified as scenic, if necessary to protect outstandingly remarkable values. Routes in scenic areas should be inconspicuous and well-screened to maintain the scenic and natural character of these areas.

The river will be maintained in free-flowing condition without impoundments or diversions.

Instream flows will be monitored to determine the minimum flows necessary to sustain the river

values. Protective actions can include measures taken to sustain flows and improve water quality.

2.2.1.2 Lands and Realty***Land Tenure Adjustments***

All lands and interests in lands within Agua Fria National Monument would be retained in Federal public ownership. The RMP evaluates the opportunities for acquiring non-Federal lands within or next to the monument that could protect or enhance management of monument resources. Any acquired lands and interests within the monument's boundary would be added to the monument.

Federal lands and interests in lands within the monument are withdrawn from all new forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including the mineral leasing and mining laws.

Utility and Transportation Corridors and Communication Sites

Existing right-of-way corridors from previous plans would be modified, removed, or remain the same (Map 2-3). No new or widened transportation corridors would be designated within the monument.

Existing utility rights-of-way in the monument would be modified, terminated, or maintained in accordance with valid existing rights, as defined in BLM's agreements with utility providers for as long as the demand exists for the utility. New rights-of-way might be permitted within existing rights-of-way, and where site-specific National Environmental Policy Act (NEPA) analysis determines that impacts would be negligible on the values for which the monument was designated. Maintaining existing facilities would be permitted, subject to compliance with current policies and practices, provided that monument resources are protected.

Applications for rights-of-way or ancillary public facilities will be evaluated and processed under existing policies and practices, and as needed, for access to private inholdings, public facilities, or administrative sites.

BLM may consider applications for new facilities if they determine that such facilities will protect or enhance monument resources.

Land Use Authorizations

Any land use authorizations, would be managed in accordance with valid existing rights granted before the monument was designated. Land use authorizations will be evaluated to ensure compatibility with protecting monument resources. Some authorizations may be allowed to continue if they are not precluded by the proclamation and do not conflict with monument resource management objectives. Applications, proposals, and future use requests that were pending when the monument was created, are subject to the terms of the proclamation, including its recognition of valid existing rights and other management directives and decisions for the monument. Maintaining existing facilities would be permitted, subject to compliance with current policies and practices, provided that monument resources are protected.

2.2.1.3 Soil, Air, and Water Resources

Soil cover and productivity would be maintained or improved through erosion prevention and land treatments.

Activity plans for maintaining or promoting appropriate ground cover would be implemented. These plans would provide for infiltration, permeability, soil moisture storage, and soil stability suitable for ecological sites.

Watershed improvement projects would be implemented to increase ground cover and reduce erosion.

BLM would ensure that mitigation is considered during project planning to prevent or reduce impacts to air quality.

Water rights, subject to valid existing rights, would be reserved in an amount sufficient to fulfill the purpose for which the monument was established. BLM's management actions to protect water resources would include the following:

- Implementing activity plans to maintain and enhance stream flows.
- Developing activity plans to ensure that all water meets or exceeds Federal and State water quality standards.
- Reducing impacts to water quality by implementing mitigation measures during project construction.

2.2.1.4 Biological Resources

The following decisions relative to management of biological resources were extracted from current planning documents:

- Improve the Agua Fria River riparian corridor.
- Implement grazing management practices that protect wildlife species and their habitats, in accordance with *1997 Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (Land Health Standards)
- Continue to transplant native fish species into suitable sites.
- Modify fences to allow wildlife movement.
- Develop new water sources.
- Conduct prescribed burns to restore native grasses and improve pronghorn habitat.
- Use native species when restoring or rehabilitating disturbed or degraded rangelands. Non-native plants may be used under limited circumstances in accordance with the Land Health Standards and Guidelines.

- Modify existing agreements with the Animal and Plant Health Inspection Service (APHIS) animal damage control, specifically targeting individual predators rather than predator populations.
- Coordinate with AGFD on hunting and fishing policies to ensure public safety, especially if there are areas of increased visitor use.
- Continue existing noxious weed control. Exotic species would not be introduced unless doing so is essential for controlling noxious weeds or other undesirable species.
- Plant cottonwood and willow along the Agua Fria River and its tributaries.
- Prohibit firewood collection where it might affect wildlife habitat.
- Acknowledge that scientific investigations are important to increasing our understanding of monument resources. However, investigations should avoid surface disturbance.
- Prohibit vegetation chaining and other vegetation manipulation methods that cause substantial surface disturbance.

The following Biological Opinions and Conference Opinions address endangered species management within the planning areas:

- [2-21-88-F-167] The Phoenix Resource Management Plan/EIS.
- [2-21-96-F-421] The Lower Gila North Management Framework Plan (1983), and Lower Gila North Grazing EIS.
- [2-21-96-F-422] The Eastern Arizona Grazing EIS, Phoenix District Portion.
- [2-21-99-F-031] Reintroduction of Gila Topminnow and Desert Pupfish into Three Tributaries of the Agua Fria River.
- [2-21-03-C-409] Existing Phoenix Resource Management Plan for the Agua Fria National Monument.

2.2.1.5 Cultural Resources

BLM would continue to coordinate with Tonto National Forest in managing cultural resources in the Perry Mesa National Register District, which encompasses the areas of Perry Mesa (including the significant archaeological sites in Perry Mesa ACEC), Black Mesa, and the Agua Fria River Canyon. The boundaries of the Perry Mesa National Register District and Perry Mesa ACEC are shown in Map 2-2.

BLM would coordinate with State Government, tribes, and other governmental entities (under existing agreements and any new arrangements deemed necessary) to disseminate and exchange information and cooperate in management actions consistent with legal authorities and other directives that guide BLM.

Current interim management guidance acknowledges that, although scientific, archaeological, and historical investigations are important to increasing our understanding of monument resources, surface disturbance should be avoided.

BLM would implement protective actions, including placing signs and barriers at sites and repairing vandalism-caused damage at sites.

Professional and avocational archaeologists would continue to conduct resource inventories and site recordings with BLM's approval.

2.2.1.6 Paleontological Resources

No significant paleontological resources are known to exist within the monument. Any newly found resources would be managed under existing BLM's policies and guidance.

2.2.1.7 Recreation Resources

Suitable signs would be placed at the monument's boundaries and other relevant information would be posted as needed. BLM

would initiate actions to interpret the monument's resources and provide environmental education to visitors on important topics (e.g. visitor safety and resource protection). Management discretion would be exercised, when needed, through emergency closures or other actions to protect the monument's resources.

Current recreation uses would continue, to include hiking, target shooting, viewing prehistoric sites, and dispersed recreational camping (with a 14-day limit). Collecting any objects, including fossils, rock specimens, and archaeological artifacts would be allowed by permit only for legitimate scientific uses documented by BLM.

2.2.1.8 Visual Resources

No Visual Resource Management allocations were made in previous planning documents. In the absence of VRM standards established through planning, VRM Class III standards have been applied throughout the planning area.

2.2.1.9 Rangeland Management

Land Use Allocation

Where applicable, livestock grazing would be permitted within the national monument, pursuant to the terms of existing permits and leases. There are currently 11 grazing leases on 10 range allotments.

Livestock grazing would be prohibited in the Larry Canyon ACEC (Map 2-2).

Desired Future Condition

In the monument (as in all properly managed grazing pastures), proper grazing management practices are followed to protect diverse and productive plant communities and the proper functioning condition of riparian areas.

Watersheds are in properly functioning conditions, including their upland, riparian, and

aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes are maintained to support healthy biotic populations and communities.

Management Actions

New water sources might be developed if monitoring or other data reveal a need.

Fence construction and maintenance will follow guidance provided in BLM's Handbook for Fencing H-1741.

All previous versions of the grazing administration regulations have been succeeded by the Department of the Interior's *Final Rule for Grazing Administration*, issued in 1995, which requires implementing standards and guidelines to achieve the fundamentals of rangeland health. The *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (BLM 1997a) (discussed in Sections 2.7.1.1 Land Health Standards and 2.7.1.9 Rangeland Management of Management Common to All Action Alternatives of this chapter) were completed in 1997.

2.2.1.10 Mineral Resource Management

All Federal minerals would remain withdrawn from all forms of location, sale, or leasing, including withdrawal from the following:

- Location, entry, and patent under the mining laws.
- Disposition under all laws relating to mineral and geothermal leasing.
- Disposal under the Mineral Materials Act.

Mineral interests may be exchanged if the exchange furthers the protective purposes of the monument. Any mineral interests acquired by the United States within the monument would be

reserved as part of the monument and would be subject to the withdrawals listed here.

For lands encumbered by mining claims, no activity beyond casual use, as defined in 43 CFR 3809, would be allowed without a determination of valid existing rights.

2.2.1.11 Fire Management

Prescribed burning would continue to be conducted on the national monument to achieve the following:

- Eliminate invasive species.
- Reduce the abundance of woody species.
- Restore and increase production of native grasses.
- Increase the production and vigor of perennial grasses, annual grasses, and forbs.
- Improve pronghorn antelope habitat.

Full suppression of wildfires would continue in the monument.

2.2.1.12 Resource Conservation Areas and Multiple Resource Management Areas

One RCA and two MRMAs would remain under current management under *Alternative A*. These areas are listed below, with applicable management decisions, and shown on Map 2-4.

- Black Canyon RCA (115,650 acres).
- Cordes Junction MRMA (10,810 acres) - An activity plan would be developed; surface occupancy of oil and gas leases would be prohibited in riparian zones; land use authorizations would be prohibited in riparian areas; motorized vehicles would be limited to existing roads and trails; and non-BLM land would be acquired.
- Sycamore Creek MRMA (3,820 acres) - An activity plan would be

developed; surface occupancy of oil and gas leases would be prohibited in riparian zones; land use authorizations would be prohibited in riparian areas; motorized vehicles would be limited to existing roads and trails; and non-BLM land would be acquired.

2.2.1.13 Travel Management

Consistent with Proclamation 7263 (Appendix A) and the Purpose and Significance of Agua Fria National Monument, all motorized and mechanized vehicle use off road will be prohibited, except for authorized administrative and emergency purposes. Motorized and mechanical vehicular uses would be limited to existing or designated routes (Map 2-11).

Larry Canyon ACEC (80 acres) would be closed to motorized vehicles.

Perry Mesa ACEC (9,580 acres) would limit motorized vehicles to designated roads and trails.

2.2.2 Bradshaw-Harquahala Planning Area

The Bradshaw-Harquahala Planning Area is managed in accordance with the Phoenix RMP (BLM 1988a) as amended in the Approved Amendment to the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan (BLM 2005) and the Lower Gila North Management Framework Plan (MFP) (BLM 1983). Additionally, management decisions in the Kingman RMP (BLM 1993a) and the Phoenix RMP cover the scattered parcels that are addressed in this planning effort but are located outside the planning area.

The Phoenix RMP divided the planning area into smaller management units, each with a particular management focus. Cooperative Recreation Management Areas (CRMAs) had significant

recreation values and were recognized by county and State Governments as important areas for intensive recreation uses. Resource Conservation Areas (RCAs) were developed to consolidate public lands by acquiring State and private parcels with resources that would benefit from public owners. Multiple Resource Management Areas (MRMAs) were managed with an emphasis on balancing the use of several resources, including grazing, recreation, and biological and cultural resources.

The following are the management decisions from the three plans that are relevant to the Bradshaw-Harquahala Planning Area:

2.2.2.1 Special Designations

Under *Alternative A*, five wilderness areas and one back country byway would remain under current management. These areas and byway are listed below.

- Big Horn Mountains Wilderness - 21,000 acres.
- Harquahala Mountains Wilderness - 22,880 acres.
- Hassayampa River Canyon Wilderness - 11,840 acres.
- Hells Canyon Wilderness - 9,900 acres.
- Hummingbird Springs Wilderness - 31,200 acres.
- Harquahala Mountain Summit Back Country Byway.

The wilderness areas are shown on Map 1-1 and the back country byway is shown on Map 2-5.

2.2.2.2 Lands and Realty

Land Tenure Adjustments

All public land that has been found to be potentially suitable for disposal (Map 2-6) (check map against the Lower Gila Amendment to verify available parcels) by sale meets the criteria in Section 203 (a) (1) of the Federal Land Policy and Management Act of 1976 (FLPMA). The section states, "...such tract

because of its location or other characteristic is difficult and uneconomical to manage as part of the public lands and is not suitable for management by another Federal department or agency." These lands would be disposed of at fair market value, excluding lands that would be disposed to local governments under the Recreation and Public Purpose Act (R&PPA). Lands which are potentially suitable for disposal will be subject to valid existing rights. A total of 54,370 acres have been found to be potentially suitable for disposal.

Other land tenure adjustments include the following:

- Retain public lands (surface and subsurface estate) in the Black Canyon and the Lake Pleasant RCAs.
- Consolidate public ownership and intensively manage lands in these two RCAs.
- Pursue acquisition of all State land in the two RCAs on a case-by-case basis.
- Acquire through exchange any non-Federal mineral estate underlying Federal surface holdings in the two RCAs.
- Acquire up to 29,360 acres of State land and 2,140 acres of private land in the Lake Pleasant Cultural Resource Management Area.
- Acquire up to 5,846 acres of State and private lands in the Cordes Junction MRMA.
- Acquire up to 39,433 acres of State and private lands in the Bumble Bee MRMA.
- Acquire up to 23,346 acres of State and private lands in the Williams Mesa MRMA.
- Acquire State land along 4 miles of the Hassayampa River in the Hassayampa River Riparian Management Area (RMA).
- Acquire up to 23,388 acres of State and private lands in the Lake Pleasant Burro Herd Management Area (HMA).
- Acknowledge that the State indemnity selection process has been completed. Lands identified in the RMP are no

longer eligible for exchange in that process but may still be open to exchange through other actions with the State or with private entities.

- Identify for disposal all subsurface mineral estate underlying Federal surface designated for disposal outside the two RCAs and the Cultural Resource Management Areas.
- Recommend lands for disposal.
- Change from retention to disposal the parcel in the northern half of T11N, R3E, Section 17.
- Continue to dispose of federal subsurface estate under non-Federal surface estate on a case-by-case basis.
- Continue to acquire non-Federal subsurface estate under federal surface estate on a case-by-case basis.
- Public lands in the Gila Bend Management Area adjacent to the White Tanks County Regional Park, described as T. 2 N., R. 3 W., sections 4,5,8,9,14,15,17 through 22, 26 through 29, and 33 through 35; T. 2 N., R. 4 W., section 1; and T. 3 N., R. 4 W., sections 1,11 through 14, 24,25, and 36 would be retained in federal ownership and would only be available for disposal to local or state governmental entities for recreation/park purposes.
- Exchanges to re-position lands within all the management areas may occur if it has been determined that it would be in the public interest.
- Lands identified for disposal may be retained if significant resource values are found during evaluation. The policy is not to dispose of lands occupied by proposed or listed threatened or endangered species. If other public uses outweigh the value of a parcel as federal-owned threatened or endangered species habitat, disposal could be considered on a case-by-case basis. If a listed or proposed threatened or endangered species would be affected by a land disposal action, consultation or conferencing with the U.S. Fish and Wildlife Service would be required. Exchange for other parcels of habitat

would be encouraged. Compensation for loss of habitat value would be required where such a policy exists. Other mitigation may also be required. These determinations would be made during preparation of the site-specific environmental assessments required for every disposal action. Environmental documentation must be in compliance with the National Environmental Policy Act prior to the approval of any lands action.

- Lands not listed or identified for specific purposes would be retained in public ownership unless needed for recreation or public purposes. Such disposal proposals on lands not identified for disposal would be considered on a case-by-case basis.
- All non-Federal lands with high resource values within the boundaries of the management areas may be considered for acquisition. Acquisitions would occur primarily through the land exchange process in accordance with 43 CFR 2200 and the Federal Land Exchange Facilitation Act. Acquisition by donation and purchase using Land and Water Conservation Funds would also be considered when willing parties or available funds exist. All acquisitions would be negotiated with willing landowners only and must be in the public interest.

Utility and Transportation Corridors and Communication Sites

All major utilities would be routed through designated corridors (Map 2-7). Additionally, right-of-way permits would be issued to promote the greatest use of existing right-of-way routes, including joint use whenever possible.

Within the Black Canyon RCA, the Black Canyon utility corridor, designated by the Phoenix RMP (BLM 1988a), would be retained (Map 2-7). It is a multi-use utility and transportation corridor that includes the Interstate 17 right-of-way and other utility lines.

Corridor Name	Width
a. Central Arizona Project (Granite Reef Aqueduct)	One mile
b. Wenden–Wickenburg	One mile
c. Parker–Liberty	Two miles
d. Mead–Phoenix	Two miles
e. Wickenburg–Yarnell	One mile
f. Palo Verde–Devers	Two miles (restricted between Burnt Mountain and Big Horn Mountains)
g. Palo Verde–Westwing	Two miles
h. El Paso Natural Gas Company	Two miles (One mile at Bill Williams River crossing)

The western portion of the corridor is located within the Bradshaw-Harquahala Planning Area.

The multiple-use corridors along existing rights-of-way designated in the Lower Gila North MFP (BLM 1983) as amended (BLM 2005) (eight of which are within the Bradshaw-Harquahala Planning Area) would be retained, as shown in Table 2-1.

The withdrawal application that involves the Central Arizona Project with the Water and Power Resources Service (now the Bureau of Reclamation) would be reviewed. The withdrawal application should be changed to include only areas absolutely necessary for the project. Otherwise the withdrawal application should be lifted, and a right-of-way would be issued for the project.

Small utility distribution systems would continue to be developed on an as-needed basis throughout the planning area. These small distribution systems would include all uses such as electrical lines, gas and water pipelines, and access roads. These distribution systems would

be authorized when consistent with environmental and land use considerations.

Whenever possible, communication sites would be placed on lands identified for disposal. Development of communication facilities on land to be retained in public ownership would be limited to designated communication sites. The current designated communication sites are listed below and would be retained:

- The 50-acre White Tanks Communication Site at T3N, R3W, Sections 27 and 28 that is located outside the RCAs.
- The repeater and microwave site on Harquahala Mountain in T6N, R10W Sections 31 and 32, or T6N, R11W Section 36, but restrict the development to one or two multi-user buildings.

Land Use Authorizations

Continue to issue land use authorizations (rights-of-way, leases, permits, and easements) on a case-by-case basis and in accordance with decisions established in the Phoenix RMP (BLM 1988a).

Continue to allow small utility distribution systems to be developed on an as-needed basis throughout the planning area. These small distribution systems would include all uses such as electrical lines, gas and water pipelines, and associated access roads. These small distribution systems would be authorized when consistent with environmental and land use considerations.

Prohibit land use authorizations in riparian areas in the Hassayampa River RMA and the Bumble Bee and Williams Mesa MRMA.

2.2.2.3 Soil, Air, and Water Resources

BLM would take the following measures:

- Incorporate salinity control measures into erosion prevention strategies and rehabilitation treatments.
- Ensure the legal availability of water and maintain adequate flows in springs on BLM-administered lands within the Arrastre Creek, Antelope Creek, Weaver Creek, and Harquahala Mountains areas (now wilderness with Federal water rights).
- Initiate strategies for assuring spring flows.
- Maintain and enhance stream flows through activity plans in special management areas.

2.2.2.4 Biological Resources

Design the development of springs and seeps, or other projects affecting water and associated resources, to protect ecological functions and processes.

Cooperate with the AGFD to acquire water rights to maintain or enhance spring and riparian habitats in the planning unit. Specific sites would be determined in a Habitat Management Plan (HMP) to achieve the goals stated in this plan.

Map 2-8 shows the distribution of desert night lizards, Arizona night lizards, and Sonoran Mountain king snakes. Use 43 CFR 3809 (Surface Mining Regulations) to minimize habitat disturbance of these species during new road building associated with mining. New mining plans of operations would provide for closing new roads, when and where needed, to prevent recreation disturbance to night lizard and king snake habitats. Wood collecting would be limited in the Weaver Mountains, particularly along Antelope, Weaver, Arrastre, Cottonwood, and Yarnell Creeks.

Reduce the competition for cover, water, and space among big game, livestock, and burros by decreasing livestock aggregations and removing all burros at waters in the Big Horn, and Harquahala Mountains.

Bighorn sheep lambing areas and a 2-mile buffer zone (20,000 acres) in the Harquahala Mountains would be protected from habitat and behavioral disturbances resulting from (a) land disposal, (b) excess fencing, (c) structure building, (d) land clearing and wood cutting; (e) mining between December 15 and April 15 (within the framework of 43 CFR 3809), (f) road building, (g) intense recreation use and development; (h) rights-of-way construction and maintenance, and (i) more than 40 percent utilization of key browse.

Significant cliffs, shown as Raptor Areas in Map 2-5, and a 2-mile zone of influence in the Big Horn Mountains and the Vulture Mountains area would be protected from (a) land disposal, (b) excess fencing, (c) building of structures, (d) land clearing or removal of downed wood or wood cutting, (e) reducing or modifying mining activities to the extent possible under the 43 CFR 3802 and 43 CFR 3809 mining regulations, (f) road building, (g) intense recreation use or development, (h) burro overuse, and (i) rights-of-way construction and maintenance. Special protection in these areas would be provided for disturbances resulting from human activities between February 1 and May 1 of each year.

Protection zones for golden eagle nests would not exceed ¼-mile radius unless a special need for a larger protection zone is determined. These zones would be created on a case-by-case basis.

Avoid subdividing big horn sheep lambing areas with fencing and monitor livestock use of these key areas. Negotiate with range user to alleviate competition where documented. This would be done by change in season of use or by instituting a grazing system to rest lambing areas during critical lambing season (January through May).

Cooperate with the Arizona Game and Fish Department to allow reintroduction of big horn sheep into the Weaver Mountains and allocate forage to the big horn's reasonable population level one year before reintroduction.

The Arizona Game and Fish Department, in cooperation with the Phoenix District, may use re-establishment and augmentation to assist desert bighorn sheep populations in reaching their natural potential. Re-establishment and augmentation of desert bighorn sheep populations would be done in areas where conflicts with other uses and resources do not occur, or where conflicts can be resolved. Final decisions on re-establishment and augmentation proposals would be considered on a case-by-case basis within the appropriate level of National Environmental Policy Act documentation that addresses conflicts and meets the requirement for public participation.

Decrease cattle densities in big horn habitat to relieve competition between big horn sheep and livestock for space, water, and browse. Graze domestic sheep as far from big horn habitat as possible to decrease big horn disease vectors.

The significant botanical areas in Arrastre Creek (650), Antelope Creek (600 acres), Weaver Creek (150 acres), and the Harquahala Mountains (7,000 acres) would be protected from habitat disturbances resulting from (a) building of structures, (b) land clearing, (c) mining, (d) road building, and (e) building and maintaining rights-of-way. A grazing system that would prevent intensive livestock use of riparian habitat would be implemented.

Prior to spring development, evaluate for clearance any planned spring development to avoid elimination of endemic snails.

Cooperate with Arizona Game and Fish Department to develop big game water catchments on public land at sites designated in the Lower Gila North Habitat Management Plan. Construction of the facilities would depend on availability of funding.

Establish cottonwood and willow regeneration around significant springs through supplemental planting and protection from livestock utilization. Significant springs include: Hackberry Springs, Weaver Mountain Springs.

Monitor selected aquatic habitat in cooperation with Arizona Game and Fish Department, State Health Services, and Environmental Protection Agency where water pollution is a problem to ensure that water quality meets appropriate federal and state standards. Improve conditions that do not meet these standards.

Establish broadleaf tree reproduction and perpetuation via supplemental planting of seedlings in existing and potentially suitable riparian habitat

Allotments, not managed intensively but possessing small tracts of riparian habitat, would be monitored and managed through Habitat Management Plans.

Provide wildlife safe access and year-round water at livestock waters on public lands and cooperate with allottees to develop similar considerations on private lands.

Develop small and upland game waters in 11 areas.

Use the very important browse species as “key species” in developing objectives and in monitoring grazing allotments’ activity plans (those species receiving importance factors greater than 7.0 in Ough and Miller 1980: 65-133. Key browse species would include one or more of the following: *Cercoparpus montanus*, *Atriplex canescens*, *Ceanothus greffii*, *Ephedra fasciculata*, *Populus fremonti*, *Simmondsia chinensis*, *Brickellia coulteri*, *Calliandra eriophylla*, *Eriogonum sp.*, *Krameria gravii*, *Janusia gracilis*.

Exclude livestock and burros at the following dirt tanks (75 acres) to enhance waterfowl and long-eared owl nesting opportunities: a) Special Habitat Feature (SHF) #95-Lone Mountain Tank; b) SHF #132-Mitchell Tank; c) SHF #150-Unnamed; and d) SHF #158-Unnamed.

Develop a fire management program for all cottonwood-willow riparian, mixed broadleaf riparian, and mesquite-salt cedar woodlands.

As Allotment Management Plans are written for allotments containing crucial desert tortoise

habitat, the recommendation to rest tortoise habitat from livestock use between February and July would be incorporated into the grazing systems. Implementation of intensive management on allotments would occur as per WL-2.6. Allotments which do not receive intensive management would be monitored as to livestock use. Adjustments in use would be made by changing seasons of use or number of livestock. Fencing out entire tortoise populations may be done, but only after contact with interested user groups.

Monitor the effects of livestock grazing on different range sites in open chaparral and cottonwood willow SHSs. Enclosures of varying sizes would be constructed. Size would depend on area needed for the purpose.

Develop a Fire Management Plan for Lower Gila North which incorporates protection for sensitive riparian habitats and Lower Sonoran habitats, establishes a mechanism for rehabilitation of riparian habitats, and establishes cover "level" strips in open and closed chaparral habitats.

The Harquahala Mountains would not be designated as an Area of Critical Environmental Concern (ACEC). An allotment Management Plan would be developed to protect this area from overgrazing. All other users or developments incompatible with the protection of this area would be restricted to the extent possible under existing regulations.

Control intensity and season of use by livestock on the Harcuvar and Harquahala mountains open chaparral SHSs

Develop a controlled (prescribed) burn plan to improve open chaparral habitat in the Harcuvar Mountains and, if not visually impacting, the Harquahala Mountains.

Continue to place wildlife escape ramps in water troughs and construct or maintain new wildlife waters in coordination with state and other federal agencies.

New livestock waters to be located within two miles from crucial tortoise habitat and/or crucial desert bighorn sheep habitat would be analyzed on a case-by-case basis to determine potential impacts. Significant impacts would be mitigated with appropriate stipulations on site selection.

Before installing facilities, BLM would conduct a site evaluation for state-protected animals and develop mitigation to protect these species and their habitats. Such mitigation might include project relocation, redesign, or abandonment.

During construction of rangeland developments, vehicles would use existing roads and trails wherever possible for access to sites. Where feasible or where no roads exist, vehicles would travel cross-country to avoid the need for road building. Where new roads must be built, roadbeds would be no wider than needed for reliable access; BLM specifications would also be used to reduce erosion and gulling.

During construction of all rangeland developments, surface resources would be disturbed as little as possible. After construction, disturbed surfaces would be restored to a natural condition as far as is practicable.

Fences proposed in big game habitat would be designed to reduce adverse impacts to big game movement. Specifications in BLM Manual 1737 and in local BLM directives would be used. BLM would consult with the Arizona Game and Fish Department on the design and location of new fences.

Where existing fences in big game habitat do not meet BLM specifications, they would be modified according to BLM Manual 1737 when they are scheduled for replacement or major maintenance.

As a general practice, new roads would not be bladed for use in fence construction. Vehicles would travel overland, or fences would be built by hand.

All livestock waters would provide safe, usable water for wildlife. As funding and opportunities

permit, existing facilities would be modified for safe wildlife use. The following standards apply to design and modification of livestock waters.

- The above-ground height of livestock troughs and tanks would not exceed 20 inches. BLM would install wildlife escape ladders in each facility and provide ramps for small bird and mammal access. Storage tanks would have either a metal or floating vinyl cover to reduce evaporation and prevent wildlife from drowning.
- Ground-level wildlife water developments would be established on livestock waters where feasible. An enclosure of three to seven acres containing the water source, storage, and related riparian habitat would be built to exclude livestock. Where terrain permits, livestock water would be provided at least 0.25 miles outside of the fenced enclosure.
- Developed spring storage and adjacent riparian habitat would be fenced to exclude livestock.
- Where practical, water troughs and tanks would be kept full year-round to provide a continuous water supply for wildlife.

The MFP and RMP planning areas have been inventoried for desert tortoise habitat and habitat categories have been established (Map 4-92). These boundaries may be slightly altered as new and better information becomes available on population distributions and dynamics.

Three one-square-mile study plots in the Harcuvar, and Harquahala mountains would be read every five years to monitor desert tortoise populations and habitat.

Environmental decision documents for all actions occurring in desert tortoise habitat would address and include mitigation measures sufficient to offset, to the extent possible, any loss of tortoise habitat quantity or quality in category I, II, and III habitats.

New land uses would be granted in category I, II, and III tortoise habitats only if no reasonable alternative exists. If no alternative exists,

mitigation, including compensation, would be evaluated to meet the no net loss goal.

Competitive off-highway-vehicle race courses would be prohibited in category I desert tortoise habitat.

Competitive off-highway-vehicle race courses would not be located in category II desert tortoise habitat unless no reasonable alternative site exists. If no reasonable alternative site exists, impacts would be fully mitigated.

Competitive off-highway-vehicle race courses would be evaluated in category III desert tortoise habitat and impacts would be mitigated.

Categorized desert tortoise habitat would be reviewed in relation to ongoing livestock use on public lands in the MFP and RMP planning areas; forage needs of desert tortoise and ecological site potential would be considered in determining and prioritizing the resolution of conflicts.

In category I and II desert tortoise habitat, only those range improvements for livestock that do not conflict with desert tortoise habitat or populations would be allowed.

New wildlife improvements would be allowed in category I and II desert tortoise habitats only if there would be no conflict with desert tortoise populations or habitat.

The Phoenix District would use the BLM's discretionary authorities relating to leasable and salable minerals to meet the desert tortoise habitat category goals and objectives.

Boulder sale permits would be restricted to areas that would result in no net loss of tortoise habitat.

2.2.2.5 Cultural Resources

Reduce or eliminate indirect impacts from land uses on cultural resources as identified through study plots.

Select cultural resources for allocation through inventory for scientific uses.

Conserve for future use a representative sample of site types in the planning area.

2.2.2.6 Recreation Resources

CRMAs would be jointly developed in master plans between BLM and cooperating agencies. Within the current planning area, CRMAs would include Lake Pleasant and the Black Canyon Trail.

BLM would continue to protect and interpret the Harquahala Peak observatory site.

An interpretive corridor would be established with signing along the Stanton-Octave-Yarnell Road. This drive offers interesting views of an undeveloped landscape, natural features, and historical sites. The signing would begin at the Stanton-Octave turnoff from Highway 89, east to Stanton and then north to Yarnell (T10N, R5W, Sec. 30). Signing would include the identification of historical events, creeks, geologic features, and botanic values. Directional signing would be incorporated into the recommended interpretive corridor.

A Special Recreation Management Area would be allocated for the Vulture Mountains. Interdisciplinary planning, including public involvement, would be completed for all special recreation management areas to establish boundaries, type and level of facility development, resolve and mitigate impacts to other resources, evaluate and refine existing Recreation Opportunity Spectrum and Visual Resource Management classes, improve recreational opportunities, and reduce conflicts among public land users. The Vulture Mountains Special Recreation Management Area, to include lands surrounding Vulture Peak, the Vulture Mine, and the Vulture Mountains, would be established to emphasize diverse recreational opportunities including trails, natural and historic interpretation, camping, and off-highway and special recreation vehicle use areas.

- Facilities and maintenance to protect resource values and improve visitor safety and recreational opportunities would be authorized.
- Single-use and multiple-use trails to meet the demand for hiking, equestrian, and mountain biking opportunities would be developed.
- Signing, regulations, and brochures would be provided as needed.

Areas not allocated to a special Recreation Management Area would be allocated as an Extensive Recreation Management Area. Project level planning for the extensive recreation management area would be conducted on a case-by-case basis.

- Primitive facilities would be authorized where needed for resource protection, visitor safety, improvement of the recreation experience, or increasing recreational opportunities.
- Camping locations, camping stay limits, off-highway and special recreation vehicle use, and utilization of the existing natural resources would be established.
- Long- and short-term camping areas, commercial or competitive off-highway and special recreation vehicle use areas, scenic turnouts, cultural interpretive sites, hiking, equestrian or mountain bike trails, road and portal signage, and road maintenance would be evaluated.
- A "designated routes only" off-highway and special vehicle classification would be established on a site-specific basis when needed for resource protection or to maintain consistency with Recreation Opportunity Spectrum classifications.

Public lands in T. 10 N., R. 4 W., sec. 26 would be managed for their scenic values) to interpret the history, geology, and hazards to human safety of the area near the privately owned Placerita Mining Camp.

Establish a hiking and horseback riding trail system near Wickenburg. The width and exact routing of the trail would be determined through a process of close consultation with the concerned public. Identify the trail by standard trail markers and install hazard warnings where needed) Work with the Desert Caballeros of Wickenburg to establish a trail system between Wickenburg and Wagoner to ensure continuous management on public lands.

Management of recreation opportunities and developments would be evaluated using the Recreation Opportunity Spectrum and Visual Resource Management.

Recreation Opportunity Spectrum classifications would be reviewed, refined, and adopted during interdisciplinary planning.

The existing 14-day camping stay limit and all associated policy would be maintained throughout the planning area unless otherwise designated by the authorized officer or through project planning. Areas may be closed for resource protection, rehabilitation, or to reduce conflicts with other uses.

Camping facilities and length-of-stay limits may be established as prescribed below for dispersed camping, long-term visitor areas, extended camping areas, and short-term camping areas.

Camping would be permitted on all public lands unless otherwise designated, closed, or restricted for resource protection.

Self-contained or vehicle-based camping would be permitted within 50 feet of the centerline of designated or existing routes. Cross-country travel to campsites would not be permitted.

Trailhead facilities would be closed to overnight camping upon written approval of the field manager.

Long-term visitor areas (LTVAs) would be defined on the ground with fences or signs. Each LTVA would include designated roads, designated campsites, and amenities to support

long-term camping occupancy. The following resource factors would be considered for implementation and development of LTVAs:

- Permitted only in rural or roaded-natural Recreation Opportunity Spectrum classes.
- Location on rocky or resilient soils.
- Well-maintained ingress and egress routes.
- Location within 30 miles of local community.
- Location outside of category I or II desert tortoise habitat.
- Mitigation if located in Category III desert tortoise habitat.
- Location with no cultural resource conflicts.
- Location outside of burro herd management areas.
- Location of developments in a manner that "is not likely to adversely affect" threatened or endangered species and their habitats.
- Location outside of riparian areas.
- Location outside of areas of critical environmental concern and wild and scenic river areas.

The following operating rules would be considered for LTVA development and use:

- Long-term camping would be restricted to the term of the permit.
- Long-term camping would be restricted to designated sites.
- Services may be provided by contract or local vendor, but the costs of services (firewood, sanitation, trash, water, etc.) would be the responsibility of each occupant.
- Users would be required to comply with all other LTVA regulations.
- LTVA users must comply with all local, state, and federal laws.
- LTVA supplementary rules may be enacted as needed.

Other regulations and conditions for LTVA use would be identified as required during

interdisciplinary project planning. If, during the planning process, the interdisciplinary project planning team determines that modifications need to be made to the guidelines listed above those modifications may be made without the need for a planning amendment. Other regulations and conditions identified during ongoing operation of LTVAs would require public notification.

Extended camping areas would be defined on the ground with fences or signs. Each such area would include designated roads, designated campsites, and amenities to support extended camping occupancy.

Interdisciplinary planning would evaluate and authorize extended camping areas where historic use patterns equate to this type of use, and potential new areas are identified that would be suitable for extended camping. The following resource factors would be considered for implementation and development of extended camping areas:

- Location only in rural, roaded-natural, or semi-primitive motorized Recreation Opportunity Spectrum classes.
- Topographic or vegetative screening.
- Suitable ingress and egress routes.
- Location on rocky or resilient soils.
- Location within 30 miles of local community.
- Location outside of Category I desert tortoise habitat.
- Mitigation if located in category II or III desert tortoise habitat.
- Location with no cultural resource conflicts.
- Location outside of burro herd management areas.
- Location in a manner that "is not likely to adversely affect" threatened or endangered species and their habitats.
- Location outside of riparian areas.
- Location outside of areas of critical environmental concern and wild and scenic river areas.

The following operating rules would be considered for extended camping area development and use:

- Camping restricted to designated sites.
- Services may be provided by contract or local vendor, but the costs of services (firewood, sanitation, trash, water, etc.) would be the responsibility of each occupant.
- Extended camping area visitors must comply with all local, state, and federal laws.
- Extended camping area supplementary rules may be enacted as needed.

Other regulations and conditions for extended camping area use would be identified as required during interdisciplinary project planning. If, during the planning process, the interdisciplinary project planning team determines that modifications need to be made to the guidelines listed above those modifications may be made without the need for a planning amendment. Other regulations and conditions identified during ongoing operation of extended camping areas would require public notification.

Short-term camping areas would be designated only where such use promotes resource protection and where all conflicts can be mitigated. Short-term camping areas would be defined on the ground with fences or signs. Interdisciplinary planning would evaluate short-term camping areas where historic use patterns equate to this type of use, and potential new areas are identified that would be suitable for short-term camping. The following resource factors would be considered for implementation and development of short-term camping areas:

- Primitive ingress and egress routes.
- Location on rocky or resilient soils.
- Mitigation if located in category I, II or III desert tortoise habitat.
- Location with no cultural resource conflicts.
- Location outside of burro herd management areas.

- Location of developments in a manner that "is not likely to adversely affect" threatened or endangered species and their habitats.
- Location outside of wildernesses.
- Location outside of areas of critical environmental concern and wild and scenic river areas.

The following operating rules would be considered for short-term camping area development and use:

- Camping would be restricted to the terms and conditions of that campground.
- Camping would be restricted to designated sites.
- Services may be provided by contract or local vendor, but the costs of services (firewood, sanitation, trash, water, etc.) would be the responsibility of each occupant.
- Camping area users must comply with all local, state and federal laws.
- Specific supplementary rules may be enacted as needed.

Other regulations and conditions for short-term camping area use would be identified as required during interdisciplinary project planning. If, during the planning process, the interdisciplinary project planning team determines that modifications need to be made to the guidelines listed above those modifications may be made without the need for a planning amendment. Other regulations and conditions identified

during ongoing operation of short-term camping areas would require public notification.

Interdisciplinary planning would evaluate and authorize development of special use areas within the management areas.

2.2.2.7 Visual Resources

No VRM standards were applied in either the Phoenix RMP (BLM 1988a) or the Lower Gila North MFP as amended (BLM 2005). The Approved Amendment to the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan, signed in 2005, adopted the VRM management classes as inventoried in the Management Framework Plan of 1983. In addition, all designated wilderness would be allocated as VRM Class I Acres of VRM Classes are shown in Table 2-2 and are portrayed on Map 2-9.

For descriptions of the VRM standards, please refer to the Visual Resources discussion of the Management Common to Both Planning Areas section of this chapter.

Public lands in T10N, R4W, Section 26 of the Gila and Salt River Baseline and Meridian would be managed for scenic values (Placerita Mining Camp area).

The public lands in T8N, R5W, Section 12 would be managed for scenic values (Box Canyon).

Class	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E (Proposed)
I	96,820	96,820	109,570	298,310	98,820
II	593,450	486,800	502,610	340,880	488,250
III	162,000	284,720	260,020	220,790	278,540
IV	144,730	98,660	94,800	107,020	103,390

2.2.2.8 Rangeland Management

Land Use Allocation

Where applicable, livestock grazing would be permitted, under the terms of existing permits and leases. The planning area has 93 grazing authorizations and the existing grazing seasons of use would continue.

Desired Future Condition

Watersheds are in properly functioning condition, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes would be maintained to support healthy biotic populations and communities.

Management Actions

All previous versions of the grazing administration regulations have been succeeded by the Department of the Interior's Final Rule for Grazing Administration, issued in 1995. This rule requires the implementing of standards and guidelines to achieve the fundamentals of rangeland health. The *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (discussed in the Land Health Standards and Rangeland Management/Grazing sections of Management Common to All Action Alternatives of this chapter) were completed in 1997. The existing allotment boundaries are shown on Map 2-5.

Management would emphasize the use and perpetuation of native species. However, when restoring or rehabilitating disturbed or degraded rangelands; nonintrusive, non-native plant species would be suitable for use where native species:

- are not available,
- are not economically feasible,

- cannot achieve ecological objectives as well as non-native species, and/or
- cannot compete with already established non-native species.

2.2.2.9 Mineral Resource Management

The mineral resources managed by the BLM's Phoenix District (PD) include more than minerals underlying BLM-managed surface areas. Mineral resource management includes thousands of acres of subsurface mineral estate beneath lands with surface rights held by others. The Bradshaw-Harquahala Planning Area includes surface acres managed by the PD and presenting the most serious management challenges at the time. However, for this RMP, the minerals planning area is much larger. It is defined as the federally administered minerals beneath PD-managed lands where the surface rights are held by BLM, the State of Arizona, or private parties. Therefore, the minerals planning area, as shown on Map 1-2, extends far to the north and east beyond Agua Fria National Monument and the Bradshaw-Harquahala Planning Area boundaries. Map 2-10, shows areas of current minerals management within the Agua Fria National Monument and the Bradshaw-Harquahala Planning Area.

Within the boundary of the Lower Gila North MFP as amended (BLM 2005), all lands in the planning area not closed to oil and gas leasing would remain open for such purposes. Federal minerals in designated wilderness are closed to oil and gas leasing. The remaining acres of federal minerals in the MFP planning area would be open to oil and gas leasing. Conditions of approval and special stipulations would be developed and incorporated as part of any operational permit after site-specific environmental analyses are completed and documented per the National Environmental Policy Act. Stipulations would mitigate impacts to special status species, cultural areas, and other resources affected by leasing-related activities.

Management Actions

Leasable Minerals

Restrict any actions or withdrawal in the planning area that would segregate leasable minerals unless there is strong evidence that the area is not conducive to mineralization.

All land in the planning area would remain open to mineral leasing. Should exploration or development of leasable minerals be pursued, special stipulations would be incorporated into the lease agreement after the results of site-specific environmental assessments for each action are known.

Mineral withdrawals within ACECs are subject to valid existing rights. The ACEC would be closed to mineral leasing effective on the date they were created. Unless stated otherwise, non-Federal lands acquired within an ACEC will be closed to the operation of the mining laws, and expired leases may not be renewed.

Surface occupancy for oil and gas development would be prohibited in riparian areas of the Bumble Bee and Williams Mesa MRMA, and the Hassayampa RMA.

Federally administered minerals beneath lands addressed in this plan, where the surface rights are held by BLM, the State of Arizona, or private parties (Map 2-10), would be open to exploration and leasing.

Saleable Minerals

Sales of mineral materials to the public would continue to be administered on a case-by-case basis under 43 CFR 3600. Generally, saleable minerals are sold at market prices. Free-use permits would continue to be issued to the State and local communities as the need arises.

Mineral withdrawals within ACECs are subject to valid existing rights. The ACEC would be closed to mineral sales effective on the date they were created. Unless stated otherwise, non-

Federal lands acquired within an ACEC will be closed to the operation of the mining laws.

Demand for saleable minerals would be met by sales or free use permits on a case-by-case basis.

Federally administered minerals beneath lands addressed in this planning effort, where the surface rights are held by BLM, the State of Arizona, or private parties (Map 2-10) would be open to mineral material disposal on a case-by-case basis, with determinations based on consistency with BLM's management policies and objectives.

Locatable Minerals

Exploration for and development of locatable minerals are provided for under the 43 CFR 3802 and 43 CFR 3809. These regulations provide for mineral development in conjunction with resource protection and are designed to prevent unnecessary and undue degradation of the environment from mining. Mining within the planning area would continue to be administered on a case-by-case basis. The planning area would generally be left open to mineral location and development.

Mineral withdrawals within ACECs are subject to valid existing rights. The ACEC would be closed to mining claim location upon approval of the plan creating the ACEC. Unless otherwise stated, non-Federal lands acquired within an ACEC would be closed to the operation of the mining laws. Mining claims within an ACEC may be examined for validity and contested if appropriate, as determined by the BLM State Director. The Lower Gila MFP (BLM 1983) recommended withdrawal of proposed ACECs from mineral entry. This recommendation was not implemented.

Minimize detrimental impacts of mineral exploration and development to habitat in the 2000-acre basin east and south of Harquahala Peak. Require performance bonds from all owner/operators to prevent unnecessary and undue degradation. Review leaching operations for environmental and human safety

2.2.2.10 Fire Management

Responses to wildfire would be full suppression in all areas. Full suppression means taking sustained and appropriate action to promptly suppress wildfires.

2.2.2.11 Wild Horses and Burros

In 1971, following the passage of the Wild Free-Roaming Horse and Burro Act (WHBA), BLM was required to designate areas where wild horses and burros existed before 1971. No wild horses are known to have been within either the monument or the Bradshaw-Harquahala Planning Area in 1971.

BLM manages burros on public land at the minimum level needed to ensure the herd's free-roaming character, health, and self-sustaining ability. Burro Herd Areas (HAs) and Herd Management Areas (HMAs) are shown on Map 2-5.

BLM classified the Lake Pleasant Area as a HMA and the Harquahala Mountains as a HA with a "zero burro population." The latter decision was based on conflicts in the area with private landowners, agricultural interests, wildlife such as bighorn sheep, and other resources. A zero burro population required removing all burros from the mountain range. Funding, however, was not provided and the burros have not yet been removed. Nuisance burros would be removed on a case-by-case basis.

Managing the 80,800-acre Lake Pleasant Burro HMA would continue in the manner described in the current herd management plan. In the 156,255 acre Harquahala HA, nuisance burros would continue to be removed on a case-by-case basis. If funding is received, burros would be removed from the HA.

2.2.2.12 Resource Conservation Areas and Multiple Resource Management Areas

Two RCAs, one RMA, and three MRMAs would remain under current management under *Alternative A*. These areas are listed below with management decisions and shown on Map 2-4.

- Black Canyon RCA (115,650 acres).
- Lake Pleasant RCA (297,080 acres).
- Bumble Bee MRMA (52,270 acres) - Develop an activity plan; prohibit surface occupancy of oil and gas leases in riparian zones; prohibit land use authorizations in riparian areas; limit motorized vehicles to existing roads and trails; acquire land.
- Cordes Junction MRMA (10,810 acres) - Develop an activity plan; prohibit surface occupancy of oil and gas leases in riparian zones; prohibit land use authorizations in riparian areas; limit motorized vehicles to existing roads and trails; acquire land.
- Williams Mesa MRMA (59,740 acres) - Develop an activity plan; prohibit surface occupancy of oil and gas leases in riparian zones; prohibit land use authorizations in riparian areas; close 3.5 miles of Tule Creek to motorized vehicles, elsewhere limited to existing roads and trails; and acquire land.
- Hassayampa River RMA - 12 miles.

Vulture Mine Road from Highway 60 south to the Vulture Mine would be designated as a scenic drive, including a scenic 1/2 mile corridor on either side of the road.

BLM would interpret, through signing; the existing scenic, geologic, and botanic values in T6N, R5W, Section 6.

Motorized vehicles would be limited to existing roads and trails in the Hassayampa River RMA.

2.2.2.13 Travel Management

Land Use Allocation

OHV Designations (Map 2-11)

Motorized vehicles would be limited to existing roads and motorized routes in the Cordes Junction and Williams Mesa MRMAs. Motorized vehicles would be limited to designated roads and trails in the Bumble Bee MRMA. A 3.5-mile portion of Tule Creek would be closed to motorized vehicles. Within the area covered by the Phoenix RMP (BLM 1988a), vehicular travel would be limited to existing roads and motorized routes in use in 1988, except for areas closed or limited to designated roads and routes.

The areas covered by the Lower Gila North MFP as amended (BLM 2005) (BLM 1983) as amended by the Approved Amendment to the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan (2005) Off-highway and special recreation vehicles would be limited to existing and/or designated roads and vehicle routes. No unauthorized cross-country vehicle travel would be permitted. Creation of unauthorized new trails and widening or extending existing trails would not be permitted. A "designated routes only" off-highway and special recreation vehicle classification would be enacted on a management area, or on a site-specific basis, when needed for resource protection or to ensure consistency with Recreation Opportunity Spectrum classifications.

The five designated wilderness areas would remain closed to all forms of motorized vehicles and mechanized uses, as legally mandated by the Wilderness Act.

Management Action

A hiking and a horseback riding trail system would be established near Wickenburg. The width and exact routing of the trail would be determined through close consultation with the concerned public. The trail would be marked by

standard trail markers, and hazard warnings would be installed where needed.

BLM would work with its partners to establish a trail system between Wickenburg and Wagoner to ensure continuous management on public lands.

2.3 Alternative B

The following discussion, with the Desired Future Conditions, land use allocations, and management actions described in the Management Common to All Action Alternatives section of this chapter, constitute proposed *Alternative B*.

2.3.1 Agua Fria National Monument

The overall theme of *Alternative B* is to plan for increased public use and include more recreation-related development, access, and education interpretation, consistent with protecting monument resources. Developed recreation is addressed by establishing a Front Country RMZ, while a Back Country RMZ would be established to retain primitive landscape values in the Agua Fria River Canyon and its tributary canyons. Selected archaeological sites would be made available for increased public visitation by allocating areas for relatively intensive and moderate public use. Access would be allowed for visitors' opportunities, including use of existing vehicle routes. Grazing would remain similar to current management, but grazing within riparian areas would be limited to winter (November 1 to March 1).

2.3.1.1 Special Designations

Areas of Critical Environmental Concern

No new ACECs are proposed by *Alternative B*, and the existing Perry Mesa and Larry Canyon ACECs (Map 2-2) would be removed from

designation because the National Monument Proclamation (Appendix A - Agua Fria National Monument Proclamation) establishes a higher level of protection and management across a more extensive landscape.

Wild and Scenic Rivers

Reaches of the Agua Fria River that have been determined to be suitable for WSR status would be managed in a way that does not degrade the values defining their suitability.

Back Country Byways

A back country byway would be evaluated for Bloody Basin Road and nominated if standards and requirements are met (Map 2-12).

Desired Future Condition

The back country byway would provide a vehicle-based, back country experience with amenities to heighten visitors' experiences, and to educate/inform them about interesting natural/cultural features along the route. Visitors could expect the road to be occasionally difficult and settings to be remote. The road might not be accessible to all classes of vehicle. High clearance might be needed to traverse the whole route. The area 1/2 mile to either side of the road's centerline would be maintained in a semi-primitive motorized recreation setting, except at the La Plata cultural site where the desired setting would be more like roaded natural, should it be further developed for public use.

Management Actions

Road maintenance would conform to BLM's Maintenance Intensity of Level 3 'Medium' (BLM Roads and Trail Terminology Report) and be passable by high-clearance vehicles.

VRM Allocations to achieve the Desired Future Conditions are described in Section 2.3.1.6 Visual Resources.

BLM would acquire easements and rights-of-way where needed to ensure long-term public access.

Monument features along the route would be interpreted, including prehistoric cultural features, historic homesteads, settlements, and ranching history.

Directional, safety, and interpretive signing would be installed to enhance public use, enjoyment, and stewardship of the route.

Administrative Actions

Develop a cooperative and a collaborative site plan with landowners and other agencies that would be affected by the byway designation.

2.3.1.2 Lands and Realty

Land Use Allocations

Utility and Transportation Corridors

Management Actions

The existing utility corridor (designated by the Phoenix RMP [BLM 1988a] in the Black Canyon RCA) would be narrowed so that the eastern boundary of the utility corridor would follow the easternmost boundaries of any existing right-of-way that is or are currently within the corridor identified in the Phoenix RMP (Map 2-13).

2.3.1.3 Biological Resources

Under *Alternative B*, wildlife habitat management would continue under current management, except the existing Larry Canyon ACEC would be eliminated because the National Monument Proclamation (Appendix A) provides for a higher level of protection and management across a more extensive landscape.

Biological resources would be subject to the same management guidance as in Section 2.7.1.4 - Biological resources from the Management Common to Both Planning area and Section 2.7.2.5 - Biological Resources from Management Common to the Agua Fria National Monument.

2.3.1.4 Cultural Resources

Alternative B would include development of access, interpretive facilities, and interpretive media for selected archaeological sites in the monument (Map 2-14, Multiple Resource Allocation). These archaeological sites would be allocated to SCRMA's focused on varying levels of public use, as described in the Cultural Resources section of Management Common to Agua Fria National Monument and shown in Table 2-3 SCRMA's.

High use represents the most intensive degree of interpretive development associated with a SCRMA, and Moderate use involves less intensive development of access and interpretive facilities. All areas of the monument not shown as High or Moderate use SCRMA's on Map 2-14 would be considered areas of Low public use that are not available for on-the-ground interpretive development or commercial tours.

2.3.1.5 Recreation Resources

In *Alternative B*, the entire monument would be allocated to a Special Recreation Management Area with three Recreation Management Zones within it. These zones would include a Back Country RMZ (12,700 acres) to manage and maintain the natural landscape character in the Agua Fria River Canyon and tributary washes (Map 2-14). A Passage RMZ (300 acres) would be created along vehicle routes designated as open to allow motorized access to and through the Back Country. The remainder of the monument would be designated a Front Country RMZ of 57,900 acres, where more focus could be placed on recreation and interpretive opportunities. Desired future conditions (DFC) for these zones can be found in the Recreation and Public Access discussion of the

Level of Public Use	Locations/Sites
High	Pueblo la Plata and Fort Silver (Pueblo la Plata Complex) Badger Springs Pueblo, the Arrastra site, Badger Springs rock art, and the Rollie site.
Moderate	Baby Canyon Pueblo and Pueblo Pato Richinbar Ruin The historic Teskey homestead near the Agua Fria River.
Low	Public use of archaeological sites would be limited in all other areas not described above.

Management Common to Agua Fria National Monument section of this chapter.

Land Use Allocation

Front Country Recreation Management Zone (57,900 acres).

Desired Future Condition

See Desired Future Condition description in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.3.1.6.

Special Recreation Permits (SRPs) and Concessions:

- Up to 12 SRPs would be authorized within the monument each year. These SRPs might include any combination of the following:
 - Commercial enterprises (e.g. jeep tours, outfitters),

- Commercial special events, and
- Noncommercial special events.

If consistent with monument values and objectives, recreation concession leases and vendor permits would be issued to enhance visitor use. Concessions and vending permits would be considered on a case-by-case basis, with determinations based on consistency with management objectives and clearly demonstrated visitor needs.

Dispersed Camping:

- Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs, threatens resources protected by the proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures; limiting camping to designated sites, or seasonal limitations.
- Camping would be prohibited within 1/4 mile of developed campgrounds.
- Camping would be prohibited at archaeological sites, including petroglyphs (rock art) sites.
- Camping would be allowed if at least 1/4 mile from intense or moderate public-use archaeological sites.
- Camping would be prohibited within 1/4 mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).
- Dispersed camping could be limited to certain designated areas if resource damage occurs.

Developed Campgrounds:

- Two campgrounds would be developed, one at Badger Springs and one along Bloody Basin Road.

- The campgrounds would each be limited to 20 campsites, each with a picnic table, fire ring, and ramada.
- Potable water would be developed if practical.
- Restroom facilities would be provided to address health and sanitation issues.

Campfires:

- Campfires would be prohibited within 1/4 mile of intensive and moderate public-use archaeological sites.
- Campfires would be prohibited at archaeological sites, including petroglyphs (rock art) sites.
- Campfires would be prohibited within 1/4 mile of a developed campground. In campgrounds, campfires would be allowed only in campfire rings.
- Campfires would be prohibited within 200 feet of a public area, such as a trail or other facilities.
- Campfires would be allowed at dispersed campsites.
- Firewood could be collected only for campfire use. Visitors could collect dead, down, and detached material only for campfires. Vegetation use and disturbance would be monitored, and this use might be temporarily or permanently suspended to prevent resource damage.

Recreational Target Shooting:

- Targets need to be of a type and material that will not produce litter and must be cleaned up after use.
- Spent shell casings have to be cleaned up after use.
- Shooting would be managed to reduce resource degradation, to reduce social conflicts, and to provide for public safety.
- Shooting would be prohibited within 1/2 mile of identified areas where people congregate, including trailheads, campgrounds, interpretive sites, kiosks, and other high-use sites.

Trail Construction for Non-motorized
Recreation Use

- Discussion of recreation trail development can be found in Section 2.3.1.8.

Land Use Allocation

Back Country Recreation Management Zone of 12,700 acres

Desired Future Condition

See Desired Future Condition description in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.3.1.6.

SRPs and Concessions:

- Up to 12 SRPs would be authorized within the monument each year. The SRPs might include any combination of the following:
 - Commercial (e.g. hunting outfitter/guides),
 - Commercial special events, and
 - Noncommercial special events.
- If consistent with monument values and objectives, recreation concession leases and vendor permits would be issued to enhance visitor use, visitor services, visitor safety, and visitor enjoyment. Concessions and vending permits would be considered on a case-by-case basis, with determinations based on consistency with management objectives and clearly demonstrated needs.

Dispersed Camping:

- Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs or threatens resources protected by the proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area

closures, limiting camping to designated sites, or seasonal limitations or closures.

- Dispersed camping would be prohibited within ¼ mile of a developed campground.
- Dispersed camping would be prohibited at archaeological sites, including petroglyphs (rock art) sites.
- Dispersed camping would be allowed if at least ¼ mile from intense or moderate public-use archaeological sites.
- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).

Developed Campgrounds:

- None.

Campfires:

- Campfires would be prohibited within ¼ mile of intensive and moderate public-use archaeological sites.
- Campfires would be prohibited on archaeological sites, including petroglyphs (rock art) sites.
- Campfires would be prohibited within ¼ mile of a developed campground.
- Campfires would be prohibited within 200 feet of a trail or other public use facility.
- Campfires would be allowed at dispersed campsites.
- Firewood collection would be limited to campfire use only. Collecting dead, down, and detached material would be allowed for campfire firewood. Vegetation use and disturbance would be monitored, and firewood collecting might be temporarily or permanently suspended to prevent resource damage.

Recreational Target Shooting:

- Targets need to be of a type and material that will not produce litter and must be cleaned up after use.
- Spent shells have to be cleaned up after use.
- Shooting would be managed to reduce resource degradation, to reduce social conflicts, and to provide for public safety.
- Shooting would be prohibited within ½ mile of identified areas where people congregate, including trailheads, campgrounds, interpretive sites, kiosks, and other high-use sites.
 - Commercial (e.g. jeep tours, outfitters).
 - Commercial special events, and
 - Noncommercial special events.
- If consistent with monument values and objectives, recreation concession leases and vendor permits would be issued to enhance visitor use, visitor services, visitor safety, and visitor enjoyment. Concessions and vending permits would be considered on a case-by-case basis, with determinations based on consistency with management objectives and clear, demonstrated need.

Trail Construction for Non-motorized Recreation Use

Discussion of recreation trail development can be found in Section 2.3.1.8.

Land Use Allocation

The Passage Recreation Management Zone would consist of 300 acres.

Desired Future Condition

See Desired Future Condition description in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.3.1.6.

River crossings at Kelton Ranch, EZ Ranch, Horseshoe Ranch, and Cross Y Ranch would be maintained.

SRPs and Concessions:

- Up to 12 SRPs would be authorized within the monument each year. These SRPs might include any combination of the following:

Dispersed Camping:

- Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs or threatens resources protected by the proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.
- Dispersed camping would be prohibited within ¼ mile of a developed campground.
- Dispersed camping would be prohibited at archaeological sites, including petroglyphs (rock art) sites.
- Dispersed camping would be allowed if at least ¼ mile from intense or moderate public-use archaeological sites.
- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).
- Dispersed camping could be limited to designated areas if resource damage occurs.

Developed Campgrounds:

- None.

Campfires:

- Campfires would be prohibited within ¼ mile of intensive and moderate public-use archaeological sites.
- Campfires would be prohibited on archaeological sites, including petroglyphs (rock art) sites.
- Campfires would be prohibited within ¼ mile of a developed campground.
- Campfires would be allowed at dispersed campsites.
- Firewood collection would be limited to campfire use only. Collecting dead, down, and detached material would be allowed for campfire firewood. Vegetation use and disturbance would be monitored, and this use might be temporarily or permanently suspended to prevent resource damage.

Recreational Target Shooting:

- Targets need to be of a type and material that will not produce litter and must be cleaned up after use.
- Spent shell casings would need to be cleaned up after use.
- Shooting would be managed to reduce resource degradation, to reduce social conflicts, and to provide for public safety.
- Shooting would be prohibited within 1/2 mile of identified areas where people congregate, including trailheads, campgrounds, interpretive sites, kiosks, and other high-use sites.

Trail Construction for Non-motorized Recreational Use

Discussion of recreation trail development can be found in Section 2.3.1.8.

Administrative Actions

Site-specific baseline data for assessing the effects of dispersed camping would be collected, and a monitoring process developed so change

can be detected and resource damage determinations can be made.

Baseline data would also be collected to determine environmental and social impacts of recreational target shooting. The data would be used to determine the effects that are now occurring and to establish standards for future management. A monitoring plan would be developed to detect change. Unacceptable impacts to monument resources and public safety concerns could result in further management actions ranging from increased restrictions to closure.

2.3.1.6 Visual Resources***Land Use Allocations***

VRM classes for *Alternative B* throughout the planning area would be allocated as described in 2-2 and as portrayed on Map 2-15.

Within the Agua Fria National Monument, allocate:

- Front Country and Passage RMZs to VRM Class III.
- Back Country RMZ to VRM Class II.
- 1/2 mile either side of Bloody Basin Road Back Country Byway to VRM Class II.
- Utility corridors would be allocated to VRM Class III.

2.3.1.7 Rangeland Management***Land Use Allocation***

Eleven grazing authorizations would continue to be administered within Agua Fria National Monument.

Desired Future Condition

Watersheds are in properly functioning conditions, including their upland, riparian, and aquatic components. Soil and plant conditions

support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes are maintained to support healthy biotic populations and communities.

Standard 2 of the *Arizona Standards for Rangeland Health* (Land Health Standards) would be achieved within 5 years in all riparian areas where livestock grazing precluded achieving that standard.

Management Actions

Livestock grazing in riparian areas would be limited to the winter (November 1 to March 1).

Inventory and/or monitoring studies will be used to determine if adjustments to permitted use levels, terms and conditions and management practices are necessary in order to meet and/or make significant progress towards meeting the Arizona Standards for Rangeland Health and other Land Use Plan Objectives.

Fence construction and maintenance will follow guidance provided in BLM's Handbook for Fencing H-1741.

2.3.1.8 Travel Management

Land Use Allocation

The entire monument is allocated as Limited to Designated Routes (Map 2-16).

Management Actions

All vehicles would be limited to designated routes. Cross-country motorized travel is prohibited except in the case of an emergency or for approved administrative purposes.

River crossings at Kelton Ranch, EZ Ranch, Horseshoe Ranch, and Cross Y Ranch would be maintained.

Within Front Country

Trail Construction for Non-motorized and Non-mechanized Recreation Use:

- Trails would be developed as needed to enhance resources, recreation experiences, and to protect monument values.
- All construction would be compatible with Desired Future Conditions for the area.
- Trails would be designed to blend into the environment.
- Loop, connector, and linear trails would be built to meet recreation, access, and resource objectives.
- Trails to maintain connectivity to recreation opportunities such as hunting, hiking, equestrian use, and viewing cultural sites could be considered.
- Trails to provide linkage with other connector trails beyond the border of the monument would also be considered.
- Opportunities to link networks of non-motorized trails within the monument to those outside the monument on other BLM's lands, or with other adjacent jurisdictions, including Tonto and Prescott National Forests, Yavapai County, and local communities, would be explored where they are consistent with monument values and do not impair protection of monument resources.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- New vehicular routes would be considered on a case-by-case basis, with determinations based on protection and enhancement of monument values.
- If monument values are not compromised, routes would also be considered for connectivity and to

provide for greater access to recreation opportunities.

- Bloody Basin and Badger Springs Roads would be maintained to at least a BLM Level 3 standard (BLM 9100 Manual) to provide safety for public use.
- Loop routes for interpretive opportunities for all-terrain vehicle (ATV) travel would be evaluated.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles:

- All vehicles would be limited to designated routes consistent with the discussion in the Management Common to Agua Fria National Monument, in Section 2.7.2.10.
- OHV access would be managed to provide for a variety of use experiences, including access for public visitation of the monument's cultural and biological resources.

Within Back Country

Trail Construction for Non-motorized and Non-mechanized Recreation Use:

- Trails would be developed as needed to enhance resources and recreation experiences, and protect monument values.
- All construction would be compatible with Desired Future Conditions for the area.
- Trails would be designed to blend into the environment.
- Loop, connector, and linear trails would be built to meet recreation, access, and resource objectives.
- Trails to maintain connectivity to recreation opportunities such as hunting, hiking, equestrian use, and viewing cultural sites would be considered.

- Trails to provide linkage with other connector trails beyond the border of the monument would also be considered.
- Opportunities to link networks of non-motorized trails within the monument to those outside the monument on other BLM's lands, or with other adjacent jurisdictions, including Tonto and Prescott National Forests, Yavapai County, and local communities, would be explored where they are consistent with monument values and do not impair protection of monument resources.
- Non-motorized trails might be built to provide access to core use areas. They may consist of minimal trail tread development or routes marked only by low impact posts such as fiberglass with minimal ground disturbance.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles:

- The Back Country RMZ would be managed as a non-motorized area.

Within Passage

Trail Construction for Non-motorized and Non-mechanized Recreation Use:

- Trails would be developed as needed to enhance resources and recreation experiences, and protect monument values.
- All construction would be compatible with Desired Future Conditions for the construction area.
- Trails would be designed to blend into the environment.
- Loop, connector, and linear trails would be built to meet recreation, access, and resource objectives.
- Trails to maintain connectivity to recreation opportunities, such as hunting, hiking, equestrian use, and

viewing cultural sites could be considered.

- Trails to provide linkage with other connector trails beyond the border of the monument could also be considered.
- Opportunities to link networks of non-motorized and non-mechanized trails within the monument to those outside the monument on other BLM's lands, or with other adjacent jurisdictions, including Tonto and Prescott National Forests, Yavapai County, and local communities, would be explored where they are consistent with monument values and do not impair protection of monument resources.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

If analysis determines new route construction is needed to mitigate resource conflicts but maintain necessary access, the Passage RMZ would be adjusted to incorporate the redesigned route network.

Route Construction for Motorized Use:

- No new routes would be built within the Back Country RMZ except to mitigate resource conflicts.
- If analysis determines new route construction is needed to mitigate resource conflicts but to maintain necessary access, the Passage RMZ would be adjusted to incorporate the redesigned route network.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles:

- All vehicles would be limited to designated routes consistent with the

discussion in the Management Common to Agua Fria National Monument in Section 2.7.2.10.

- OHV access would be managed to provide for a variety of use experiences, especially to provide access for public visitation of cultural and biological resources of the monument.

Implementation Actions

Public Access

An evaluation tree review process, as described in Appendix D, was used to establish a designated public access and route system to support resource objectives consistent with *Alternative B* and to protect monument resources. The results of the evaluation are shown in Map 2-17, and a summary of route status and quantity is shown below:

Routes Open 137 miles

Routes Closed 37 miles

New Routes 5 miles

2.3.2 Bradshaw-Harquahala Planning Area

The overall theme for *Alternative B* for the Bradshaw-Harquahala Planning Area emphasizes resource use and development, while ensuring that resource protection is not compromised. This Alternative provides for both developed and primitive recreation by establishing SRMAs and lands allocated to maintain wilderness characteristics, as well as developed public use of cultural resources. Wildlife habitats and grazing would remain similar to current management, with a change of riparian pasture use to winter season. Areas would remain open to mining. The number of utility corridors would increase, and corridors would be widened. VRM objectives would be set based on management activities and land uses being provided for in a specific area so that they may be achieved within the VRM Class

objective being set. Access within the planning area would be increased more than under the other Alternatives. The MUs for *Alternative B* are shown in Map 2-18.

2.3.2.1 Management Applicable to the Entire Bradshaw-Harquahala under this Alternative

2.3.2.1.1 Lands and Realty

Land Tenure Adjustments

Lands potentially suitable for disposal by sale or exchange would consist of parcels outside the MUs that are not within a land use allocation (Map 2-19). Other criteria limiting which lands might be selected for disposal are described in the Management Common to Both Planning Areas (Section 2.7.1.2), 58,400 acres would potentially be suitable for disposal. Of these 58,400 acres, 5,200 acres are scattered parcels outside the planning area boundaries but have been included in these planning documents.

Lands that would be considered for potential acquisition would include State and private lands (willing seller) having important resources values. When acquired, these lands would be managed consistently with the resource management prescriptions outlined in this land use plan that apply to other nearby public lands. These lands would meet the criteria described under the Management Common to Both Planning Areas in the discussion under Lands and Realty as well as program objectives reflected in Alternative B.

Utility and Transportation Corridors

Under this Alternative, new utility corridors within the Bradshaw-Harquahala Planning Area (Map 2-20) would be designated for future expected demands. These designations would respond to the demand for the intensification of the power grid and would be

consistent with the utility regulations of the Arizona Corporation Commission.

2.3.2.1.2 Rangeland Management

Land Use Allocation

A total of 93 grazing authorizations would continue to be administered within the planning area.

Desired Future Condition

Watersheds are in properly functioning conditions, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes are maintained to support healthy biotic populations and communities.

Standard 2 of the Arizona Standards for Rangeland Health (Land Health Standards) would be achieved within five years in all riparian areas where livestock grazing precluded achievement of that standard.

Management Actions

Livestock grazing in riparian areas would be limited to winter (November 1 to March 1). This restriction would be implemented where BLM can effect a change and where grazing is precluding achievement of the Desired Plant Community (DPC). Grazing allotment boundaries are shown in *Alternative B* on Map 2-21.

On unfenced allotments, livestock control fences and alternate water sources would be built where needed to meet natural resource objectives.

Fence construction and maintenance will follow guidance provided in BLM's Handbook for Fencing H-1741.

2.3.2.1.3 Mineral Resource Management

Maps 2-22, 2-23, and Map 2-24, show the minerals management areas proposed under *Alternative B* that are within the Agua Fria National Monument and the Bradshaw-Harquahala Planning Areas. The following descriptions of mineral types include information on any mining closures.

Management Actions

Leasable Minerals

Lands reconveyed to the Federal Government, which are now closed to leasing, would be opened under the Mineral Leasing Act. In addition, all other lands would be open for mineral leasing and exploration except (1) lands with existing segregations or withdrawals, and (2) the Tule Creek ACEC, which would be closed to mineral leasing.

Leases would be issued with special stipulations to protect resources. Stipulations to protect important surface values would be based on interdisciplinary review of individual proposals and environmental analyses.

Saleable Minerals (Mineral Materials)

Lands reconveyed to the Federal Government and now closed to mineral material disposal would be opened under applicable laws. In addition, except for legislatively withdrawn areas, other withdrawn areas, and segregated areas; all public lands within the planning area would be open to mineral material disposal on a case-by-case basis.

The Tule Creek ACEC and lands allocated to maintain wilderness characteristics would be closed to mineral material disposal.

Locatable Minerals

Lands reconveyed to the Federal Government that are now closed to mineral entry would be

opened to location under the mining laws. All small tract lands would be opened to location under the mining laws. In addition, all other lands would be opened for location except: (1) lands with existing segregations or withdrawals and (2) the Tule Creek ACEC, which is recommended for closure to location under the mining laws.

2.3.2.1.4 Travel Management

Land Use Allocation

All public lands in the Bradshaw-Harquahala Planning Area would be allocated as limited use areas, with motorized and mechanized vehicle use limited to designated routes. The Hassayampa River Canyon, Hells Canyon, Harquahala Mountains, Big Horn Mountains, and Hummingbird Spring Wildernesses would remain closed to motorized and mechanized use as shown in Map 2-16.

Desired Future Conditions

Define, designate, implement, and monitor a comprehensive travel management network affording a range of high-quality and diverse motorized and non-motorized recreation opportunities. The network would consist of a system of areas, roads, routes, and/or trails. The travel management network and associated recreation opportunities would be consistent with other resource management objectives and recreation settings for the area.

Management Actions

Limit all vehicles to designated routes. Cross-country motorized travel will not be permitted except in cases of emergency or for approved administrative purposes.

Implementation Actions

An evaluation process, similar to one described in Appendix D, will be used to establish a

designated public access and route system to support resource objectives consistent with *Alternative B*.

Develop comprehensive Travel and Transportation Management Plans for the Management Units and other public lands within the planning area. These plans would implement route designations on the public lands.

2.3.2.2 Management Units

Under *Alternative B*, five MUs are identified as geographical units for presenting the land use allocations. These units are summarized with their land use allocations and management actions in the following section.

The document sections discussing the five Management Units and the maps on which they appear are as follows:

- 2.3.2.2.1 Black Canyon Management Unit, Map 2-25.
- 2.3.2.2.2 Castle Hot Springs Management Unit, Map 2-26.
- 2.3.2.2.3 Hassayampa Management Unit, Map 2-27.
- 2.3.2.2.4 Harquahala Management Unit, Map 2-28.
- 2.3.2.2.5 Harcuvar Management Unit, Map 2-29.

Allocations outside MUs are discussed in Section 2.3.2.2.6 and shown on Map 2-30. As noted, areas within the MUs that do not receive specific land use allocations would be administered according to the DFC and management actions presented under Management Units and in the Management Common to All Action Alternatives section of this chapter.

2.3.2.2.1 Black Canyon Management Unit

The Black Canyon MU stretches from the southern end of Table Mesa in the south to

Cordes Junction in the north. It is bounded by Agua Fria National Monument and Tonto National Forest on the east and the Prescott National Forest on the west as shown on Map 2-25. The MU contains the following land:

- 68,730 acres of BLM-administered lands.
- 12,600 acres of Arizona State land.
- 6,780 acres of private land.
- 1,100 acres of county park lands in both Maricopa and Yavapai Counties.

Vision

During the planning process, local citizens expressed their concerns and vision for the future of the Black Canyon MU. A diverse group of interested citizens are engaged in a collective effort to conserve the ecological, cultural, open space, and recreation values of the Black Canyon MU, so that it remains a well-managed, publicly owned urban interface area where people want to live and recreate. The MU's natural character is maintained while continuing to provide an array of public opportunities in the future for visual resources, environmental education, recreation, and exploration within the framework of a healthy, properly functioning landscape. This community vision includes multiple uses that are consistent with and support the overall management objectives. The scenic views and recreation opportunities are maintained while protecting the watershed functions. The area offers properly managed and marketed quality recreation and tourism.

The scenic corridor along Interstate Highway 17 is preserved to promote tourism and welcome visitors to the area.

A comprehensive strategy and trails plan is completed to select and develop new single-use and multi-use trails, hiking, equestrian use, and vehicle routes for all lands within the MU. The strategy represents a collaborative effort with the AGFD, Prescott and Tonto National Forests, Maricopa and Yavapai Counties, and land managers of other trails to link to trails on public

lands. The strategy includes a coordinated trail linkage between the Black Canyon City and Wickenburg areas.

An environmental education program exists to instill a land use ethic and educate school youth and adult users about the MU. Recreation opportunities are expanded in the MU for new and non-traditional users.

2.3.2.2.1.1 Special Area Designations

Special Area Designations would not be made within the Black Canyon MU.

2.3.2.2.1.2 Lands and Realty

Land Tenure Adjustments

No lands have been identified as available for disposal. All have been identified for acquisition.

Communication Sites

This MU has one designated communication site, the Black Canyon City communication site, which would be retained and subject to valid existing rights.

Utility and Transportation Corridors

The portion of the Black Canyon corridor to the west of Interstate 17 would be widened for viable future utility development. The western boundary of the corridor would be adjusted to be 1 mile west of the true center of I-17 (as defined by the center of the median), shown in Map 2-20.

2.3.2.2.1.3 Biological Resources

No biological allocations would be made within the Black Canyon MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources from the Management Common to Both Planning

Areas and in Section 2.7.3.4 - Biological Resources from the Management Common to the Bradshaw-Harquahala Planning Area section.

2.3.2.2.1.4 Cultural Resources

Land Use Allocations

Black Mesa/Bumble Bee SCRMA and Black Canyon SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of some or all of following actions could be implemented at selected sites:

- building visitors' facilities such as parking areas, platforms, restrooms, picnic tables, benches, or trash receptacles,
- installing signs along routes and trails to direct visitors to interpreted sites,
- building hardened walking trails,
- installing interpretive signs and register boxes, and
- preparing brochures and related educational materials or programs.

Actions would be implemented to stabilize, repair, and maintain sites in good condition.

Commercial and noncommercial group tours could be authorized to sites allocated to public use, as long as they were conducted with protective stipulations in accordance

with BLM's regulations and provisions of special recreation permits.

Administrative Actions

Specific sites for public use would be selected by considering the following factors:

- the presence of aboveground features of interest to the public and suitable for interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- the condition of the site and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety considerations,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.3.2.2.1.5 Recreation Resources

Land Use Allocations

Table Mesa SRMA

Desired Future Condition

Manage for intensive camping, OHV use, equestrian activities, and casual use mining. The SRMA would offer a diverse network of motorized single and two-track routes for general motorized recreation use, commercial use, and organized OHV events.

Emphasize acceptable dust control and compatibility with neighboring communities and landowners.

Emphasize semi-primitive motorized and roaded-natural recreation settings. Users would be concentrated in some areas.

Develop facilities with a variety of amenities consistent with the desired recreation setting. Visitors could expect contact with BLM's representatives daily or more often. Nonintrusive signing would be present in most of the SRMA.

Management Actions

Using a structured evaluation process, designate vehicle routes within this SRMA for general motorized recreation use, commercial use, and organized OHV events that are consistent with, and help achieve, all Desired Future Conditions for the area.

Locate and develop a staging and camping area for the following purposes:

- meeting the high recreation demand,
- parking and unloading OHVs,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- human health and safety.

Limit to 20 acres the area of exposed barren soil.

Limit the number of motorized competitive races to 2 per year.

Prohibit recreational target shooting within the SRMA.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.1.6.

Land Use Allocations

All remaining land within the Management Unit would be allocated to an Extensive Recreation Management Area.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

2.3.2.2.1.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative B* throughout the planning area would be allocated as described in 2-2 and as portrayed on Map 2-15.

Within the Black Canyon Management Unit:

- the Table Mesa SRMA and an area west and north of Cordes Lakes would be allocated to VRM Class III,
- an area surrounding Black Canyon City would be allocated to VRM Class IV,
- utility corridors would be allocated to VRM Class III or IV, and
- the rest of the Management Unit would be allocated to VRM Class III.

2.3.2.2.1.7 Mineral Resource Management

Alternative B proposes no mineral withdrawals or closures for the Black Canyon MU.

2.3.2.2.1.8 Travel Management

Land Use Allocation

The Black Canyon Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

The Table Mesa SRMA is discussed in Section 2.3.2.2.1.5 and would include a diverse network of motorized single and two-track routes for general motorized recreation use, commercial use, and organized OHV events consistent with SRMA objectives.

SCRMAAs with sites allocated to public use are discussed in the Cultural Resources Section 2.3.2.2.1.4.

Management Actions

Limit all vehicles to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes.

Consider building hardened walking trails at selected prehistoric and historic sites within the Black Mesa/Bumble Bee SCRMA and Black Canyon SCRMA.

2.3.2.2.2 Castle Hot Springs Management Unit

The Castle Hot Springs MU is bounded by State Route 74 (the Carefree Highway) to the south, Prescott National Forest to the north, the Black Canyon MU to the east, and the

Hassayampa MU to the west (Map 2-26).
The MU contains the following lands:

- 112,430 acres of BLM-administered lands.
- 53,730 acres of Arizona State land.
- 32,560 acres of private land.
- 22,870 acres of county park lands in both Maricopa and Yavapai Counties (Lake Pleasant Regional Park).
- 1,100 acres of Bureau of Reclamation lands not in Lake Pleasant Regional Park.

2.3.2.2.2.1 Special Designations

Current special designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section.

Special Designation

Tule Creek ACEC (640 acres)

Relevance

The Tule Creek area contains significant historic and cultural values, including the Fort Tule site, a prehistoric hilltop ruin occupied from A.D. 1100 to 1300, and a home site occupied by miners in the 1920s and 1930s. Tule Creek is a rare Sonoran Desert riparian system dominated by emergent vegetation and occupied by endangered Gila topminnow.

Importance

The Fort Tule cultural site was probably used as a significant connection in a regional communication system based on signaling among hilltop sites. Its role in the communication system can offer important information on prehistoric social systems during the era it was used.

Tule Creek and its sensitive biological resources are extremely vulnerable to

disturbance and degradation from vehicle use, mining, and livestock grazing. Continued protection of Tule Creek is important to the recovery of the endangered fish.

Desired Future Condition

The integrity of the riparian area, endangered species habitat quality, and cultural resources are maintained and protected from degradation.

Management Actions

The fenced area would be closed to livestock grazing and motor vehicles.

The ACEC would be withdrawn from mineral entry, closed to mineral and geothermal leasing, and closed to mineral material disposal.

An interpretive site for biological and cultural resources would be developed. Where needed, measures to protect sites, such as site stabilization or closure to public access, would be implemented.

Administrative Actions

Continue to patrol archaeological sites with help from Site Steward Volunteers.

2.3.2.2.2.2 Lands and Realty

Land Tenure Adjustments

No lands have been identified as available for disposal.

Communication Sites

There are no designated communication sites within this MU.

2.3.2.2.2.3 Biological Resources

No allocations would be made for biological resources within Castle Hot Springs MU. Biological resources would be subject to

management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area section.

2.3.2.2.2.4 Cultural Resources

Land Use Allocations

Lake Pleasant/Agua Fria SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of the some or all of the following and other actions could be implemented at selected sites:

- building visitor facilities such as parking areas, platforms, restrooms, picnic tables, benches, or trash receptacles,
- installing signs along routes and trails to direct visitors to interpreted sites,
- building hardened walking trails,
- installing interpretive signs and register boxes, and
- preparing brochures and related educational materials or programs.

Actions to stabilize, repair, and maintain sites in good condition could be undertaken.

Commercial and noncommercial group tours could be authorized to sites allocated to public use, as long as they were conducted with protective stipulations in accordance

with BLM's regulations and provisions of special recreation permits.

Administrative Actions

Specific sites for public use would be selected by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- condition of the site and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.3.2.2.2.5 Recreation Resources

Land Use Allocation

Hieroglyphic Mountains SRMA

Desired Future Condition

Manage mainly for intensive motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events, and competitive races.

Emphasize acceptable dust control and compatibility with neighboring communities and landowners.

Emphasize semi-primitive motorized and roaded-natural recreation settings. Uses and users would be concentrated in some areas.

Develop facilities with a variety of amenities consistent with the desired recreation setting. Visitors could expect contact with BLM's representatives daily or more often. Nonintrusive signing would be present in most of the SRMA.

Management Actions

Locate at least 20 miles of single and two-track motorized vehicle routes for competitive races to provide a unique array of challenges for ATV and motorcycle competitive racing.

Limit the number of motorized competitive races to 4 per year.

Locate and develop as many as two staging/camping areas for:

- meeting the high recreation demand,
- parking and unloading of OHVs,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- human health and safety.

Limit to 30 acres the area of exposed barren soil.

Prohibit recreational target shooting.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.2.6.

Land Use Allocation

All remaining land within the Management Unit would be allocated to an Extensive Recreation Management Area.

2.3.2.2.2.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative B* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-15.

Within Castle Hot Springs Management Unit:

- the Hieroglyphic Mountains SRMA would be allocated to VRM Class III objectives,
- Hells Canyon Wilderness is allocated to VRM Class I objectives, and
- the rest of the Management Unit would be allocated to VRM Class II.

2.3.2.2.2.7 Mineral Resource Management

Management Actions

Lands managed to maintain wilderness characteristics would be closed to mineral material disposal.

Tule Creek ACEC would be withdrawn from mineral entry, closed to mineral and geothermal leasing, and closed to mineral material disposal.

2.3.2.2.2.8 Travel Management

Land Use Allocation

The Castle Hot Springs Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

The Hieroglyphic Mountains SRMA is discussed in the Recreation Resource Section 2.3.2.2.2.5. The SRMA would offer at least 20 miles of single and two-track motorized vehicle routes available for competitive races to provide a unique array of challenges for ATV and motorcycle competitive racing. Allow general motorized recreation use, commercial use, organized OHV events, and competitive races on all designated motorized vehicle routes within the SRMA.

Tule Creek ACEC is discussed in Section 2.3.2.2.2.1.

SCRMA and sites allocated for public use are discussed in the Cultural Resources Section 2.3.2.2.2.4.

Management Actions

All vehicles would be limited to designated routes. No-cross country motorized travel would be permitted except in cases of emergency or for approved administrative purposes.

Close the fenced part of the Tule Creek ACEC to vehicle use.

Build hardened walking trails to public use cultural sites within the Lake Pleasant/Agua Fria SCRMA.

Implementation Actions

Develop a comprehensive Travel and Transportation Management Plan to manage for single-use, multi-use hiking, equestrian, and OHV routes within the Castle Hot Springs Management Unit. This plan will implement the designated route system.

2.3.2.2.3 Hassayampa Management Unit

The Hassayampa MU has the Town of Wickenburg at its center. It is bounded on the east by Prescott National Forest and the Castle Hot Springs MU, and on the west by the

Harquahala Mountain MU. The MU's southern edge is south of the Vulture Mountains, and its boundaries extend north past Yarnell (Map 2-27). The MU contains the following lands:

- 181,910 acres of BLM-administered lands,
- 130,580 acres of Arizona State land,
- 50,610 acres of private land, and
- 460 acres of county-administered lands in both Maricopa and Yavapai Counties.

Vision

During the planning process, local citizens expressed their concerns and vision for the future of the Hassayampa MU. A diverse group of Wickenburg residents is engaged in a collective effort to conserve the ecological, cultural, open space, and recreation values of the Wickenburg area, so that Wickenburg remains a place where people want to live, work, and recreate. Strong citizen stewardship and land use ethics help to preserve health, diversity, and productivity of the natural landscapes in the area. Partnerships between BLM, Public, and Private Entities, including Maricopa and Yavapai Counties, the City of Wickenburg, and other government or non-governmental organizations, promote the long-term sustainability of the area and collaborate in management of public lands in the Management Unit.

A system of high-quality equestrian trails surrounds Wickenburg to buffer the area from urban sprawl and preserve the open-space value of local landscape. This trail system affords many opportunities for recreation enthusiasts and serves to enhance the lifestyle, culture, and culture history of community residents.

Properly managed and marketed quality recreation and tourism activities are offered throughout the MU which promote conservation and a strong land ethic, while protecting the natural resources and cultural heritage of the MU.

The MU is managed with an emphasis on the values of open space, scenic and visual quality, and cultural and biological assets. The lands within the MU are managed for multiple uses, including mining, livestock grazing and OHV use.

2.3.2.2.3.1 Special Designations

Current Special Area Designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Back Country Byways

Constellation Mine Road

Desired Future Condition

The back country byway would provide a vehicle-based, back-country experience with amenities to heighten visitors' experiences, to educate, and to inform visitors about interesting natural and cultural features along the route. Visitors could expect the road to be occasionally difficult and settings to be remote. The road might not be accessible to all classes of vehicles. High clearance might be needed to traverse the whole route. Establish and maintain a semi-primitive motorized recreation setting ½ mile to either side of the road's centerline.

Management Actions

Evaluate and nominate the Constellation Mine Road for potential designation as a national back country byway. The public portions of this road would be maintained at a BLM Maintenance Intensity standard of Level 3 'Medium' (BLM Roads and Trails Terminology Report and be passable by high-clearance vehicles.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.3.6.

Secure easements and rights-of-way where needed to ensure long-term public access along Constellation Mine Road.

Interpret the route's historical features, including original road construction structures; mining properties; mining districts; and historic homesteads, settlements, and ranching history.

Install directional, safety, and interpretive signing to enhance public use, enjoyment, and stewardship of the route.

Administrative Actions

Establish a friends group to maintain, monitor, and help interpret and present the route as well as the area's natural and human history.

2.3.2.2.3.2 Lands and Realty

Lands would not be disposed of within the Hassayampa MU.

2.3.2.2.3.3 Biological Resources

No allocations would be made for biological resources within Hassayampa MU. Biological resources would be subject to management guidance in Section 2.7.1.4 – Biological Resources in the Management Common to Both Planning Areas and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area section.

2.3.2.2.3.4 Cultural Resources

Land Use Allocations

Wickenburg/Vulture SCRMA and Weaver/Octave SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor,

limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of some or all of following and other actions could be implemented at selected sites:

- building visitor facilities such as parking areas, platforms, restrooms, picnic tables, benches, or trash receptacles,
- installing signs along routes and trails to direct visitors to interpreted sites,
- building hardened walking trails,
- installing interpretive signs and register boxes, and/or
- preparing brochures and related educational materials or programs.

Actions could be taken to stabilize, repair, and maintain sites in good condition.

Commercial and noncommercial group tours, to sites allocated to public use, could be authorized with protective stipulations in accordance with BLM's regulations and provisions of special recreation permits.

Administrative Actions

Sites for public use would be selected by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing selected areas or features to withstand visitation ,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,

- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.3.2.2.3.5 Recreation Resources

Land Use Allocation

Stanton SRMA

Desired Future Condition

Provide diverse recreation experiences while improving unacceptable environmental impacts from the following recreation:

- excessive and unregulated camping,
- activities of prospecting clubs, and
- motorized and other recreation uses.

Maintain a variety of recreation settings and opportunities with emphasis on semi-primitive motorized and roaded-natural settings.

Management Actions

Locate and develop trailheads, staging/camping areas, and other facilities.

Designate a diverse network of motorized vehicle routes open to a range of OHV experiences and challenges.

Limit the number of motorized competitive races to 2 per year.

Install informational, educational, and interpretive kiosks and trail signs where needed. Placement of interpretive signs along the Stanton-Octave-Yarnell road, as proposed under the Lower Gila North MFP, would be consistent with this management action.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.3.6.

Administrative Actions

Determine specific areas where assessments would be initiated to do the following:

- define detailed desired conditions,
- define standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

Yarnell SRMA

Desired Future Condition

This site is one of the most valued in Arizona for launching successful long-distance, non-powered flights. Maintain long-term public access to the Yarnell hang gliding launching area (Map 2-32). In addition, maintain the landing areas and keep approaches to landing areas as free of flight hazards as possible.

Management Actions

Retain in public ownership Sections 22, 23, and 27 and all landing zones below Yarnell Hill.

Acquire legal public access to the Yarnell Hang Gliding launching area through easements, rights-of-way, or land acquisition.

Acquire the Arizona State Trust Land parcel southwest of Yarnell containing Fool's Gulch (Section 22) through purchase, legislation, or exchange.

Prohibit new overhead power lines, phone lines, or communication facilities within 1 mile of launching and identified landing zones.

Land Use Allocation

Wickenburg SRMA

Desired Future Condition

Establish a system of high-quality equestrian trails surrounding Wickenburg. The system will buffer the area from urban sprawl and preserve the open space value of the local landscape. This trail system would offer multiple opportunities for all recreation enthusiasts and enhance the lifestyle, cultural experience, and understanding of the local culture.

Offer properly managed and marketed quality recreation and tourism promoting conservation and a strong land ethic and protecting the natural resources and cultural heritage of the Wickenburg SRMA.

Manage the area of the proposed SRMA for a DFC that emphasizes values of open space, scenic and visual quality, and cultural and biological assets. Manage the lands within the SRMA for multiple uses, including livestock grazing and OHV uses.

Emphasize and maintain a variety of recreation settings and opportunities, including rural, roaded-natural, semi-primitive motorized, semi-primitive non-motorized, and associated experiences for residents, tourists, and winter visitors.

Management Actions

Locate and develop a non-motorized trailhead for the Red Top Trail System for these purposes:

- meeting the high demand for non-motorized recreation,
- vehicle parking,
- unloading animals,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- health and safety.

Limit to 20 acres the area of exposed barren soil.

Locate and develop an ATV and a motorcycle route network in the Red Top Trail area to give the local community motorized recreation opportunities to shift motorized use from the designated non-motorized trails. Use existing designated motorized vehicle routes and create new routes less than 50 inches wide, if necessary, to meet the objective.

Prohibit motorized competitive races in the SRMA.

Locate and develop at least one parking area of 3 acres or less for OHV parking and unloading. Limit to 5 acres the area of exposed barren soil.

Maintain and upgrade the non-motorized Vulture Peak Trail by rerouting segments of the trail and installing a restroom at the lower trailhead.

Acquire the 19,396 acres of Arizona State land within the SRMA. Prioritize and pursue acquisition using the criteria in the Lands and Realty discussion of the Management Common to Both Planning Areas section of Chapter 2. Lands will be acquired according to the following priorities:

- maintaining access and securing trail alignments,
- enhancing recreation opportunities,
- preserving scenery and open space, and
- conserving riparian values.

Develop special facilities for horse camping in the area south of Vulture Peak and south of Congress. These facilities could provide water

for horses, electrical hookups for trailers, and more primitive horse camping facilities.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.3.6.

Administrative Actions

Collaborate with a diverse group of Wickenburg citizens to conserve the ecological, cultural, open space and recreation values of the Wickenburg area.

Write a comprehensive Travel Management Plan to develop management for single-use, multi-use hiking, equestrian, and OHV routes for the SRMA.

Land Use Allocation

San Domingo SRMA

Desired Future Condition

Provide a Sonoran Desert wash and upland environment suitable for an array of motorized and non-motorized uses. Manage for semi-primitive motorized and some roaded-natural settings.

Provide opportunities for the following while protecting the natural and cultural resources in the area:

- intensive camping,
- OHV activities,
- equestrian use,
- recreation activities of prospecting clubs,
- event operations, and
- motorized single and two-track routes for general motorized recreation use and competitive races.

Management Actions

Locate and develop trailheads, staging and camping areas, and other facilities as needed for

recreation activities. Limit to 10 acres the total area of exposed barren soil.

Limit the number of motorized competitive races to 2 per year.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.3.6.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities
- define desired conditions and standards
- establish monitoring plans to manage camping and other recreation uses

Land Use Allocation

Vulture Mine SRMA

Desired Future Condition

Provide a Sonoran Desert landscape suitable for intensive motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events, and competitive races.

Emphasize and maintain the current array of roaded natural and semi-primitive, motorized settings.

Preserve the mining and settlement history of the Vulture City Cemetery.

Management Actions

Locate at least 20 miles of motorized single and two-track routes for competitive races to provide a unique array of challenges for truck, buggy, ATV, and motorcycle competitive racing.

Limit the number of motorized competitive races to 4 per year.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.3.6.

Interpret and develop the Vulture City Cemetery for public use.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

All remaining land within the Management Unit would be allocated to an Extensive Recreation Management Area.

2.3.2.2.3.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative B* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-15.

Within the Hassayampa Management Unit:

- the Wickenburg SRMA would be allocated to VRM Class III in areas where rural and roaded-natural settings would be desired, and Class II where semi-primitive motorized and semi-primitive non-motorized settings would be desired,
- the San Domingo, Stanton, and the Vulture Mine SRMAs would

- be allocated to VRM Class III objectives,
- the Hassayampa River Canyon Wilderness would continue to be allocated as VRM Class I,
- utility corridors would be allocated to VRM Class III or IV, and
- in areas not listed above, VRM classes would be as portrayed on Map 2-15.

2.3.2.2.3.7 Mineral Resource Management

The Hassayampa MU would have no mineral withdrawals or closures.

2.3.2.2.3.8 Travel Management

Land Use Allocation

The Hassayampa Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

SRMAs are discussed in detail in the Recreation Resource Section 2.3.2.2.3.5.

The Stanton SRMA would include a diverse network of motorized vehicle routes open to a range of OHV experiences and challenges.

The Wickenburg SRMA would include a system of high-quality equestrian trails surrounding Wickenburg. Management actions for this SRMA would include:

- Locate and develop a non-motorized trails and a trailhead for the Red Top Trail System within the SRMA.
- Locate and develop an ATV and a motorcycle route network in the Red Top Trail area to provide motorized recreation opportunities.

The San Domingo SRMA would provide a managed Sonoran Desert wash and upland environment suitable for an array of motorized and non-motorized uses.

The Vulture Mine SRMA would provide intensive motorized single and two-track routes for general motorized recreation opportunities, commercial use, organized OHV events and competitive races. Locate at least 20 miles of motorized single and two-track routes for competitive races to provide a unique array of challenges for truck, buggy, ATV, and motorcycle competitive racing.

Discussion of SCRMA with sites allocated to Public Use can be found in the Cultural Resources Section 2.3.2.2.3.4.

Discussion of the Constellation Mine Road Back Country Byway can be found in the Special Area Designations Section 2.3.2.2.3.1.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes.

Maintain and upgrade the non-motorized Vulture Peak Trail by rerouting segments of the trail.

Consider building hardened walking trails to historic and prehistoric sites within the Wickenburg/Vulture SCRMA and Weaver/Octave SCRMA, for interpretation education and visitation.

The Constellation Mine Road Back Country Byway would be maintained to a BLM Maintenance Intensity standard of Level 3 'Medium' (BLM Roads and Trails Terminology Report), passable by high-clearance vehicles. Easements and rights-of-way would be secured where needed to ensure long-term public access along Constellation Mine Road.

Implementation Actions

Develop a comprehensive Travel and Transportation Management Plan to manage for single-use, multi-use hiking, equestrian, and OHV routes within the Hassayampa Management Unit and associated SRMAs. This plan will implement the designated route system.

2.3.2.2.4 Harquahala Management Unit

The Harquahala MU under *Alternative B* would be bounded on the east by the Hassayampa MU and would extend west to the Phoenix District boundary near the town of Wenden. The MU's southern boundary would follow the BLM property line north and west of Tonopah. The northern boundary would also follow the BLM property line south of State Route 60, which runs west of Wickenburg, through Aguila and Wenden (Map 2-28). The MU would contain the following lands:

- 401,680 acres of BLM-administered lands,
- 31,970 acres of Arizona State land, and
- 7,710 acres of private land.

2.3.2.2.4.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.1 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

No new Special Designations would be proposed within the Harquahala MU in *Alternative B*.

2.3.2.2.4.2 Lands and Realty

Land Tenure Adjustments

Alternative B proposes no lands for disposal within this MU.

Communication Sites

The Harquahala Peak communication site is the only designated communication site within this MU. New communication facilities would be limited to existing designated communication sites.

2.3.2.2.4.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Land Use Allocation

Harquahala Mountains WHA

Desired Future Condition

The current geographic distribution, plant diversity, and richness of the Chaparral and Sonoran Desert scrub vegetation communities in this desert mountain landscape would be maintained or enhanced. Unfragmented wildlife habitat would provide adequate forage, cover, and access to water for healthy wildlife populations.

Management Actions

New grazing improvements in Browns Canyon and the Inner Basin would be prohibited or designed to avoid increasing livestock use or concentrated livestock use.

BLM would acquire available State and private lands upon agreement with land owners.

Vehicle routes that conflict with maintenance of wildlife habitat could be closed, limited, or mitigated to ensure achieving of the DFC.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

2.3.2.2.4.4 Cultural Resources

Land Use Allocation

Harquahala Mountains SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of some or all of the following and other actions could be implemented at selected sites:

- building visitor facilities such as parking areas, platforms, restrooms, picnic tables, benches, or trash receptacles,
- installing signs along routes and trails to direct visitors to interpreted sites,
- building hardened walking trails,
- installing interpretive signs and register boxes, and/or
- preparing brochures and related educational materials or programs.

Actions to stabilize, repair, and maintain sites in good condition would be taken as needed.

Commercial and noncommercial group tours, to sites allocated to public use, could be authorized and conducted under protective stipulations that are in accordance with BLM's regulations and provisions of; special recreation permits.

Administrative Actions

Specific sites for public use would be selected by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development.
- accessibility to communities, travel routes, and recreation trails,
- condition of the site and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.3.2.2.4.5 Recreation Resources

Land Use Allocation

The entire Management Unit would be allocated as an Extensive Recreation Management Area.

Management Actions

A Trans-Harquahala Trail would be designated and developed to traverse the mountain range from south to north over the summit

Implementation Actions

Select, plan, and develop at least one staging and camping area to meet motorized and non-motorized recreation demand. Have this area provide accommodation for the following:

- parking,
- unloading OHVs and horses,
- overnight camping, and
- large organized event operations.

Development may include the following:

- informational signs,
- kiosks,
- picnic tables,
- hitching posts,
- troughs for water hauled to the site,
- loading ramp, and
- soil stabilization for dust abatement.

Exposed, barren soil would not exceed 15 acres. Site-specific analysis, site design, and allowable site uses would address the potential effects on the objectives of the wildlife movement corridor.

2.3.2.2.4.6 Wilderness Characteristics

Land Use Allocation

In *Alternative B* for the Harquahala Management Unit, 56,040 acres as portrayed on Map 2-31 would be allocated to maintain wilderness characteristics.

Desired Future Condition

In addition to the DFC and management actions described in the Wilderness Characteristics discussion of the Management Common to Both Planning Areas section of this chapter, the following apply to this allocation.

The area would be managed mainly for an emphasis on non-motorized recreation experiences, open space, and natural landscapes to complement the region's diverse recreation

opportunities. Recreation settings of semi-primitive non-motorized would be maintained throughout the area. Natural landscape values and remoteness would be maintained.

The current mix of motorized and non-motorized recreation settings, associated landscapes, and experiences would be maintained.

Management Actions

Recreation management would be for settings of semi-primitive non-motorized with semi-primitive motorized along boundaries and designated routes.

Revegetating routes (also called "reclaiming" routes), washes, and single-track vehicle routes would be closed. Unnecessary tertiary routes would also be closed to enhance scenic values, wildlife habitat, solitude, and remoteness values; and to expand primitive recreational settings and opportunities. Routes that access wildlife waters, livestock facilities, and other authorized facilities requiring periodic access would remain open.

Motorized competitive races would not be permitted.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.4.7.

Disposal of mineral materials or vegetation sales would be prohibited.

Recreation related actions suggested for the allocated areas can be found in Section 2.3.2.2.4.5.

Administrative Actions

Site-specific standards would be established to maintain proper levels of recreation-related disturbance allowed within each desired recreation setting.

2.3.2.2.4.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative B* throughout the planning area would be allocated as described in Table 2-2 as portrayed on Map 2-15.

Within the Harquahala Management Unit:

- the existing Harquahala Mountains, Hummingbird Springs, and Big Horn Mountains Wilderness Areas would continue to be allocated to VRM Class I objectives,
- lands allocated to maintain wilderness characteristics would be allocated to VRM class II objectives,
- utility corridors would be allocated to VRM Class III or IV, and
- areas not listed above would be allocated to VRM classes as portrayed on Map 2-15.

2.3.2.2.4.8 Mineral Resource Management

Management Actions

Lands allocated to maintain wilderness characteristics would be closed to mineral material disposal.

2.3.2.2.4.9 Travel Management

Land Use Allocation

The Harquahala Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

Allocations to maintain wilderness characteristics are discussed in Section 2.3.2.2.4.6.

SCRMA with sites allocated to public use are discussed in the Cultural Resources Section 2.3.2.2.4.4.

Management Actions

Limit all vehicles to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes.

Close all revegetating routes (also called "reclaiming" routes), washes, and single-track vehicle routes within 56,040 acres (Map 2-31) allocated to maintain wilderness characteristics. Unnecessary tertiary routes would also be closed. Routes to wildlife waters, livestock facilities, and other authorized facilities requiring periodic access would remain open.

Designate a Trans-Harquahala Trail.

Consider providing a variety of hardened walking trails to prehistoric and historic sites within the Harquahala Mountains SCRMA for interpretation, education, and public visitation.

2.3.2.2.5 Harcuvar Management Unit

The Harcuvar MU encompasses the easternmost end of the Harcuvar Mountains within the PD's administrative area. Most of the Harcuvar Mountains are administered by BLM's Lake Havasu Field Office. The Harcuvar MU is bounded on the west and north by the boundary between the Phoenix and Lake Havasu Field Offices, and on the east and south by the boundary between BLM and non-BLM-administered lands (Map 2-29). The MU contains the following lands:

- 53,200 acres of BLM-administered lands,
- 6,280 acres of Arizona State land, and
- 3,360 acres of private land.

Vision

The MU's natural landscape and open space values are maintained. Recreation opportunities, scenic backdrops, and access to recreation features beyond the planning area boundary in adjoining areas are available to users.

Recreation settings and opportunities within the Management Unit are maintained. The Harcuvar MU is mainly an extension of the Harcuvar Mountains, which are managed by BLM's Lake Havasu Field Office. Management actions are closely coordinated with that field office.

2.3.2.2.5.1 Special Designations

No new Special Designations would be proposed within this MU in *Alternative B*.

2.3.2.2.5.2 Lands and Realty**Land Tenure Adjustments**

No lands have been identified for disposal.

Communication Sites

No designated communication sites lie within this MU.

2.3.2.2.5.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.3.2.2.5.4 Cultural Resources***Land Use Allocation***

Harcuvar Mountains SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of the some or all of following and other actions could be implemented at selected sites:

- building visitor facilities such as parking areas, platforms, restrooms, picnic tables, benches, or trash receptacles,
- installing signs along routes and trails to direct visitors to interpreted sites,
- building hardened walking trails,
- installing interpretive signs and register boxes, and/or
- preparing brochures and related educational materials or programs.

Actions to stabilize, repair, and maintain sites in good condition would be initiated as needed.

Commercial and noncommercial group tours, to sites allocated to public use, would be authorized and conducted under protective stipulations that are in accordance with BLM's regulations and provisions of special recreation permits.

Administrative Actions

Sites for public use would be selected by considering the following factors:

- presence of aboveground features that are of interest to the public and are amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,

- condition of the site and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.3.2.2.5.5 Recreation Resources

Land Use Allocations

The entire Management Unit would be allocated as an Extensive Recreation Management Area.

2.3.2.2.5.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative B* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-15.

Within the Harcuvar Management Unit:

- the area along the Harcuvar Mountains would be allocated to VRM Class III

- the rest of the Management Unit would be allocated to VRM Class IV

2.3.2.2.5.7 Travel Management

Land Use Allocation

The Harcuvar Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

SCRMA's with sites allocated to public use are discussed in Section 2.3.2.2.5.4 Cultural Resources.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes.

Consider developing hardened walking trails to prehistoric and historic sites within the Harcuvar Mountains SCRMA for interpretation, education, and public visitation.

2.3.2.2.6 Resource Allocations Not Within a Management Unit

2.3.2.2.6.1 Cultural Resources

Land Use Allocation

Galena Gulch SCRMA: (Map 2-30)

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected

sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of the some or all of following and other actions could be implemented at selected sites:

- building visitor facilities such as parking areas, platforms, restrooms, picnic tables, benches, or trash receptacles,
- installing signs along routes and trails to direct visitors to interpreted sites,
- building hardened walking trails,
- installing interpretive signs and register boxes, and/or
- creating brochures and related educational materials or programs.

Actions to stabilize, repair, and maintain sites in good condition would be implemented as needed.

Commercial and noncommercial group tours, to sites allocated to public use, would be authorized and conducted under protective stipulations that are in accordance with BLM's regulations and-provisions of special recreation permits.

Administrative Actions

Sites for public use would be selected by considering the following:

- presence of aboveground features that are of interest to the public and are amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,

- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would help develop sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.3.2.2.6.2 Recreation Resources

Land Use Allocation

Skull Valley SRMA: (Map 2-30)

Desired Future Condition

The landscape character would be maintained, and motorized access to routes in Prescott National Forest would also be maintained.

Management Actions

Motorized and mechanized uses would be on designated motorized routes.

Management of the Skull Valley SRMA would be transferred to the adjacent Prescott National Forest upon agreement by BLM and the U.S. Forest Service.

Land Use Allocation

North Black Canyon Trail SRMA: (Map 2-30)

Desired Future Condition

The Black Canyon Trail from Highway 69 north and east would be completed to connect with trails in Prescott National Forest. A non-motorized experience along or near the historic sheep driveway would be provided. The trail and any ancillary facilities would generally be along the corridor established by secretarial order in 1969.

Management Actions

Rights-of-way would be acquired for the trail and facilities to preserve their access and long-term character.

Easements or rights-of-way would be acquired on lands where the trail or facilities must cross or be built on non-Federal lands.

Any future land tenure action will recognize the trail and facilities and will retain a ¼ mile corridor (1/8 mile on each side) along the trail and any ancillary facility, as well as public access to the trails and facilities by easement, right-of-way, deed restriction, or other suitable means.

Administrative Actions

Establish a citizen focus group to help with trail and facility sites, designs, and management. With citizen's input, write a long-term SRMA management plan. Exact locations of the trail or any ancillary facilities would be determined in conjunction with the Yavapai County Trails Committee and the Trail and Facilities Citizen Group.

Land Use Allocation

All other BLM-managed lands outside of Management Units in this Alternative would be allocated to an Extensive Recreation Management Area.

2.3.2.2.6.3 Visual Resources

Land Use Allocations

VRM classes for *Alternative B* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-15.

2.3.2.2.6.4 Travel Management

Land Use Allocation

All areas not within management units would be allocated as limited use areas, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

SRMAs are discussed in Recreation and Public Access Section 2.3.2.2.6.2.

SCRMA with sites allocated to public use are discussed in the Cultural Resources Section 2.3.2.2.6.1.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes.

In the Skull Valley SRMA: (Map 2-30) motorized vehicle travel would be restricted to lower speeds near private lands with travel only on designated motorized routes.

In the North Black Canyon Trail SRMA: (Map 2-30) the Black Canyon Trail would connect to trails in Prescott National Forest.

Consider developing hardened walking trails within the Galena Gulch SCRMA to prehistoric and historic sites for interpretation, education, and public visitation.

2.4 Alternative C

The following discussion and the DFCs, land use allocations, and management actions described in the Management Common to All Action Alternatives section of Chapter 2, comprise the total proposed *Alternative C*.

2.4.1 Agua Fria National Monument

The overall theme of *Alternative C* is to allow visitors to experience the natural landscape and cultural resource setting of Agua Fria National Monument. Management decisions will focus on protecting the monument's resources while accommodating visitor experiences. Such management would result in limited access and establishing a larger Back Country RMZ than under *Alternative B* to preserve the natural landscape and enhance primitive recreation opportunities. *Alternative C* would also emphasize managing cultural resources for more limited public use. Upland grazing areas would remain similar to those under current management, but riparian areas would be closed to grazing. Managing natural and cultural resources would generally be more restrictive than under *Alternative B*.

2.4.1.1 Special Designations

Alternative C for Agua Fria National Monument would designate four ACECs, shown on Map 2-33, for managing the Gila chub. *Alternative C* would also remove the designation of the existing Perry Mesa and Larry Canyon ACECs because the national monument's proclamation (Appendix A) provides for more protection and management across a more extensive landscape than the ACEC designation.

Alternative C also proposes studying eligibility of more waterways for WSR designations and evaluating a back country byway.

Areas of Critical Environmental Concern

Silver Creek ACEC (350 acres)

Relevance

Silver Creek ACEC would protect a rare riparian deciduous forest.

Importance

The habitat supports a federally listed endangered native fish (Gila chub) and provides special features of value for studies of desert riparian systems. The area is listed as a critical habitat for the Gila chub.

Desired Future Condition

The integrity of the riparian area and endangered species habitat quality are maintained and protected from degradation.

Management Actions

Motorized vehicle routes would be closed or mitigated to avoid degrading riparian values or habitat for Gila chub.

Livestock grazing would be prohibited.

Indian Creek ACEC (330 acres)

Relevance

Indian Creek ACEC would protect a rare riparian deciduous forest.

Importance

Habitat supports a federally endangered native fish (Gila chub) and provides special features of value for studies of desert riparian systems. The area is as a critical habitat for the Gila chub.

Desired Future Condition

The integrity of the riparian area and endangered species habitat quality are maintained and protected from degradation.

Management Actions

Lands along Indian Creek would be acquired from willing non-Federal land holders. Motorized vehicle routes would be closed or mitigated to avoid degrading riparian values or habitat for Gila chub.

Livestock grazing would be prohibited.

Larry Canyon ACEC (50 acres)***Relevance***

Rare riparian deciduous forest

Importance

Habitat supports a federally endangered native fish (Gila chub) and provides special features of value for studies of desert riparian systems. The area is listed as a critical habitat for the Gila chub.

Desired Future Condition

The integrity of the riparian area and endangered species habitat quality are maintained and protected from degradation.

Management Actions

Motorized vehicle routes would be closed or mitigated to avoid degrading riparian values or Gila chub habitat.

This area would be unavailable for livestock grazing.

Lousy Canyon ACEC (80 acres)***Relevance***

Rare riparian deciduous forest

Importance

Habitat supports the federally listed Gila topminnow, Gila chub, and desert pupfish and provides special features of value for studies of desert riparian systems. The area is a critical habitat for the Gila chub.

Desired Future Condition

The integrity of the riparian area and endangered species habitat quality are maintained and protected from degradation.

Management Actions

Motorized vehicle routes would be closed or mitigated to avoid degrading riparian values or habitat for Gila chub.

This area would be unavailable for livestock grazing.

Wild and Scenic Rivers

Tributaries to the Agua Fria River would be studied to determine eligibility and suitability for wild and scenic river designation in accordance with the WSR Act (Map 2-33).

Back Country Byways

Evaluate and nominate a back country byway on Bloody Basin Road if standards and requirements are met (Map 2-33).

Desired Future Condition

The back country byway would provide a vehicle-based recreation experience with amenities to heighten visitors' experiences and to educate, and inform visitors about interesting natural and cultural features along the route.

Visitors could expect the road to occasionally be difficult and settings to be remote. The road might not be accessible to all classes of vehicle. High-clearance vehicles might be needed to travel the whole route. A recreation setting of semi-primitive motorized would be maintained for ½ mile to either side of the road's centerline.

Management Actions

Road maintenance standards would conform to a BLM Maintenance Intensity standard of Level 3 'Medium' (BLM Roads and Trails Terminology Report) passable by high-clearance vehicles.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.1.6.

Easements and rights-of-way would be secured where needed to ensure long-term public access.

Monument features along the route would be interpreted, including prehistoric cultural features, historic homesteads, settlements, and ranching history.

Directional, safety, and interpretive signs would be installed to enhance public use, enjoyment, and stewardship of the area.

Administrative Actions

A cooperative and a collaborative site plan would be developed with landowners and other agencies affected by the byway designation.

2.4.1.2 Lands and Realty

2.4.1.2.1 Utility and Transportation Corridors

The Black Canyon utility corridor would be eliminated from the monument. All existing rights-of-way and prior existing rights would continue to be honored.

2.4.1.3 Biological Resources

Alternative C for the Agua Fria National Monument would designate two Wildlife Habitat Areas (WHA) for enhancing pronghorn habitat and four ACECs for managing biological resources, especially Gila chub. The current Larry Canyon ACEC would be dropped because the Monument Proclamation (Appendix A) provides more protection and management across a more extensive landscape.

The ACECs are described in the Special Area Designations section of *Alternative B*. The management actions for the WHAs, which are shown in Map 2-34, are outlined below.

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area

Land Use Allocation

Pronghorn Fawning Habitat WHA.

Pronghorn Movement Corridor WHA.

Desired Future Condition

Unfragmented wildlife habitat that provides adequate forage, cover, and access to water for healthy wildlife populations, especially pronghorn.

Management Actions

Vehicle routes that cross known pronghorn movement corridors with a type and a volume of use that modifies pronghorn behavior in ways that fragment their habitat, will be closed or mitigated to minimize the fragmentation.

Prescribed fire would continue to be used to improve pronghorn habitat.

New recreation sites would not be developed in pronghorn movement corridors.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

2.4.1.4 Cultural Resources

Alternative C would develop a moderate number of interpretive improvements to enhance

Level of Public Use	Locations/Sites
High	Pueblo la Plata and Fort Silver (Pueblo la Plata Complex)
Moderate	Baby Canyon Pueblo and Pueblo Pato; Badger Springs rock art, Richinbar Ruin, the Rollie site, the Arrastra site, and Badger Pueblo The historic Teskey homestead near the Agua Fria River.
Low	Public use of archaeological sites would be limited in all other areas not described above.

visitor experiences by increasing access to a few archaeological sites and developing interpretive information about the national monument's cultural resources.

Areas would be allocated to SCRMA's focused on varying levels of public use as shown in Table 2-4 and on Map 2-35.

For descriptions of associated actions, see the Cultural Resources section of Management Common to Agua Fria National Monument. High use represents the most intensive degree of interpretive development, and moderate use involves less intensive development of access and interpretive facilities. All areas of the monument not shown

as high or moderate use SCRMA's on Map 2-35 would be considered areas of low public use that are not available for on-the-ground interpretive development or commercial tours.

2.4.1.5 Recreation Resources

In *Alternative C*, the entire monument would be allocated to a Special Recreation Management Area with three Recreation Management Zones within it. These zones would include a Back Country RMZ of 28,200 acres to manage and maintain the natural landscape character in the Agua Fria River Canyon and tributaries, and Perry Mesa south of Bloody Basin Road (Map 2-35). A Passage RMZ of 700 acres would be allocated 100 feet on each side of the centerline of designated routes that pass through or enter into the Back Country RMZ, to manage (1) vehicle-based visitation and (2) authorized uses such as grazing permits. The rest of the monument would be allocated as a Front Country RMZ of 42,000 acres, where more focus could be placed on recreation and interpretive opportunities. General descriptions of the Front Country, Back Country, and Passage RMZs, including Desired Future Conditions common to all Alternatives, are in the Management Common to Agua Fria National Monument section of this document under the discussion in Section 2.7.2.7.

Land Use Allocation

Front Country Recreation Management Zone of 42,000 acres

Desired Future Condition

See Desired Future Condition description in the Recreational Resources Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.4.1.6.

SRPs and Concessions:

- Up to six SRPs would be authorized within the monument each year. These SRPs might include any combination of the following:
 - Commercial (e.g. jeep tours, outfitters),
 - Commercial special events, and
 - Noncommercial special events.
- Issue permits and concessions to enhance visitor use, services, and visitor safety and enjoyment, providing these conform to monument values and objectives. BLM will consider concessions and permits on a case-by-case basis, basing its determinations on consistency with management objectives and a clearly demonstrated need.

Dispersed Camping:

- Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs or threatens resources protected by proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.
- Allow camping at designated sites only.

Developed Campgrounds:

- Develop one campground at either Badger Springs or near the Bloody Basin Road outside the WHAs.
- Limit campsites to 20, with a picnic table, fire ring, and ramada provided at each site.
- Develop potable water if available.
- Provide restrooms to address health and sanitation issues.

Campfires:

- Prohibit campfires within ¼ mile of High and Moderate public-use archaeological sites.
- Prohibit campfires at archaeological sites, including petroglyph (rock art) sites.
- Prohibit campfires within ¼ mile of a developed campground.
- Within campgrounds, allow campfires only in manufactured campfire rings.
- Allow campfires at designated sites.
- Limit firewood collection to campfire use only. Firewood may consist of dead, down, and detached material.
- To prevent resource damage, monitor vegetation for use and disturbance and temporarily or permanently suspend this use to prevent resource damage.

Recreational Target Shooting:

- Recreational target shooting would be prohibited within the Front Country RMZ.

Trail Construction for Non-motorized Recreation Use

Discussion of recreation trail development can be found in Section 2.4.1.8.

Land Use Allocation

Back Country Recreation Management Zone of 28,200 acres

Desired Future Condition

Maintain or enhance the natural landscape character of the Agua Fria River Canyon and tributaries (Map 2-35). See Desired Future Condition description in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.4.1.6.

Maintain river crossings at Kelton Ranch, EZ Ranch, Horseshoe Ranch, and Cross Y Ranch.

SRPs and Concessions:

- Up to six SRPs would be authorized within the monument each year. These SRPs might include any combination of the following:
 - Commercial (e.g. jeep tours, outfitters),
 - Commercial special events, and
 - Noncommercial special events.
- Issue permits and concessions to enhance visitor use, services, safety, and enjoyment, providing they conform to monument values and objectives. Evaluate concessions and permits on a case-by-case basis. Determinations would be made on consistency with management objectives and clearly demonstrated needs.

Dispersed Camping:

- Allow camping but limit it to certain designated areas if resource damage occurs. Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs or threatens resources protected by proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.
- Prohibit camping at archaeological sites, including at petroglyph (rock art) sites.
- Allow camping if at least ¼ mile from High or Moderate use archaeological sites.

- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).

Campfires:

- Allow campfires at dispersed sites.
- Prohibit campfires within ¼ mile of High and Moderate public-use archaeological sites.
- Prohibit campfires within 200 feet of archaeological sites, including petroglyph (rock art) sites.
- Prohibit campfires within ¼ mile of a developed campground.
- Allow campfires only in existing disturbed areas.
- Allow campfires in existing campfire rings only.
- Limit firewood collection to campfire use only. Firewood may consist of dead, down, and detached material. To prevent resource damage, monitor vegetation for use and disturbance. Temporarily or permanently suspend firewood collection to prevent resource damage.

Recreational Target Shooting:

- Targets need to be of a type and material that will not produce litter and must be cleaned up after use.
- Spent shell casings have to be cleaned up after use.
- Unacceptable impacts to monument resources or public safety would result in further management actions, ranging from further restrictions to closure.
- Prohibit shooting within ½ mile of areas where people congregate, including trailheads, campgrounds, interpretive sites, kiosks, and other high-use sites.

Trail Construction for Non-motorized Recreation Use

Discussion of recreation trail development can be found in Section 2.4.1.8.

Land Use Allocation

The Passage Recreation Management Zone would consist of 700 acres.

Desired Future Condition

See Desired Future Condition description in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.4.1.6.

SRPs and Concessions:

- Up to six SRPs would be authorized within the monument each year. These SRPs might include any combination of the following:
 - Commercial (e.g. jeep tours, outfitters),
 - Commercial special events, and
 - Noncommercial special events.
- Issue permits and concessions to enhance visitor use, services, and visitor safety and enjoyment, providing these conform to monument values and objectives. Consider concessions and permits on a case-by-case basis, with determinations based on consistency with management objectives and a clearly demonstrated need.

Dispersed Camping:

- Allow camping at designated sites only.
- Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs or threatens resources protected by proclamation, or if health and safety issues emerge. If

damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.

- Prohibit camping on archaeological sites, including petroglyph (rock art) sites.
- Allow camping if at least ¼ mile from High or Moderate public use archaeological sites.
- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).

Campfires:

- Prohibit campfires within ¼ mile of High and Moderate public-use archaeological sites.
- Prohibit campfires at archaeological sites, including petroglyph (rock art) sites.
- Prohibit campfires within ¼ mile of a developed campground.
- Limit firewood collecting to campfire use only. Firewood may consist of dead, down, and detached material. To prevent resource damage, monitor vegetation for use and disturbance. Temporarily or permanently suspend firewood collecting to prevent resource damage.

Recreational Target Shooting:

- Targets need to be of a type and material that will not produce litter and must be cleaned up after use.
- Spent shell casings have to be cleaned up after use.
- Unacceptable impacts to monument resources and public safety would result in further management actions, ranging from further restrictions to closure.

Trail Construction for Non-motorized Recreation Use

Discussion of recreation trail development can be found in Section 2.4.1.8.

Administrative Actions

Collect baseline data concerning recreational target shooting, to determine social and resource impact, to establish monitoring needs and frequencies, and to detect change.

2.4.1.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative C* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-36. Within the Agua Fria National Monument, the Front Country and Passage RMZs would be allocated to VRM Class III. The Back Country RMZ and 1/2 mile on each side of the proposed Bloody Basin Road Back Country Byway would be allocated to Class II objectives.

2.4.1.7 Rangeland Management

Land Use Allocation

Eleven grazing authorizations would continue to be administered within Agua Fria National Monument. Grazing would be prohibited in the monument's riparian areas (Map 2-37). On grazing allotments where riparian areas are unfenced, the entire pasture would be closed to grazing.

Desired Future Condition (DFC)

Watersheds are in properly functioning condition, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes are maintained to support healthy biotic populations and communities.

Within 3 years, riparian areas that did not meet Standard 2 of the Arizona Standards for Rangeland Health (Land Health Standards) because of livestock grazing would meet that standard.

Management Actions

For allotments where the public lands are unfenced from other lands, fencing and surveys would be required to establish the boundaries of the riparian areas and protect them from livestock grazing.

The loss of allotment acres because of the riparian restriction would result in current authorized livestock numbers being correspondingly reduced.

Fence construction and maintenance will follow guidance provided in BLM's handbook on Fencing No. 1741-1.

2.4.1.8 Travel Management

Land Use Allocation

The entire monument is allocated as limited to designated routes.

Management Actions

All vehicles would be limited to designated routes. Cross-country motorized travel is prohibited except in the case of an emergency or for approved administrative purposes.

Maintain river crossings at Kelton Ranch, EZ Ranch, Horseshoe Ranch, and Cross Y Ranch.

Within Front Country

Trail Construction for Non-motorized and Non-mechanized Recreation Use:

- Develop trails as needed to enhance resources and recreation experiences and to protect monument values. Any construction would be compatible with Desired Future Conditions for the construction area.
- Design trails to blend into the environment.
- Build loop, connector, and linear trails, depending on recreation, access, and resource objectives.
- Where appropriate, build trails to maintain connectivity to recreation opportunities such as hunting, equestrian activities, hiking, and viewing cultural sites.
- Where appropriate, build trails to link with other connector trails beyond the monument's border.
- Explore opportunities to link networks of non-motorized trails within the monument to trails outside the monument on other BLM-managed lands, or in other adjacent jurisdictions, including Tonto and Prescott National Forests, Yavapai County, and local communities, where linkages are consistent with monument values and do not impair protection of monument resources.
- Place priority for developing non-motorized trails on archaeological sites developed for interpretive use and visitation.
- Evaluate other non-motorized trails to enhance visitor access and enjoyment of monument resources. Such trails may include (1) self-guided nature and cultural resource trails, (2) trails to interpreted sites not accessible by vehicle, or (3) longer trails linking multiple sites for day or multiple-day trips.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- All construction would be compatible with Desired Future Conditions for the construction area.
- Evaluate new motorized vehicle routes on a case-by-case basis, with determinations based on protecting and enhancing monument values.
- Enhance existing routes north of Bloody Basin Road to provide greater motorized recreation opportunities.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles:

- All vehicles would be limited to designated routes consistent with the discussion in Section 2.7.2.10.
- Manage OHV access to provide for a variety of use experiences, including allowing public access to the monument's cultural and biological resources.

Within Back Country

Trail Construction for Non-motorized and Non-mechanized Recreation Use:

- Develop trails as needed to enhance resources and recreational experiences and protect monument values. All construction would be compatible with Desired Future Conditions for the construction area.
- Design trails to blend into the environment.
- Build loop, connector, and linear trails, depending on recreation, access, and resource objectives.
- Where appropriate, build trails to maintain connectivity to recreational opportunities, such as hunting, hiking, equestrian activities, and viewing cultural sites.
- Where appropriate, build trails to link with other connector trails beyond the monument's border.

- Explore opportunities to link networks of non-motorized trails within the monument to trails outside the monument on other BLM-managed lands, or on other adjacent jurisdictions, including Tonto and Prescott National Forests, Yavapai County, and local communities, where trail linkages conform to monument values and do not impair protection of monument resources.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- Build no new routes within the Back Country RMZ.

Off-Highway Vehicles:

- Manage the Back Country RMZ as a non-motorized area.

Within Passage

Trail Construction for Non-motorized and Non-mechanized Recreational Use

- Develop trails as needed to enhance resources and recreational experiences, and protect monument values. All construction would be compatible with Desired Future Conditions for the construction area.
- Design trails to blend into the environment.
- Build loop, connector, and linear trails, depending on the established recreation, access, and resource objectives.
- Build trails to maintain connectivity to recreation opportunities, such as hunting, riding, and viewing cultural sites.
- Build trails to link with other connector trails beyond the monument's border.

- Explore opportunities to link networks of non-motorized and non-mechanized trails within the monument to trails outside the monument on other BLM-managed lands, or within other adjacent jurisdictions, including Tonto and Prescott National Forests, Yavapai County, and local communities, where trail linkages conform to monument values and do not impair protection of monument resources.
- Place the priority for developing non-motorized trails on archaeological sites developed for interpretive use and visitation.
- Evaluate other non-motorized trails to enhance visitor access and enjoyment of monument resources. These trails may include (1) self-guided nature and cultural resource trails, (2) trails to interpreted sites not accessible by vehicle, or (3) longer trails linking multiple sites for day or multiple-day trips.
- Build non-motorized and non-mechanized trails to provide access to core use areas. Such trails could consist only of routes marked by low-impact fiberglass posts with minimal ground disturbance.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- All construction would be compatible with desired recreation settings.
- Motorized route construction would be considered only as mitigation for resource conflicts.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles:

- All vehicles would be limited to designated routes consistent with the discussion in Section 2.7.2.10.
- Manage OHV access to provide for a variety of use experiences, especially to provide access for public visitation of the monument's cultural and biological resources.

Implementation Actions

Public Access

An evaluation tree review process was used to establish a designated public access and route system to support resource objectives consistent with *Alternative C* and to protect monument resources. The results of the evaluation are shown on Map 2-38. A summary of the route status and quantity that would be designated is shown below.

Routes Open 123 miles

Routes Closed 48 miles

New Routes 6 miles

2.4.2 Bradshaw-Harquahala Planning Area

Although *Alternative C* still places some emphasis on resource use and development, it places greater emphasis on more undeveloped opportunities. Some areas would undergo more protective management than that proposed under *Alternative B*. The result is limiting access, closing some areas to vehicles, and establishing an increased number and acreage of areas of critical environmental concerns (ACECs). In addition, there would be fewer cultural resources devoted to public use and a greater number of acres allocated to maintain wilderness characteristics. Grazing of uplands would remain similar to current management, but riparian areas would be closed to grazing. Mining would be open in most areas, with restrictions in areas that are allocated to maintain wilderness characteristics and ACECs. Visual

resource management (VRM) would be consistent with increased emphasis on resource protection. The management units (MUs) for *Alternative C* are shown on Map 2-39.

2.4.2.1 Management Applicable to the Entire Bradshaw-Harquahala under this Alternative

2.4.2.1.1 Lands and Realty

Land Tenure Adjustments

Under *Alternative C* two methods have been developed for determining which lands are potentially suitable for disposal through sale or exchange. Management of all other resources would remain as discussed for the Alternative. The two methods are described below. The lands suitable for disposal, determined by both sets of criteria, are shown in Map 2-40.

The first method selects lands with the following traits:

- parcels of 160 acres or less and
- 5 miles or more from blocks (5,000 or more contiguous acres) of BLM-managed lands.

This method has found approximately 600 acres potentially suitable for disposal. Of these 600 acres, 344 acres are scattered lands outside the planning area boundaries but included in this planning effort. None of the areas determined by this method were in a management unit selected for *Alternative C*.

The second method selects lands with the following traits:

- either physically or functionally fragmented,
- in blocks of 5,000 acres or less, and
- generally not adjoining in-holdings of other Federal agencies.

This method found 49,100 acres to be potentially suitable for disposal. Of these 49,100 acres, 5,200 acres are within the scattered lands outside the planning area boundaries but included in this planning effort. Other criteria limiting which lands might be selected as suitable for disposal are described in the Management Common to Both Planning Areas section of this chapter in the discussion under Lands and Realty Section 2.7.1.2.

Lands considered for potential acquisition include State and private lands (willing seller) within the planning area. Acquired parcels would be managed in accordance with the resource management prescriptions outlined in this land use plan. These lands would meet the criteria described under the Lands and Realty discussion of the Management Common to Both Planning Areas, as well as program objectives for *Alternative C*.

Utility and Transportation Corridors

New utility corridors within the Bradshaw-Harquahala Planning Area (Map 2-41) would be allocated for future expected demands. These allocations would respond to the demand to intensify the power grid and would conform to the utility regulations of the Arizona Corporation Commission.

2.4.2.1.2 Rangeland Management

Land Use Allocation

BLM would continue to administer 93 grazing authorizations within the planning area.

Desired Future Condition

Watersheds are in proper functioning condition, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes are maintained to support healthy biotic populations and communities.

In riparian areas where livestock grazing precluded achieving Standard 2 of the Arizona Standards for Rangeland Health (Land Health Standards), the standard could be achieved within 3 years.

Management Actions

Grazing in riparian areas would be prohibited (Map 2-42). On grazing allotments where the riparian areas are unfenced and BLM owns or controls a sufficient amount of acreage within a pasture, the entire pasture would be unavailable for grazing.

For allotments where the public lands are unfenced from other lands, surveys, and fencing would be required to establish the boundaries of the riparian areas and protect them from livestock grazing where reasonable and prudent.

The loss of acres in an allotment because of the riparian restriction would result in a corresponding reduction in current authorized livestock numbers.

2.4.2.1.3 Mineral Resource Management

The following maps show minerals management proposed under *Alternative C* in the immediate environs of the planning areas:

- *Alternative C* Closed to Locatable Minerals (Map 2-43).
- *Alternative C* Closed to Leasable Minerals (Map 2-44).
- *Alternative C* Closed to Saleable Minerals (Map 2-45).

The following descriptions of mineral types include information on mining closures:

Leasable Minerals

All lands would be open to leasing except for the Tule Creek ACEC, Sheep Mountain RNA ACEC, Black Mesa ACEC, and Baldy Mountain ONA ACEC (Map 2-46), all of which would be closed to mineral and geothermal leasing.

Reconveyed lands with potential for leasable minerals would be opened for mineral and geothermal leasing.

Saleable Minerals (Mineral Materials)

All BLM-managed lands in the planning area would be open for mineral material disposal, except for the following areas, which would be closed:

- Baldy Mountain ONA ACEC (Map 2-46).
- Black Butte ACEC (Map 2-46).
- Sheep Mountain RNA ACEC (Map 2-46).
- Tule Creek ACEC (Map 2-46).
- Vulture Mountains ACEC (Map 2-46).
- Black Mesa ACEC (Map 2-46).
- Lands allocated to maintain wilderness characteristics (Map 2-54).

Reconveyed lands with potential for saleable minerals would be opened for disposal of mineral materials.

Locatable Minerals

All lands would be open to mineral entry except for Baldy Mountain ONA ACEC, Sheep Mountain RNA ACEC, Black Mesa ACEC, and Tule Creek ACEC, all of which would be withdrawn from mineral entry (Map 2-46).

Small tracts and reconveyed lands with high potential for locatable minerals, except for lands in riparian corridors, would be opened to mineral entry.

No riparian areas now withdrawn from mineral entry would be opened to mineral entry under the mining laws.

2.4.2.1.4 Travel Management

Land Use Allocation

All public lands within the Bradshaw-Harquahala Planning Area would be allocated as limited use areas, with motorized and mechanized vehicle uses limited to designated routes. The Hassayampa River Canyon, Hells Canyon, Harquahala Mountains, Big Horn Mountains and Hummingbird Spring Wildernesses would remain closed to motorized and mechanized uses (Map 2-16).

Desired Future Conditions

The network would consist of a system of areas, roads, routes and/or trails that promote access and recreation options. The travel management network and associated recreation opportunities would be consistent with other resource management objectives and recreation settings for the area.

Management Actions

Define, designate, implement, and monitor a comprehensive travel management network affording a range of high-quality and diverse motorized and non-motorized recreation opportunities.

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Administrative Actions

An evaluation process, similar to one described in Appendix D, will be used to establish a designated public access and route system to

support resource objectives consistent with *Alternative B*.

Develop comprehensive Travel and Transportation Management Plans for the management units and other public lands within the planning area. These plans would implement route designations on the public lands.

2.4.2.2 Management Units

Under *Alternative C*, six MUs are geographic units for presenting land use allocations. These MUs are summarized with their land use allocations and management actions in the following sections.

The document sections discussing the six MUs and the maps on which they appear are as follows:

- Black Canyon Management Unit, Section 2.4.2.2.1, Map 2-47.
- Castle Hot Springs Management Unit, Section 2.4.2.2.2, Map 2-48.
- Hassayampa Management Unit, Section 2.4.2.2.3, Map 2-49.
- Harquahala Management Unit, Section 2.4.2.2.4, Map 2-50.
- Harcuvar Management Unit, Section 2.4.2.2.5, Map 2-51.
- Upper Agua Fria River Basin Management, Section 2.4.2.2.6, Map 2-52.

Allocations outside MUs are discussed in Section 2.4.2.2.7 and shown on Map 2-53.

2.4.2.2.1 Black Canyon Management Unit

The Black Canyon MU stretches from the southern end of Table Mesa in the south to Cordes Junction in the north. It is bounded by Agua Fria National Monument and Tonto National Forest on the east and the Prescott National Forest on the west (Map 2-47).

The MU contains the following lands:

- 68,730 acres of BLM-administered lands,
- 12,600 acres of Arizona State land,
- 6,780 acres of private land, and
- 1,100 acres of county park lands in both Maricopa and Yavapai Counties.

2.4.2.2.1.1 Special Designations

Area of Critical Environmental Concern

Black Mesa ACEC (5,540 acres)

Relevance

Diverse types of significant archaeological sites occupied over the past 2,000 years, including sites that may have been ancestral to the Perry Mesa Tradition that was dominant in the Agua Fria National Monument.

Importance

This area contains a well-preserved collection of prehistoric and historic sites that can yield information important to scientific research, particularly relating to the immediate predecessors and development of the Perry Mesa Tradition.

Management Actions

Install fences or barriers to exclude livestock from the Running Deer site.

Withdraw the ACEC from mineral entry; close it to mineral and geothermal leasing, and close to mineral material disposal.

Implement measures to protect cultural sites.

Limit commercial tours and special recreation permits. Limit tours to those conducted for educational purposes in conjunction with site recording or protection projects.

Close all routes that lead directly to significant sites.

Administrative Actions

Complete Class III (intensive) cultural inventories of previously unsurveyed areas and permit BLM-approved scientific studies.

Continue to patrol sites with volunteer help and add this area to the territory regularly monitored by the Civil Air Patrol.

2.4.2.2.1.2 Lands and Realty

Land Tenure Adjustments

Within the Black Canyon MU, the two methods used to determine lands suitable for disposal; generated no parcels by the first method and 5,020 acres by the second. For a description of the methods used, see the Lands and Realty discussion at the beginning of the description of *Alternative C* for the Bradshaw-Harquahala Planning Area. See the lands that are suitable for disposal on Map 2-40.

Communication Sites

One designated communication site is located within this MU. The Black Canyon City communication site would be retained and subject to valid existing rights.

Utility and Transportation Corridors

The portion of the Black Canyon corridor to the west of Interstate 17 would be widened for future utility development. The western boundary of the corridor would be adjusted to be 2 miles west of the true center of I-17.

2.4.2.2.1.3 Biological Resources

No biological resource allocations are located within this MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in

the Management Common to the Bradshaw-Harquahala Planning Area.

2.4.2.2.1.4 Cultural Resources

Land Use Allocation

Black Canyon Corridor SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of the some or all of following and other actions could be implemented at selected sites:

- parking areas,
- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes, and
- brochures and related educational materials or programs.

Stabilize, repair, and maintain sites in good condition.

Authorize commercial and noncommercial group tours, conducted with protective stipulations in accordance with BLM's regulations and, where required, SRPs.

Administrative Actions

Select specific sites for public use by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would help develop sites for public use.

Cooperate with agencies, tribes, and local communities to develop heritage tourism programs that benefit local economies. Develop historic properties for heritage tourism in a way that contributes to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.4.2.2.1.5 Recreation Resources

Land Use Allocation

Table Mesa SRMA

Desired Future Condition

Manage for intensive camping, OHV use, equestrian activities, and casual use mining. The SRMA would offer a diverse network of motorized single and two-track routes for

general motorized recreation use, commercial use, and organized events.

Emphasize acceptable dust control and compatibility with neighboring communities and landowners.

Emphasize motorized recreation settings. Users may be concentrated in some areas, but use is mainly dispersed.

Develop only the facilities needed to meet resource management objectives and must be consistent with the desired recreation setting.

Management Actions

Manage for intensive camping, OHV use, equestrian activities, and casual use mining.

Locate and develop a staging/camping area to meet the high recreation demand. Provide for the following:

- parking and unloading of OHVs,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- human health and safety.

Limit to 10 acres the areas of exposed barren soil.

Prohibit motorized competitive races in the SRMA.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.1.7.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,

- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

The remaining lands within the Management Unit would be allocated as an Extensive Recreation Management Area.

2.4.2.2.1.6 Wilderness Characteristics

Land Use Allocation

Within the Black Canyon Management unit, 14,880 acres would be allocated to maintain wilderness characteristics as shown on Map 2-54.

Desired Future Condition

In addition to the DFC and management actions described in the Wilderness Characteristics discussion of the Management Common to Both Planning Areas section of Chapter 2, the following apply to this allocation.

Manage with an emphasis on non-motorized and primitive recreation experiences, to augment the open space and natural landscapes. Desired recreation settings would consist of semi-primitive non-motorized tracts within the interior of the allocation with semi-primitive motorized tracts along boundaries.

Sections of the Black Canyon Trail's current alignment traversing this area would be managed as a primitive multi-use trail, open to use by four-wheel-drive vehicles, ATVs, motorcycles, mountain bikes, hikers, and horses. A non-motorized Black Canyon Trail alignment is currently being surveyed and constructed through this area.

Management Actions

Close all secondary, tertiary, reclaiming, and single-track vehicle routes and washes not part of the Black Canyon Trail sections mentioned above.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.1.7.

The current alignment of the Black Canyon Trail would be maintained and managed as a multi-use route.

Develop non-motorized trails to link with community trail systems.

Close the areas to mineral material disposal and vegetation sales.

Administrative Actions

Undertake detailed inventory and analysis to develop standards to maintain proper levels of recreation disturbance in each recreation setting.

2.4.2.2.1.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative C* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-36.

Within the Black Canyon Management Unit:

- the Table Mesa SRMA would be allocated to VRM Class III,
- lands allocated to maintain wilderness characteristics would be allocated to VRM Class II objectives,
- utility corridors would be allocated to VRM Class III or IV, and
- the rest of the Management Unit would be allocated to VRM classes as portrayed on Map 2-36.

2.4.2.2.1.8 Mineral Resource Management

Black Mesa ACEC would be withdrawn from mineral entry, closed to mineral and geothermal leasing, and closed to mineral material disposal.

Lands allocated to maintain wilderness characteristics would be closed to mineral material disposal.

2.4.2.2.1.9 Travel Management

Land Use Allocation

The Black Canyon Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

The Table Mesa SRMA and other recreation allocations are discussed in Section 2.4.2.2.1.5. The Table Mesa SRMA would offer a variety of experiences as part of a diverse network of motorized single and two-track routes for general motorized recreation use, commercial use, organized events, and equestrian activities.

Allocations to maintain wilderness characteristics are discussed in Section 2.4.2.2.1.6.

SCRMA and cultural sites allocated to Public Use are discussed in the Cultural Resources Section 2.4.2.2.1.4.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Close all secondary, tertiary, reclaiming, and single-track vehicle routes and washes not part of the Black Canyon Trail sections, in order to secure wilderness character on lands managed to maintain wilderness character.

Sections of the Black Canyon Trail's current alignment traversing this area would be managed and maintained as a primitive multi-use trail, open to use by four-wheel-drive vehicles, ATVs, motorcycles, mountain bikes, foot travel, and horses. A non-motorized Black Canyon Trail alignment is currently being surveyed and constructed through this area.

Close all routes that lead directly to significant cultural sites within the Black Mesa ACEC.

Develop non-motorized trails to link with community trail systems.

2.4.2.2.2 Castle Hot Springs Management Unit

Castle Hot Springs MU is bounded by State Route 74 (the Carefree Highway) to the south, Prescott National Forest to the north, Black Canyon MU to the east, and Hassayampa MU to the west (Map 2-48). The MU contains the following lands:

- 112,430 acres of BLM-administered land,
- 53,730 acres of Arizona State land,
- 32,560 acres of private land,
- 22,870 acres of county park lands in both Maricopa and Yavapai Counties (Lake Pleasant Regional Park), and
- 1,100 acres of Bureau of Reclamation lands not within Lake Pleasant Regional Park.

2.4.2.2.2.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.2 in the Management Common to the

Bradshaw-Harquahala Planning Area section of this chapter.

Tule Creek ACEC (640 acres)

Relevance

Tule Creek ACEC contains significant historic and cultural values, including the Fort Tule site, a prehistoric hilltop ruin occupied from about A.D. 1100 to 1300, and a homesite occupied by miners in the 1920s and 1930s. Tule Creek is an example of rare Sonoran Desert riparian system dominated by emergent vegetation and occupied by the endangered Gila topminnow.

Importance

The Fort Tule cultural site was probably used as a significant connection in a regional communication system based on signaling among hilltop sites. Its role in the communication system can offer important information on prehistoric social systems during the era in which it was used.

Tule Creek and its sensitive biological resources are extremely vulnerable to disturbance and degradation from vehicles, mining, and livestock use. Continued protecting of Tule Creek is important to the recovery of the endangered Gila topminnow.

Desired Future Condition

The integrity of the riparian area, endangered species habitat, and cultural resources are protected from degradation.

Management Actions

Close the fenced area to livestock grazing and motorized vehicles.

Withdraw the ACEC from mineral entry; close it to mineral and geothermal leasing, and close to mineral material disposal.

Administrative Decision

Continue to patrol archaeological sites and, where needed, implement measures to protect sites.

Sheep Mountain RNA ACEC (4,270 acres)

Relevance

Pristine biological resources, including desert tortoise habitat and potential desert bighorn sheep habitat, with open space and non-motorized recreation opportunities.

Importance

This is a highly scenic area with high-quality wildlife habitat undisturbed by vehicle routes and human activity.\

Desired Future Condition

Semi-primitive, non-motorized recreation setting throughout the entire area.

A diversity of non-motorized, trail-based opportunities in a natural setting.

Broad expanses of natural appearing Sonoran Desert landscapes that continue to contribute to the open space, primitive recreation, and solitude opportunities near the urban centers of the Greater Phoenix metropolitan area.

Management Actions

Close all vehicle routes identified as reclaimed through the route designation process.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.2.6.

Withdraw the ACEC from mineral entry and close it to mineral and geothermal leasing and to mineral material disposal.

Do not permit vegetation sales.

2.4.2.2.2 Lands and Realty

Land Tenure Adjustments

Within the Castle Hot Springs MU, the two methods that were used to derive lands available for disposal; generated no parcels by the first method, and 2,270 acres by the second method. For a description of the methods used, see the Lands and Realty discussion at the beginning of the description of *Alternative C* for the Bradshaw-Harquahala Planning Area. See lands that are suitable for disposal in Map 2-40.

Communication Sites

No designated communication sites lie within this MU.

2.4.2.2.3 Biological Resources

No allocations would be made for biological resources within Castle Hot Springs MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area

2.4.2.2.4 Cultural Resources

Land Use Allocation

Lake Pleasant/Agua Fria SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

A combination of some or all of following and other actions could be implemented at selected sites:

- parking areas,
- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes, and
- brochures and related educational materials or programs.

Implement actions to stabilize, repair, and maintain sites in good condition.

Authorize commercial and noncommercial group tours, conducted with protective stipulations in accordance with BLM's regulations and, where required, SRPs.

Administrative Actions

Specific sites for public use would be selected by considering the following factors:

- aboveground features of interest to the public and amenable to interpretation,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would help develop sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.4.2.2.2.5 Recreation Resources

Land Use Allocation

Hieroglyphic Mountains SRMA

Desired Future Condition

Manage mainly for intensive motorized single and two-track routes for general motorized recreation use and competitive races.

Emphasize dust control and compatibility with neighboring communities and landowners.

Maintain semi-primitive motorized and roaded-natural settings, with an emphasis on semi-primitive motorized opportunities.

Develop facilities with a variety of amenities consistent with the desired recreation setting. Visitors could expect contact with BLM's representatives frequently.

Nonintrusive signing would be present in most of the SRMA but might be absent in some areas.

Users would be concentrated in staging and camping areas, but most use would be dispersed.

Management Actions

Designate all motorized vehicle routes within this SRMA for general motorized recreation use,

commercial use, organized OHV events, and competitive races.

Locate at least 20 miles of single and two-track routes for motorized competitive races to provide a unique array of challenges for motorcycle and ATV competitive racing.

Limit the number of motorized competitive races to 2 per year.

Locate and develop a staging/camping area for the following purposes:

- meeting the high recreation demand,
- parking and unloading OHVs,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- human health and safety.

Limit to 20 acres the area of exposed barren soil.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.2.6.

Land Use Allocation

The lands remaining in the Management Unit would be allocated to an Extensive Recreation Management Area.

2.4.2.2.2.6 Wilderness Characteristics

Land Use Allocation

In the Castle Hot Springs Management Unit, 9,413 acres would be allocated to maintain wilderness characteristics (Map 2-54).

In addition to the DFC and management actions described in the Wilderness Characteristics discussion of the Management Common to Both Planning Areas section of this chapter, the following apply to this allocation.

Desired Future Condition

The area would be managed mainly for emphasis on non-motorized recreation experiences, open space, and natural landscapes to complement Lake Pleasant Regional Park. Recreation settings of semi-primitive non-motorized would be maintained throughout the area. Natural landscape values and remoteness would be maintained.

The current mix of motorized and non-motorized recreation settings, associated landscapes, and experiences would be maintained.

Management Actions

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.2.7.

As many as three non-motorized trails and trailheads would be developed to link with other trails, allow loop hikes, and provide a variety of trail experiences.

Mineral material disposals, vegetation sales, and new roads, and rights-of-way would be prohibited.

Vehicles would be confined to designated routes. Reclaiming and eroded routes, hillside climbs, and washes would be closed to motorized travel.

2.4.2.2.2.7 Visual Resources***Land Use Allocations***

VRM classes for *Alternative C* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-36.

Within the Castle Hot springs Management Unit:

- the Baldy Mountain ONA ACEC and the Sheep Mountain RNA ACEC would be allocated to VRM Class I objectives,
- the Hieroglyphic Mountains SRMA would be allocated to VRM Class III objectives,
- the Hells Canyon Wilderness would continue to be allocated to VRM Class I objectives, and
- in areas not listed above, VRM classes would be as portrayed on Map 2-36.

2.4.2.2.2.8 Mineral Resource Management***Management Actions***

Tule Creek ACEC, Baldy Mountain ONA ACEC, and Sheep Mountain RNA ACEC would be withdrawn from mineral entry, closed to mineral and geothermal leasing, and closed to mineral material disposal.

2.4.2.2.2.9 Travel Management***Land Use Allocation***

The Castle Hot Springs Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Special Areas Designations Section 2.4.2.2.2.1. RMAs and other recreation allocations are discussed in Section 2.4.2.2.2.5.

SCRMA and cultural resources sites allocated to Public Use are discussed in Section 2.4.2.2.2.4.

Management Actions

Limit all vehicles to designated routes. No cross-country motorized travel would be permitted

except in cases of emergency or for approved administrative purposes.

Close all secondary, tertiary, single-track, washes, and reclaiming vehicle routes within the Baldy Mountain ONA/ACEC. Build non-motorized trails with up to three trailheads within the ONA/ACEC, offering loop hikes, and connection to other trails.

Close the fenced area within the Tule Creek ACEC to motorized vehicles.

Within the Hieroglyphic Mountains SRMA, manage mainly for intensive motorized single and two-track routes for general motorized recreation use and competitive races. Designate all motorized vehicle routes within the SRMA for general motorized recreation use, commercial use, organized OHV events and competitive races. Locate at least 20 miles of single and two-track routes for motorized competitive races to provide a unique array of challenges for motorcycle and ATV competitive racing.

Close all reclaimed vehicle routes within the Sheep Mountain ONA/ACEC except those needed to facilitate public access to the area.

Consider developing hard-surfaced walking trails within the Lake Pleasant/Agua Fria SCRMA for interpretation and educational uses.

2.4.2.2.3 Hassayampa Management Unit

The Hassayampa MU contains the Town of Wickenburg at its center. It is bounded on the east by Prescott National Forest and the Castle Hot Springs MU, and on the west by the Harquahala MU. The southern edge is south of the Vulture Mountains, and the MU extends north past Yarnell (Map 2-49).

The MU contains the following land:

- 181,910 acres of BLM-administered lands,

- 130,580 acres of Arizona State land,
- 50,610 acres of private land, and
- 460 acres of county-administered lands in Maricopa and Yavapai Counties.

2.4.2.2.3.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with Management Actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Area of Critical Environmental Concern

Vulture Mountains ACEC (2,790 acres)

Relevance

The cliffs along the crest of Vulture and Caballeros Peaks are significant habitat features used by many species of raptors, as well as being a pristine, scenic landmark. These cliffs are essential to the maintenance of the current biological diversity of the surrounding area. Large concentrations of nesting hawks and falcons use these spectacular cliff faces.

Importance

The value of the cliffs for nesting raptors is significant for a large area. These cliffs are virtually the only suitable nesting cliffs for many miles. Nesting raptors are sensitive to construction-related activities. If the cliffs and surrounding area are not protected from these activities, cliff-nesting raptors would disappear from much of the area.

Desired Future Condition

Maintain the raptor nesting habitat on the cliffs and the surrounding foraging habitat.

Management Actions

Prohibit mineral material disposal.

The ACEC boundary would be a 1/2 mile buffer of significant cliffs.

Prohibit the creation of new recreation sites.

Close, limit, or mitigate vehicle routes that conflict with maintaining wildlife habitat and cultural resources to ensure achieving the DFC.

Prohibit building of new vehicle routes.

Prohibit rock climbing in the ACEC.

Acquire non-Federal lands within the ACEC as available.

Back Country Byway

Constellation Mine Road *Desired Future Condition*

This back country byway would provide a vehicle-based, backcountry experience with amenities to heighten visitor experiences and to educate and inform visitors about interesting natural and cultural features along the route. Visitors could expect the road to occasionally be difficult and settings to be remote. The road might not be accessible to all classes of vehicles. High clearance might be needed to travel the whole route. The road does not fragment wildlife habitat or limit wildlife movement. Establish and maintain a semi-primitive motorized recreation setting ½ mile to either side of the road's centerline.

Management Actions

Evaluate and nominate the Constellation Mine Road for potential designation as a national back country byway.

Maintain the public portions of this road at a BLM Maintenance Intensity standard of Level 3 'Medium' (BLM Roads and Trails Terminology Report) and passable by high-clearance vehicles.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.3.7.

Secure easements and rights-of-way as described in Travel Management Section 2.4.2.2.3.9, where needed to ensure long-term public access along Constellation Mine Road.

Interpret the route's historical features, including original road-building structures; mining properties and districts; and historic homesteads, settlements, and ranching history.

Install directional, safety, and interpretive signs to enhance public use, enjoyment, and stewardship of the route.

Administrative Actions

Establish a friends group to maintain, monitor, and help interpret the route, and present the route and area's natural and human history.

2.4.2.2.3.2 Lands and Realty

Land Tenure Adjustments

Within the Hassayampa MU the two methods that were used to derive lands available for disposal, generated no parcels by the first method; and 10,340 acres by the second method. For a description of the methods used, see the Lands and Realty discussion at the beginning of the description of *Alternative C* for the Bradshaw-Harquahala Planning Area. See lands that are suitable for disposal on Map 2-40.

In support of the Yarnell Special Recreation Management Area:

- Retain in public ownership Sections 22, 23, and 27 (Map 2-32) and all landing zones below Yarnell Hill.
- Acquire legal public access to the Yarnell hang gliding launching area through easements, rights-of-way, or land acquisition.

- Acquire the Arizona State Trust parcel southwest of Yarnell containing Fool's Gulch (Section 22) through purchase, legislation, or exchange.
- Prohibit new overhead powerlines, phone lines, or communication facilities within 1 mile of launching and identified landing zones.

In support of the Wickenburg Special Recreation Management Area:

- Acquire the 19,396 acres of State land within the SRMA. Prioritize and pursue acquisition using the criteria in the Lands and Realty discussion of the Management Common to Both Planning Areas section of Chapter 2. Lands would be acquired according to the following priorities:
 - maintaining access and securing trail alignments,
 - enhancing recreation opportunities,
 - preserving scenery and open space, and
 - conserving riparian values.

Communication Sites

No designated communication sites are within this MU.

2.4.2.2.3.3 Biological Resources

No biological allocations would be made within the Hassayampa MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.4.2.2.3.4 Cultural Resources

Land Use Allocation

Wickenburg/Vulture SCRMA

Desired Future Condition

Manage a variety of prehistoric and historic sites for interpretation, education, and public visitation. For further information on public use of cultural resources, see Appendix E.

Management Actions

A combination of some or all of following and other actions could be implemented at selected sites:

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes, and
- brochures and related educational materials or programs

Stabilize, repair, and maintain sites in good condition.

Authorize commercial and noncommercial group tours with protective stipulations in accordance with BLM regulations and, where required, SRPs.

Administrative Actions

Select sites for public use considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,

- accessibility to communities, travel routes, and recreation trails,
- condition of the site and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

Cooperate with agencies, tribes, and local communities to support heritage tourism programs that benefit local economies. Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.4.2.2.3.5 Recreation Resources

Land Use Allocation

Stanton SRMA

Desired Future Condition

Provide an area to accommodate intensive recreation public uses and desired settings. This area would continue to allow other diverse recreation experiences while decreasing unacceptable environmental impacts from the following:

- excessive and unregulated camping,
- recreation activities of prospecting clubs, and
- motorized and other recreation uses.

Maintain a variety of recreation settings and opportunities with an emphasis on semi-primitive motorized and roaded-natural settings and associated recreation experiences.

Management Actions

Locate and develop trailheads, staging and camping areas, and other facilities.

Designate a diverse network of motorized vehicle routes open to a range of OHV experiences and challenges.

Limit the number of motorized competitive races to 1 per year.

Install informational, educational, and interpretive kiosks and trail signs where needed and suitable. Placement of interpretive signs along the Stanton-Octave-Yarnell road, as proposed under the Lower Gila North MFP, would be consistent with this management action.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.3.7.

Administrative Actions

Determine specific areas where assessments would be initiated to do the following:

- define detailed desired conditions,
- define standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

Yarnell SRMA

Desired Future Condition

This site is one of the most valued in Arizona for launching successful long-distance, non-powered flights. Maintain long-term public

access to the Yarnell hang gliding launching area. In addition, maintain the landing areas and approaches to landing areas as free of flight hazards as possible.

Management Actions

Lands actions to support this SRMA are described in the Lands and Realty Section. 2.4.2.2.3.2.

Land Use Allocation

Wickenburg SRMA

Desired Future Condition

Establish a system of high-quality equestrian trails surrounding Wickenburg to buffer the area from urban sprawl and preserve the open space value of the local landscape. This trail system would afford many opportunities for recreation enthusiasts and enhance the lifestyle, culture, and cultural history of community residents.

Offer properly managed and marketed quality recreation and tourism, promoting conservation, a strong land ethic, and protects the natural resources and cultural heritage of the Wickenburg SRMA.

Emphasize and maintain, in suitable areas, an array of rural, roaded-natural, semi-primitive motorized, and semi-primitive non-motorized settings and associated experiences and opportunities for residents, tourists, and winter visitors.

Management Actions

Locate and develop a non-motorized trailhead for the Red Top Trail System to meet the high demand for non-motorized recreation and provide for the following:

- vehicle parking,
- unloading of animals,
- overnight camping,
- event operations,

- informational signing,
- dust abatement, and
- human health and safety.

Limit to 20 acres the area of exposed barren soil.

Locate and develop an ATV and a motorcycle trail network in the Red Top Trail area to give the local community motorized recreation opportunities and to shift motorized use from designated non-motorized trails. Use existing designated motorized vehicle routes, and, if necessary, create new routes less than 52 inches wide to meet the objective.

Prohibit motorized competitive races in the SRMA.

Locate and develop at least one small parking area for OHV parking and unloading. Limit to 5 acres the area of exposed barren soil.

Maintain and upgrade the Vulture Peak Trail by rerouting some trail segments.

Lands actions to support this SRMA are described in the Lands and Realty Section. 2.4.2.2.3.2.

Develop special facilities for horse camping in the area south of Vulture Peak and south of Congress. These facilities could provide water for horses, electrical hook-ups for trailers, and more primitive horse camping facilities.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.3.7.

Withdraw from mineral entry, close to mineral and geothermal leasing, and close to mineral material disposal, an area around Box Canyon on the Hassayampa River to permanently protect its scenic quality and recreation values. The withdrawal would include the following sections: Township 8 North, Range 5 West, sections 12, 13, and 24; and Township 8 North, Range 4 West, sections 7, 18, 19, 20, 29, and 30. (Map 2-55).

Administrative Actions

Collaborate with a diverse group of Wickenburg citizens to conserve the ecological, cultural, open space, and recreation values of the Wickenburg area so that it remains a place where people want to live, work, and play.

Write a comprehensive strategy and trails plan to select and develop new single-use and multi-use hiking, equestrian, and OHV trails for all lands in the SRMA.

Land Use Allocation

San Domingo SRMA

Desired Future Condition

Provide a Sonoran Desert wash and upland environment suitable for an array of motorized and non-motorized activities. Manage for roaded-natural, semi-primitive motorized, and semi-primitive non-motorized recreation settings.

Provide opportunities for the following while protecting the natural and cultural resources in the area:

- intensive camping,
- OHV activities,
- equestrian use,
- recreation activities of prospecting clubs,
- event operations, and
- motorized single and two-track routes for general motorized recreation use and competitive races.

Management Actions

Locate and develop trailheads, staging and camping areas, and other facilities as needed for recreation activities. Limit to 10 acres the areas of exposed barren soil.

Limit the number of motorized competitive races to 1 per year.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.3.7.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

Vulture Mine SRMA

Desired Future Condition

Provide a Sonoran Desert landscape suitable for intensive motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events and competitive races.

Emphasize and maintain the current roaded-natural and semi-primitive motorized recreation settings and associated opportunities.

Preserve the mining and settlement history of the Vulture City Cemetery.

Management Actions

Designate a minimum of 20 miles of motorized single and two-track routes for competitive races to provide a unique array of challenges for truck, buggy, ATV, and motorcycle competitive racing.

Limit the number of motorized competitive races to 2 per year.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.3.7.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Write a site management and interpretation plan for the Vulture City Cemetery.

Land Use Allocation

The remaining lands within the Management Unit would be allocated as an Extensive Recreation Management Area.

2.4.2.2.3.6 Wilderness Characteristics

Land Use Allocation

Within the Hassayampa Management Unit, 13,200 acres would be allocated to maintain wilderness characteristics as shown on Map 2-54.

Desired Future Condition

In addition to the DFC and management actions described in the Wilderness Characteristics discussion of the Management Common to Both Planning Areas section of Chapter 2, the following apply to this allocation:

Manage for open space and generally natural landscapes. Emphasize a recreation setting of semi-primitive non-motorized.

Maintain availability of non-motorized recreation opportunities.

Management Actions

Close tertiary, primitive, reclaiming, single-track vehicle routes and washes to motorized use.

Retain access to the Fools Canyon OHV route between the Hassayampa River Canyon Wilderness and lands allocated to maintain wilderness characteristics.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.3.7.

Prohibit mineral material disposal and vegetation sales.

2.4.2.2.3.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative C* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-36.

Within the Hassayampa Management Unit, allocate:

- Constellation Mine Road Back Country Byway to VRM Class II objectives ½ mile to either side of the road's centerline.
- Lands allocated to maintain wilderness characteristics to VRM Class I objectives.
- Wickenburg SRMA to VRM Class II objectives except areas with desired recreation settings of rural or roaded-natural and areas open to mineral development to VRM Class III objectives.
- San Domingo, Stanton, and Vulture Mine SRMAs to VRM Class III.
- Hassayampa River Canyon Wilderness to VRM Class I objectives.

- Utility corridors would be allocated to VRM Class III or IV.
- Areas not listed above would be allocated to VRM classes as portrayed on Map 2-36.

2.4.2.2.3.8 Mineral Resource Management

Management Actions

Close Vulture Mountains ACEC to mineral material disposal.

Close lands allocated to maintain wilderness characteristics to mineral material disposal.

Close and withdraw from mineral entry, mineral and geothermal leasing, and mineral material disposal an area within Wickenburg SRMA and around Box Canyon, to include the following sections:

- Township 8 North, Range 5 West, sections 12, 13, and 24.
- Township 8 North, Range 4 West, sections 7, 18, 19, 20, 29, and 30.

2.4.2.2.3.9 Travel Management

Land Use Allocation

The Hassayampa Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in the Special Area Designation Section 2.4.2.2.3.1.

SCRMA and cultural resource sites allocated to Public Use are discussed in Section 2.4.2.2.3.4.

SRMAs and other recreation allocations are discussed in Section 2.4.2.2.3.5.

Allocations to maintain wilderness characteristics are discussed in Section 2.4.2.2.3.6.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

The Stanton SRMA would include a diverse network of motorized vehicle routes open to a range of OHV experiences and challenges.

The Wickenburg SRMA would feature a system of high-quality equestrian trails surrounding Wickenburg. Transportation related prescriptions include:

- Locate and develop a non-motorized trailhead for the Red Top Trail System to meet the high demand for non-motorized recreation.
- Locate and develop an ATV and a motorcycle trail network in the Red Top Trail area. Use existing designated motorized vehicle routes, and, if necessary, create new routes less than 52 inches wide to meet the objective.
- Maintain and upgrade the Vulture Peak Trail by rerouting some trail segments.

The San Domingo SRMA would offer a Sonoran Desert wash and upland environment suitable for an array of motorized and non-motorized activities.

The Vulture Mine SRMA would provide a Sonoran Desert landscape suitable for intensive motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events and competitive races. Locate a minimum of 20 miles of motorized single and two-track routes for competitive races to provide a unique array of

challenges for truck, buggy, ATV, and motorcycle competitive racing.

Close the Vulture Peak ACEC to road building.

Secure easements and rights-of-way where needed to ensure long-term public access along Constellation Mine Road.

Close tertiary, primitive, reclaiming, single-track vehicle routes and washes to motorized use on 13,200 acres allocated to maintain wilderness characteristics as shown on Map 2-49. Retain access to the Fools Canyon OHV route between the Hassayampa River Canyon Wilderness and lands allocated to maintain wilderness characteristics.

Consider construction of hard-surfaced walking trails at selected sites within the Wickenburg/Vulture SCRMA for interpretation, education, and visitation.

Implementation Actions

Write a comprehensive strategy and trails plan to select and to develop new single-use and multi-use hiking, equestrian, and OHV trails for all lands in the Wickenburg SRMA.

2.4.2.2.4 Harquahala Management Unit

Alternatives C, D, and E would slightly expand the Harquahala MU. The MU is bounded on the east by the Hassayampa MU and extends west to the Hassayampa Field Office boundary, near the town of Wenden. The MU's southern boundary includes the private and State land south to Interstate 10. The northern boundary follows BLM's property line south of US Route 60, which goes west of Wickenburg, through Aguila, and through Wenden (Map 2-50).

The Harquahala MU contains the following land:

- 420,730 acres of BLM-administered lands,
- 48,410 acres of Arizona State land, and
- 29,616 acres of private land.

Vision

The Harquahala Mountains are renowned for their cultural history, the quality and uniqueness of their biotic communities, and the diversity of their recreation opportunities. The mountain ranges in this MU (Harquahala, Big Horn, and Belmont Mountains) and the areas between them create a complex of wildlife habitats and wildlife movement corridors that the AGFD recognizes as priority management areas. The abundant recreation opportunities include:

- primitive experiences,
- designated hiking trails,
- a back country byway,
- backpacking,
- wildlife viewing,
- hunting,
- rock hounding,
- equestrian uses,
- cultural sightseeing, and
- OHV-driving opportunities.

The MU's scenic and natural landscapes are maintained while offering visitors a diverse array of recreation opportunities. Such opportunities within the MU include both motorized and non-motorized activities. At the same time, a priority is placed on maintaining, enhancing, and restoring natural, biological, and cultural resources.

2.4.2.2.4.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Areas of Critical Environmental Concern

Harquahala Mountains ONA ACEC (41,670 acres)

Relevance

The area constitutes a rare, intact, mountaintop vegetation community surrounded by low desert. The mountains contain a biologically diverse system, in stark contrast to the surrounding landscape, and support a diverse sky island ecosystem, with many species not found in the surrounding Sonoran Desert. The mountains are a natural and mainly roadless area with few noticeable human intrusions in a primitive landscape setting.

Importance

The ONA does the following:

- encloses and preserves a unique assemblage of biological resources,
- conserves significant cultural and historic sites, and
- protects a distinctive vegetation community.

The biological richness of the Harquahala Mountains is unique within southwest Arizona. The Harquahala Mountains and surrounding bajadas provide important wildlife habitat to a diverse array of wildlife species. The area is an ecoregional conservation site with important biodiversity values.

The ONA contains the Harquahala Mountain Observatory National Register of Historic Places district. Besides the observatory itself; the historic Harquahala Peak Pack Trail, Ellison's Camp, and other sites are also components of the historic district. The area also includes many well-preserved prehistoric sites and historic ranching and mining sites. Some archaeological sites may be related to the use of the mountain range by a regional group of the Western Yavapai Tribe.

The ONA will safeguard important and unfragmented wildlife habitat.

Desired Future Condition

The integrity of the vegetation communities, historical features, and prehistoric sites are protected from degradation. Unfragmented wildlife habitat provides adequate forage, cover, and access to water for healthy wildlife populations.

Management Actions

Prohibit the construction of new vehicle routes.

Withdraw the ACEC from mineral entry, and close it to mineral and geothermal leasing, and mineral material disposal.

Protect spring sources by not allowing surface-disturbing activities.

Acquire all available state lands and private lands from willing sellers.

Close, limit, or suitably mitigate vehicle routes that conflict with maintaining wildlife habitat and cultural resources to ensure achieving DFC.

Prohibit building new recreation sites.

Prohibit livestock grazing during bighorn sheep lambing season (January 1 to April 1).

Undertake actions to protect important cultural resources. Maintain the Harquahala Observatory historical site and its interpretive facilities in their current condition.

Prohibit developing grazing improvements that would increase livestock use in Browns Canyon and the Inner Basin.

Administrative Actions

Undertake an inventory of cultural resources to identify and to evaluate sites, determine proper site uses, and develop and implement protection measures for cultural resources within the ACEC.

Black Butte ACEC (800 acres)***Relevance***

Biological resources including raptor nesting habitat and desert tortoise habitat.

Significant source of material for prehistoric tool production.

Importance

Important raptor nesting habitat in central Arizona.

The "Vulture" source of obsidian was a major source of obsidian for prehistoric groups.

Desired Future Condition

The raptor nesting habitat values of the cliffs and the surrounding foraging habitat are maintained.

The integrity of the archeological sites is protected from disturbance or degradation.

Management Actions

Do not permit mineral material disposal.

Prohibit building of new recreation sites.

Close, limit, or suitably mitigate vehicle routes that conflict with maintaining wildlife habitat and cultural resources to achieve the DFC.

Prohibit the creation of new motorized routes.

The "Vulture" obsidian source is a highly valued site within the ACEC. Prohibit actions that would threaten its integrity. Permit scientific study that advances local and regional archaeological knowledge if the integrity of the site is maintained.

Prohibit rock climbing to protect nesting raptors.

2.4.2.2.4.2 Lands and Realty**Land Tenure Adjustments**

Within the Harquahala MU, the two methods used to derive lands available for disposal generated no parcels by the first method and 8,210 acres by the second method. For a description of the methods used, see the Lands and Realty discussion at the beginning of the description of *Alternative C* for the Bradshaw-Harquahala Planning Area. See lands that are suitable for disposal on Map 2-40.

Communication Sites

The Harquahala Peak communication site would be the only designated communication site within this MU. New communication sites will be authorized only at existing designated communication sites.

2.4.2.2.4.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Land Use Allocation

Belmont/Big Horn Mountains Wildlife Habitat Area

Desired Future Condition

Maintain the wildlife and plant diversity and species richness of the Sonoran Desert scrub vegetation community. Maintain unfragmented wildlife habitat that provides adequate forage, cover, and access to water for healthy wildlife populations.

Management Actions

Prohibit building new fences.

Close, limit, or suitably mitigate motorized vehicle routes that conflict with maintaining wildlife habitat values to ensure achieving DFC.

Arizona State and private lands would be acquired from willing sellers when available.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

Land Use Allocation

Harquahala/Belmont/Big Horn Wildlife Corridor

Desired Future Condition

Maintain the plant diversity and richness of the chaparral and Sonoran Desert scrub vegetation communities. Maintain unfragmented wildlife habitat that provides adequate forage, cover, and access to water for healthy wildlife populations.

Management Actions

Arizona State and private lands would be acquired from willing sellers when available.

Close, limit, or suitably mitigate motorized vehicle routes that conflict with maintaining wildlife habitat values to ensure achieving DFC.

Design all future improvements to motorized vehicle routes to ensure wildlife habitat is not fragmented and wildlife movement is unimpeded, especially for desert bighorn sheep and desert tortoise.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

2.4.2.2.4.4 Cultural Resources

Land Use Allocation

Harquahala Mountains SCRMA

Desired Future Condition

A variety of prehistoric and historic sites would be managed for interpretation, education, and public visitation. For further information on public use of cultural resources, see Appendix E.

Management Actions

A combination of some or all of the following and other actions could be implemented at selected sites:

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes,
- brochures and related educational materials or programs.

Stabilize, repair, and maintain sites in good condition.

Authorize, with protective stipulations, commercial and noncommercial group tours in accordance with BLM's regulations and, where required, SRPs.

Administrative Actions

Select sites for public use by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and

- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would help develop sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. BLM would develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.4.2.2.4.5 Recreation Resources

Land Use Allocation

The entire Harquahala MU would be allocated as an Extensive Recreation Management Area.

Implementation Actions

Select, plan, and develop at least one staging and one camping area to meet motorized and non-motorized recreation demand. Have this area provide accommodation for the following:

- parking,
- unloading OHVs and horses,
- overnight camping, and
- large organized event operations.

Development may include the following:

- informational signs,
- kiosks,
- picnic tables,
- hitching posts,
- troughs for water hauled to the site,
- loading ramp, and
- soil stabilization for dust abatement.

Limit to 15 acres the area of exposed barren soil. Mark or delineate the perimeter with barriers to prevent expansion.

In the area near Black Mountain, BLM may designate and build as many as three loop or one-way trails for ATVs and motorcycles, with total mileage not to exceed 20 miles. These trails would be adjacent to areas managed to maintain wilderness characteristics.

2.4.2.2.4.6 Wilderness Characteristics

Land Use Allocation

Within the Harquahala Management Unit, 70,350 acres would be allocated to maintain wilderness characteristics as shown on Map 2-54.

In addition to the DFC and management actions described in the Wilderness Characteristics discussion of the Management Common to Both Planning Areas section of Chapter 2, the following apply to this allocation.

Desired Future Condition

Maintain current natural conditions and open space values. Expand the availability of non-motorized trails for hikers, equestrians, and mountain bikers. Emphasize non-motorized recreation. Increase availability of non-motorized recreation opportunities where practical.

Manage for recreation settings of semi-primitive non-motorized and semi-primitive motorized, with an emphasis on the following:

- maintaining land areas for primitive recreation,
- practicing backcountry skills,
- attaining isolation from other users, and
- maintaining remoteness.

Management Actions

Close tertiary, primitive, reclaimed, and single-track vehicle routes, and washes except routes providing access to functioning and maintained facilities, waters, or other authorized uses. Retain the main transportation and travel network for continued use.

Motorized competitive races would not be permitted.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.4.7.

Prohibit mineral material disposals and vegetation sales.

Locate and develop as many as three hiking, equestrian, and bicycle trails, with total mileage not to exceed 10 miles.

Close the raptor protection area and Vulture obsidian area to vehicular travel.

Administrative Actions

Conduct a detailed inventory of current disturbances to provide a baseline for establishing detailed standards and setting trigger-points for management actions so that each recreation setting will not exceed proper levels of recreation disturbance.

2.4.2.2.4.7 Visual Resources***Land Use Allocations***

VRM classes for *Alternative C* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-36.

Within the Harquahala Management Unit, allocate:

- Harquahala Mountains ACEC and lands allocated to maintain wilderness

characteristics to VRM Class II objectives.

- Utility corridors would be allocated to VRM Class III or IV.
- The rest of the Management Unit would be allocated as portrayed on Map 2-36.

2.4.2.2.4.8 Mineral Resource Management***Management Actions***

Withdraw the Harquahala Mountains ACEC from mineral entry; also close it to mineral and geothermal leasing, and close to mineral material disposal.

Close Black Butte ACEC and lands allocated to maintain wilderness characteristics to mineral material disposal.

2.4.2.2.4.9 Travel Management***Land Use Allocation***

The Harquahala Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in the Special Area Designation Section 2.4.2.2.4.1.

WHAs are discussed in the Biological Resources Section 2.4.2.2.4.3.

SCRMA and cultural resource sites allocated to Public Use are discussed in Section 2.5.2.2.4.4.

SRMAs and other recreation allocations are discussed in Section 2.4.2.2.4.5.

Allocations to maintain wilderness characteristics are discussed in Section 2.4.2.2.4.6.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Close tertiary, primitive, reclaiming, and single-track vehicle routes, and washes except routes providing access to active and maintained facilities, waters, or other authorized uses on 63,400 acres allocated to maintain wilderness characteristics as shown on Map 2-50. Locate and develop as many as three hiking, equestrian, and bicycle trails, with total mileage not to exceed 10 miles. Close to motorized vehicle travel the raptor protection and Vulture obsidian areas within lands allocated to maintain wilderness characteristics.

Close, limit, or suitably mitigate vehicle routes within the Harquahala Mountains ONA ACEC (70,350 acres) that conflict with maintaining wildlife habitat and cultural resources.

Close all routes within the Black Butte ACEC. Close, limit, or suitably mitigate other vehicle routes that conflict with maintaining wildlife habitat and cultural resources to achieve the DFC. Prohibit building new roads and motorized routes.

Close, limit, or suitably mitigate motorized vehicle routes within the Belmont/Big Horn Mountains WHA that conflict with maintaining wildlife habitat values to ensure achieving DFC.

Consider construction of hard-surfaced walking trails at selected sites within the Harquahala Mountains SCRMA for interpretation, education, and visitation.

2.4.2.2.5 Harcuvar Management Unit

The Harcuvar MU encompasses the easternmost end of the Harcuvar Mountains within the PD's administrative area. Most of the Harcuvar Mountain range is administered by the Lake Havasu Field Office. The Harcuvar MU is bounded on the west and north by the PD boundary with the Lake Havasu Field Office, and on the east and south by the boundary between BLM- and non-BLM-administered lands (Map 2-51).

The Harcuvar MU contains the following lands:

- 53,200 acres of BLM-administered lands,
- 6,280 acres of Arizona State land, and
- 3,360 acres of private land.

2.4.2.2.5.1 Special Designations

Alternative C would propose no new Special Designations within the Harcuvar MU.

2.4.2.2.5.2 Lands and Realty

Land Tenure Adjustments

No lands have been identified for disposal within this MU.

Communication Sites

No designated communication sites are within this MU.

2.4.2.2.5.3 Biological Resources

No allocations would be made for biological resources within Harcuvar MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in section 2.7.3.4 - Biological

Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.4.2.2.5.4 Cultural Resources

No cultural resources would be allocated to public use within this MU.

2.4.2.2.5.5 Recreation Resources

Land Use Allocation

The entire MU would be allocated as an Extensive Recreation Management Area.

2.4.2.2.5.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative C* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-36.

Within the Harcuvar Management Unit:

- the area along the Harcuvar Mountains would be allocated to VRM Class III and
- the rest of the Management Unit would be allocated to VRM Class IV.

2.4.2.2.5.7 Mineral Resource Management

This MU would have no mineral withdrawals or closures.

2.4.2.2.5.8 Travel Management

Land Use Allocation

The Harcuvar Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

2.4.2.2.6 Upper Agua Fria River Basin Management Unit

The Upper Agua Fria River Basin MU is sandwiched between the Bradshaw Mountains Ranger District and the Verde Ranger District of the Prescott National Forest. It stretches from Cordes Lakes in the south to the Town of Prescott Valley in the north (Map 2-52).

The Upper Agua Fria River Basin MU contains the following lands:

- 21,520 acres of BLM-administered lands,
- 36,990 acres of Arizona State land, and
- 39,290 acres of private land.

Vision

Citizens take an active role in guiding management of public lands in the Management Unit. A citizen working group, in partnership with government agencies, exists to determine appropriate uses of lands and find ways to achieve community goals. Strong citizen stewardship and land use ethics help to preserve health, diversity, and productivity of the remaining natural landscapes in the area. The MU's natural landscape and open space is maintained. Visitors to public lands can find recreation opportunities, scenic community backdrops, and access to the Black Canyon Trail.

2.4.2.2.6.1 Special Designations

Alternative C proposes no Special Designations for the Upper Agua Fria River Basin MU.

2.4.2.2.6.2 Lands and Realty

Land Tenure Adjustments

Within this MU, the two methods used to determine lands available for disposal generated no parcels by the first method and 1,430 acres by the second method. For a description of the methods used, see the Lands and Realty discussion at the beginning of the description of *Alternative C*, for the Bradshaw-Harquahala Planning Area. See the lands that are suitable for disposal on Map 2-40.

Communication Sites

There would be no designated communication sites within this MU.

2.4.2.2.6.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Land Use Allocation

Upper Agua Fria River Basin Habitat Corridor Wildlife Habitat Area

Desired Future Condition

Maintain and enhance existing wildlife habitat and ensure unimpeded wildlife movement between BLM-managed Federal lands and adjacent National Forest lands.

Management Actions

Prohibit construction of new vehicle routes and fences.

Close, limit, or suitably mitigate motorized vehicle routes that conflict with maintaining

wildlife habitat values to ensure achieving the DFC.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

2.4.2.2.6.4 Cultural Resources

No cultural resources would be allocated to public use within this MU.

2.4.2.2.6.5 Recreation Resources

Land Use Allocation

Upper Agua Fria River Basin SRMA

Desired Future Condition

Maintain the SRMA's natural landscape and open space. Offer visitors recreation opportunities, scenic community backdrops, and access to the Black Canyon Trail.

Maintaining or increasing the amount of land allocated to open space is one of the most effective ways to preserve existing natural values and recreation opportunities; and to extend new or increased levels of recreation activity in the future.

Emphasize semi-primitive motorized settings with roaded-natural along primary routes.

Management Actions

Establish new trails, parking, and staging areas, where suitable, for hikers, equestrians, mountain bikers, ATVs, and four-wheel-drive enthusiasts.

Complete the non-motorized Black Canyon Trail and develop up to three trailheads or access points for trail users.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.6.6.

Administrative Actions

Work with citizen volunteer groups to complete a comprehensive strategy and a trails plan to select and to develop new single-use and multi-use hiking, equestrian, and OHV trails for all lands in the SRMA. Collaborate with the AGFD, Prescott National Forest, Yavapai County, and land managers of other trails to link trails to trails on BLM's land.

Land Use Allocation

The remaining BLM's lands outside any Management Unit would be allocated as an Extensive Recreation Management Area.

2.4.2.2.6.6 Visual Resources

Land Use Allocations

VRM classes for Alternative C throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-36. The entire Upper Agua Fria River Basin Management Unit would be allocated to VRM Class III objectives.

2.4.2.2.6.7 Mineral Resource Management

Alternative C proposes no mineral withdrawals or closures for the Upper Agua Fria River Basin MU.

2.4.2.2.6.8 Travel Management

Land Use Allocation

The Upper Agua Fria River Basin Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

Wildlife Habitat Areas are discussed in the Biological Resources Section 2.4.2.2.6.3.

SRMAs and other recreation allocations are discussed in Section 2.4.2.2.6.5.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Establish new trails, where suitable, for hikers, equestrians, mountain bikers, ATVs, and four-wheel-drive enthusiasts.

Complete the non-motorized Black Canyon Trail and develop up to three trailheads or access points for trail users.

Prohibit construction of new vehicle routes. Close, limit, or suitably mitigate motorized vehicle routes that conflict with maintaining wildlife habitat values to ensure achieving the DFC.

2.4.2.2.7 Resource Allocations Not Within a Management Unit

2.4.2.2.7.1 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Land Use Allocation

Date Creek Mountains Wildlife Habitat Area
(Map 2-53)

Desired Future Condition

Maintain the wildlife/plant diversity and richness of the Sonoran Desert scrub vegetation community. Maintain unfragmented wildlife habitat that provides adequate forage, cover, and access to water for healthy wildlife populations.

Management Actions

High-quality desert tortoise habitat would become a priority for land acquisition.

Prohibit building new vehicle routes and fences.

Close, limit, or suitably mitigate vehicle routes that conflict with maintenance of wildlife habitat values to ensure achieving the DFC.

Maintenance of wildlife habitat would be given priority in resolving resource conflicts.

2.4.2.2.7.2 Recreation Resources

Land Use Allocation

Skull Valley SRMA (Map 2-53)

Desired Future Condition

Maintain the SRMA's landscape character while maintaining access to routes in the Prescott National Forest.

Management Actions

Transfer management of the SRMA to the adjacent Prescott National Forest.

2.4.2.2.7.3 Travel Management

Land Use Allocation

These lands would be allocated as limited use areas, with motorized and mechanized vehicle uses limited to designated routes.

Other Resource Allocations with Travel Management Prescriptions

Wildlife Habitat Areas are discussed in the Biological Resources Section 2.4.2.2.7.1.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Prohibit construction of new vehicle routes. Close, limit, or suitably mitigate motorized vehicle routes that conflict with maintaining wildlife habitat values to ensure achieving the DFC.

2.5 Alternative D

The following discussion, along with the Desired Future Conditions, land use allocations, and management actions described in the Management Common to All Action Alternatives section of Chapter 2, comprise the total proposed *Alternative D*.

2.5.1 Agua Fria National Monument

Alternative D places the strongest emphasis on protecting natural landscapes and cultural resources by limiting land uses in Agua Fria National Monument. Management would limit motorized use in the monument and

close more areas to vehicles than under the other Alternatives. To preserve natural landscapes, access would be limited; Back Country RMZ would encompass most of the monument.

Alternative D would allocate most cultural resources for limited public use and areas would be developed for intensive public use. Within the monument, grazing would not be authorized on public lands also; larger areas will be managed for more primitive recreation experiences and wilderness character.

2.5.1.1 Special Designations

Alternative D would designate one ACEC, the Agua Fria River Riparian Corridor (Map 2-56), to preserve the monument's riparian resources, and would study potential additions to the existing proposed wild and scenic river designation. This Alternative would maximize primitive and semi-primitive recreation opportunities, and emphasize non-motorized activities in backcountry settings. The management actions provide for protecting monument resources and incorporating the citizen proposal for wilderness characteristics within the monument.

Areas of Critical Environmental Concern

Removes designation of the existing Perry Mesa and Larry Canyon ACECs because the monument's proclamation (Appendix A) provides for a higher level of protection than the ACECs and creates management across a more extensive landscape.

Designate the following ACEC:

Agua Fria River Riparian Corridor ACEC (13,070 acres)

Relevance

Nearly intact riparian network within a desert/semi-desert grassland transition zone.

Importance

Habitat supports many special status wildlife species, including endangered fish. Special values for studies of a desert riparian system.

Desired Future Condition

Riparian areas are in proper functioning condition and provide high-quality habitat for a diversity of wildlife species, including fish.

The integrity of riparian areas and wildlife habitat are maintained and protected from degradation.

Management Actions

Close, limit, or suitably mitigate vehicle routes that conflict with maintaining riparian and wildlife values to ensure achieving the DFC.

Designate the lands along Indian Creek as a priority for acquisition.

Wild and Scenic Rivers

Study tributaries to the Agua Fria River to determine eligibility for WSR designation (Map 2-56).

Back Country Byways

Alternative D proposes no back country byways.

2.5.1.2 Lands and Realty

Utility and Transportation Corridors

Eliminate the Black Canyon utility corridor from the monument. Continue to honor all existing rights-of-way and prior rights.

2.5.1.3 Biological Resources

Alternative D would allocate two Wildlife Habitat Areas and designate one ACEC for managing biological resources within Agua Fria National Monument. *Alternative D* would drop Larry Canyon ACEC because the monument's

proclamation (Appendix A) provides for a higher level of protection than an ACEC and management across a more extensive landscape.

The actions for the ACECs are described in the Special Area Designations section and shown on Map 2-56. The management actions for the WHAs, also shown on Map 2-57, are outlined below.

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Land Use Allocation

Pronghorn Movement Corridor Wildlife Habitat Area.

Pronghorn Fawning Habitat Wildlife Habitat Area.

Desired Future Condition

Unfragmented pronghorn habitat that provides adequate forage, cover, and access to water for healthy pronghorn populations.

Management Actions

To assure achieving the DFC, close or suitably mitigate vehicle routes that may:

- cross known pronghorn movement corridors and
- have a type and a volume of use which modify pronghorn behavior in ways that fragment their habitat.

Continue to use prescribed fire to improve pronghorn habitat.

Develop no new recreation sites in pronghorn movement corridors and fawning.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

Since *Alternative D* proposes ending livestock grazing, remove all fences, and authorize no new ones.

2.5.1.4 Cultural Resources

<i>Level of Public Use</i>	<i>Locations/Site</i>
<i>High</i>	<i>No areas of the monument</i>
<i>Moderate</i>	<i>Pueblo la Plata and Fort Silver (Pueblo la Plata Complex) on Perry Mesa</i>
<i>Low</i>	<i>Public use of archaeological sites would be limited in all other areas not described above</i>

Alternative D would minimally increase public access to cultural sites. Interpretive development and educational activities would be focused on the Pueblo la Plata area (Map 2-58). This area would be allocated to a public use SCRMA as shown in Table 2-5.

Descriptions of potential improvements and activities within special cultural resource management areas are described in the Cultural Resources description of the Management Common to Agua Fria National Monument section of Chapter 2. High use represents the most intensive degree of interpretive development, and Moderate use involves less intensive development of access and interpretive facilities. All areas of the monument not shown as a Moderate use SCRMA on Map 2-58 are considered as areas of low public use that would not be available for on-the-ground interpretive development or commercial tours.

2.5.1.5 Recreation Resources

In *Alternative D*, the entire monument would be allocated to a Special Recreation Management Area with three Recreation Management Zones within it. These zones would include a Back Country RMZ of 68,380 acres to manage and maintain the natural landscape character in the Agua Fria River Canyon, tributaries, washes, and adjacent mesas (Map 2-58). A Passage RMZ of 990 acres along designated vehicle routes would pass through or provide access into the Back Country RMZ. The rest of the monument would be designated a Front Country RMZ (1,530 acres), where more focus would be placed on recreation and interpretive opportunities. Descriptions of these zones and Desired Future Conditions and management actions that apply to all Alternatives can be found in the Recreation and Public Access discussion of the Management Common to Agua Fria National Monument section of Chapter 2.

Land Use Allocation

Front Country Recreation Management Zone of 1,530 acres

Desired Future Condition

See Desired Future Condition description in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.5.1.6.

Throughout the monument, recreation concession leases, vendor permits, and Special Recreation Permits would not be authorized.

Dispersed Camping:

- Allow camping at designated sites only.

- Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs or threatens resources protected by proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.

No developed campgrounds.

Campfires:

- Prohibit campfires within ¼ mile of intensive and moderate public-use archaeological sites.
- Prohibit campfires at archaeological sites, including petroglyph (rock art) sites.
- Allow campfires at designated campsites.
- Prohibit collection of woody material for campfires. Require campfire wood to be brought in from outside the monument.

Recreational target shooting would be prohibited.

Trail Construction for Non-motorized Recreation Use:

Discussion of recreation trail development can be found in the Travel Management Section 2.5.1.8.

Land Use Allocation

Back Country Recreation Management Zone of 68,380 acres

Desired Future Condition

The natural landscape of the Agua Fria River Canyon, tributaries, and washes (Map 2-58) is maintained. See Desired Future Condition description in Section 2.7.2.7 of the

Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.5.1.6.

Retain the motorized river crossings at Kelton Ranch, EZ Ranch, Horseshoe Ranch, and Cross Y Ranch.

Throughout the monument, provide no recreation concession leases, issue no vendor permits, and authorize no Special Recreation Permits.

Dispersed Camping:

- require a permit and
- limit camping to designated sites only.

No developed campgrounds.

Campfires would be prohibited.

Recreational target shooting would be prohibited.

Trail Construction for Non-motorized Recreation Use:

Discussion of recreation trail development can be found in the Travel Management Section 2.5.1.8.

Land Use Allocation

Passage Recreation Management Zone of 990 acres.

Desired Future Condition

See Desired Future Condition description in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.5.1.6.

Throughout the monument, provide no recreation concession leases, issue no vendor permits, and authorize no Special Recreation Permits.

Dispersed Camping:

- Allow camping at designated sites only.
- Camping permits could be required if resource damage occurs that inhibits achieving resource DFCs or threatens resources protected by proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.
- Prohibit camping at archaeological sites, including petroglyph (rock art) sites.
- Allow camping if at least ¼ mile from intense or moderate public-use archaeological sites.
- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).
- Prohibit vehicles from pulling off routes in posted special areas containing sensitive resources.

No developed campgrounds.

Campfires:

- Prohibit campfires within ¼ mile of intensive and moderate public-use archaeological sites.
- Prohibit campfires at archaeological sites, including petroglyph (rock art) sites.

- Allow campfires at designated campsites.
- Allow no collection of woody material for campfires. Require that any wood for campfires be brought in from outside the national monument.

Recreational target shooting would be prohibited.

Trail Construction for Non-motorized Recreation Use:

Discussion of recreation trail development can be found in the Travel Management Section 2.5.1.8.

Administrative Actions

Collect site-specific baseline data to (1) determine social and resource impacts of recreation uses, (2) to establish monitoring needs and frequencies, and (3) to detect change. Where monument resources are unacceptably affected, implement more management actions, ranging from further restrictions to closure.

2.5.1.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59. Within the monument, the Front Country RMZ, totaling 1,530 acres, would be allocated to VRM Class III objectives and the Back Country and Passage RMZs would be allocated to VRM Class II.

2.5.1.7 Rangeland Management

Land Use Allocation

Make allotments unavailable for livestock grazing and cancel all current grazing authorizations.

Desired Future Condition

Watersheds are in properly functioning conditions, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Maintain ecological processes to support healthy biotic populations and communities.

No grazing authorizations would be administered within Agua Fria National Monument. The removal of all livestock would result in the rapid achievement of the Arizona Standards for Rangeland Health (Land Health Standards).

Management Actions

Build fencing around grazed lands to control livestock incursions.

Remove range-related improvements on public lands that serve no purpose for other resources. This removal would reduce the visual impact of former grazing operations.

2.5.1.8 Travel Management

Land Use Allocation

The entire monument is allocated as Limited to Designated routes.

Management Actions

All vehicles would be limited to designated routes. Cross-country motorized travel is prohibited except in the case of an emergency or for approved administrative purposes.

Within Front Country

Trail Construction for Non-motorized and Non-mechanized Use:

- Develop trails as needed to enhance resources and recreation experiences and to protect monument values.
- All construction would be compatible with Desired Future Conditions for the construction area.
- Make trail development a priority at archaeological sites developed for interpretive use and visitation.
- Consider other trails to enhance visitor access and enjoyment of monument resources. Such trails might include self-guided nature and cultural resource trails, trails to interpreted sites, or longer trails linking multiple sites for day or multiple day trips.
- Use packed soil, crushed stone, and other natural or synthetic materials.
- Design trails to fit the environment.
- Build loop, connector, and linear trails, depending on the established trail and resource objectives.
- Build trails to maintain connectivity to recreation opportunities, such as hunting, equestrian activities, hiking, and viewing cultural sites.
- Build trails to link with other connector trails beyond the monument's border.
- Where trail linkages conform to monument values and do not impair protection of monument resources, explore opportunities to link the monument's network of non-motorized trails to trails on other BLM-managed lands, or with other adjoining jurisdictions, including Tonto and Prescott National Forests, Yavapai County, and local communities.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- Evaluate new motorized vehicle routes on a case-by-case basis, with determinations based on protecting and enhancing monument values.

- Enhance existing routes north of Bloody Basin Road to provide greater motorized recreation opportunities.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles:

- All vehicles would be limited to designated routes consistent with the discussion in the Travel Management Section 2.7.2.10.
- Manage OHV access to provide for a variety of use experiences, including access for public visitation of cultural and biological resources.

Within Back Country

Trail Construction for Non-motorized and Non-mechanized Use:

- No new trails would be built in the Back Country RMZ except to mitigate resource conflicts or concerns. Trail construction would use the least intrusive method to mitigate the conflict. A trail might simply be marked with fiberglass posts.

Route Construction for Motorized Use:

- Build no new routes within the Back Country RMZ.

Off-Highway Vehicles:

- Manage the Back Country RMZ as a non-motorized area. All vehicles are restricted to passage zones.

Within Passage

Trail Construction for Non-motorized and Non-mechanized Use:

- Develop trails as needed to enhance resources and recreation experiences and to protect monument values.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- Motorized route construction would be considered only as mitigation for resource conflicts.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles:

- All vehicles would be limited to designated routes consistent with the discussion in the Travel Management Section 2.7.2.10.
- Manage OHV access to provide for a variety of use experiences, including viewing of scenic, cultural and biological resources.

Implementation Actions

Public Access

An evaluation process was used to establish a designated public access and route system to support resource objectives consistent with *Alternative D* and to protect monument resources. The results of the evaluation are shown in Map 2-60. A summary of route status and length under *Alternative D* is shown below.

Routes Open	48 miles
Routes Closed	123 miles
New Routes	0 miles

2.5.1.9 Wilderness Characteristics

Land Use Allocation

Within the monument, 37,571 acres would be allocated to maintain wilderness characteristics as shown on Map 2-71.

Desired Future Condition

In addition to the DFC and management actions in the Wilderness Characteristics discussion of the Management Common to Both Planning Areas section of this chapter, the following DFC also applies:

Lands within the monument allocated to maintain wilderness characteristics contain outstanding opportunities for solitude and naturalness. Maintain these characteristics and provide opportunities for unconfined primitive recreation, adventure, and discovery. Important wildlife populations and habitat are also within these lands and recognized as an important component of the naturalness and actively managed.

Management Actions

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.1.6.

Authorize no new rights-of-way.

2.5.2 Bradshaw-Harquahala Planning Area

Alternative D emphasizes natural landscapes and non-motorized recreation, allowing visitors to experience more areas in their natural setting. *Alternative D* would provide more areas for non-motorized use than the other Alternatives and close more areas to vehicles, mining, and grazing. More management is dedicated to maintaining primitive recreation opportunities. The MUs for *Alternative D*, are shown in Map 2-61.

2.5.2.1 Management Applicable to the Entire Bradshaw-Harquahala under this Alternative

2.5.2.1.1 Lands and Realty

Land Tenure Adjustments

Land tenure decisions determine which lands will be retained and which will be proposed for disposal or acquisition. Land tenure decisions must achieve the goals, standards, and objectives outlined in the land use plan.

No lands have been found to be potentially suitable for disposal under *Alternative D*. If *Alternative D* were chosen, any proposed land disposal, including the disposal of scattered lands outside the planning area, would require a plan amendment.

Lands considered for potential acquisition would include State and private lands (willing seller) within the planning area that are in accordance with the resource management prescriptions in this RMP. Lands considered for acquisition must meet (1) the criteria described in the Lands and Realty discussion of the Management Common to Both Planning Areas section of Chapter 2 and (2) the resource program objectives of *Alternative D*.

Utility and Transportation Corridors

Currently designated corridors (Map 2-62) would meet the demand for intensifying the power grid, provided consistently with the utility regulations of the Arizona Corporation Commission. The Black Canyon's multi-use corridor would be eliminated from Agua Fria National Monument. (See the Utility and Transportation Corridor discussion in the Lands and Realty section of *Alternative D*, Agua Fria National Monument).

2.5.2.1.2 Rangeland Management

Land Use Allocation

Make all livestock allotments unavailable for grazing and cancel current livestock authorizations.

Desired Future Condition

Watersheds are in properly functioning conditions, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Maintain ecological processes to support healthy biotic populations and communities.

Management Actions

Build fencing around grazed lands to control livestock incursions.

Remove public land range-related improvements that serve no purpose for managing other resources.

Require cadastral surveys to establish the location of the public lands and delineate property boundaries to properly locate boundary fencing and to enforce the closure.

2.5.2.1.3 Mineral Resources Management

The following descriptions of mineral types include information on mining closures.

Management Actions

Leasable Minerals

The following limitations to leasable minerals are shown on Map 2-63.

Close any reconveyed lands to mineral and geothermal leasing by public land order.

Close the following areas to mineral and geothermal leasing:

- Black Mesa ACEC,
- Tule Creek ACEC,
- Baldy Mountain ONA ACEC,
- Sheep Mountain RNA ACEC,
- Vulture Mountains ACEC,
- Belmont-Big Horn Mountains ACEC,
- Harquahala Mountains ONA ACEC ,
- Black Butte ONA ACEC, and
- Lands allocated to maintain wilderness characteristics.

All other lands would be open to mineral and geothermal leasing.

Saleable Minerals (Mineral Materials)

The following limitations to saleable minerals are shown on Map 2-64.

Close any reconveyed lands to mineral material disposal by public land order.

Close the following areas to mineral material disposal:

- Black Mesa ACEC,
- Tule Creek ACEC,
- Baldy Mountain ONA ACEC,
- Sheep Mountain RNA ACEC,
- Vulture Mountains ACEC,
- Belmont-Big Horn Mountains ACEC,
- Harquahala Mountains ONA ACEC,
- Black Butte ONA ACEC, and
- Lands allocated to maintain wilderness characteristics.

All other lands would be open to mineral material disposal.

Locatable Minerals

The following limitations to locatable minerals are shown on Map 2-65.

Withdraw any reconveyed lands from the mining laws by public land order.

Withdraw the following areas from the mining laws:

- Black Mesa ACEC,
- Tule Creek ACEC,
- Baldy Mountain ONA ACEC,
- Sheep Mountain RNA ACEC,
- Vulture Mountains ACEC,
- Harquahala Mountains ONA ACEC,
- Black Butte ONA ACEC, and
- Lands allocated to maintain wilderness characteristics.

Small tract lands would remain withdrawn from the mining laws.

Withdraw from the mining laws all public lands (including subsurface) within incorporated municipal boundaries.

Unless currently segregated or withdrawn, all remaining lands would remain open under the mining laws.

2.5.2.1.4 Travel Management

Land Use Allocation

All public lands within the Bradshaw-Harquahala Planning Area would be allocated as limited use areas, with motorized and mechanized vehicle uses limited to designated routes and mechanized uses.

Desired Future Conditions

Define, designate, implement, and monitor a comprehensive travel management network affording a range of high-quality and diverse motorized and non-motorized recreation opportunities. The network would consist of a system of areas, roads, routes and/or trails. The travel management network and associated recreation opportunities would be consistent with other resource management objectives and recreation settings for the area.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Administrative Actions

A route evaluation and designation process, similar to one described in Appendix D, will be used to establish a designated public access and route system within the Black Canyon Management Unit to support resource objectives consistent with *Alternative D*.

Develop comprehensive Travel and Transportation Management Plans for the management units and other public lands within the planning area. These plans would implement route designations on the public lands.

2.5.2.2 Management Units

Alternative D would use seven MUs for presenting land use allocations and management actions. These MUs are summarized in the following text. As noted, areas within the MUs that do not receive specific land use allocations would be administered according to the DFC and management actions presented under Management Units and in the Management Common to the Bradshaw-Harquahala Planning Area section of Chapter 2.

The document sections discussing the seven Management Units and maps on which they appear are as follows:

- Black Canyon MU, Section 2.5.2.2.1, Map 2-47.
- Castle Hot Springs MU, Section 2.5.2.2.2, Map 2-66.
- Hassayampa MU, Section 2.5.2.2.3, Map 2-67.

- Harquahala MU, Section 2.5.2.2.4, Map 2-68.
- Harcuvar MU, Section 2.5.2.2.5, Map 2-51.
- Peeples Valley MU, Section 2.5.2.2.6, Map 2-69.
- Upper Agua Fria Basin MU, Section 2.5.2.2.7, Map 2-70.

2.5.2.2.1 Black Canyon Management Unit

The Black Canyon MU stretches from the southern end of Table Mesa in the south to Cordes Junction in the north. It is bounded by Agua Fria National Monument and Tonto National Forest to the east, and Prescott National Forest to the west (Map 2-47). The Black Canyon MU contains the following land:

- 68,730 acres of BLM-administered lands,
- 12,600 acres of Arizona State land,
- 6,780 acres of private land, and
- 1,100 acres of county parklands in both Maricopa and Yavapai Counties.

2.5.2.2.1.1 Special Designations

Area of Critical Environmental Concern

Black Mesa ACEC (5,540 acres)

Relevance

Diverse types of significant archaeological sites occupied over the past 2,000 years, including sites that may have been ancestral to the Perry Mesa Tradition that was dominant in Agua Fria National Monument.

Importance

The area includes the Running Deer site and other prehistoric and historic sites with important scientific values and relationships to sites in the adjacent national monument.

Management Actions

Install fences or barriers to keep livestock out of the Running Deer site.

Withdraw the ACEC from mineral entry, close to mineral and geothermal leasing, and close to mineral material disposal.

Implement measures to protect cultural sites.

Limit commercial tours and special recreation permits to those conducted for educational purposes in conjunction with site recording or protection projects.

Close all routes that lead directly to significant sites.

Administrative Actions

Complete Class III (intensive) cultural inventories of previously unsurveyed areas and permit BLM-approved scientific studies.

Continue to patrol sites with volunteer help and add this area to the territory regularly monitored by the Civil Air Patrol.

Nomination to National Recreation Trail System**Black Canyon Trail*****Desired Future Condition***

Provide for sustainable use of the trail network. An ever-increasing urban population will seek out the trail for various recreation benefits and outcomes. Promote the preservation of the scenery, public access to the trail, safe travel on the trail, appreciation and enjoyment of the open space, and historic resources of the Black Canyon corridor. A National Recreation Trail should be established primarily within urban areas, secondarily, within scenic areas, and along historic travel routes of the areas.

Management Actions

Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Issue a right-of-way agreement for the trail and facilities to preserve their access and long-term character.

Acquire easements, rights-of-way, or both on non-Federal lands where the trail or facilities must cross or be built.

Any future land tenure action will recognize the trail and facilities and will retain a ¼-mile corridor (1/8 mile on each side) along the trail and any ancillary facility, as well as public access to them by easement, right-of-way, deed restriction, or other suitable means.

2.5.2.2.1.2 Lands and Realty**Land Tenure Adjustments**

Alternative D proposes no land tenure adjustments within the Black Canyon MU because no lands have been proposed for disposal or acquisition.

Communication Sites

Only one designated communication site is located within this MU. Retain the Black Canyon City communication site, subject to valid existing rights.

Utility and Transportation Corridors

Extend the Black Canyon multi-use corridor so that the corridor is continuous north and south across BLM's lands within this MU.

2.5.2.2.1.3 Biological Resources

No biological resource allocations would be made within this MU. Biological resources would be subject to management guidance in

Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.5.2.2.1.4 Cultural Resources

Land Use Allocation

Black Canyon Corridor SCRMA

Desired Future Condition

Make available a variety of prehistoric and historic sites for interpretation, educational uses, and public visitation. For further information on public use of cultural resources, see Appendix E.

Management Actions

Implement a combination of some or all of following or other actions at selected sites:

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and registers, and
- brochures and related educational materials or programs.

Stabilize, repair, and maintain sites.

Authorize commercial and noncommercial group tours, conducted with protective stipulations in accordance with BLM's regulations and, where required, special recreation permits.

Administrative Actions

Select sites for public use by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would help develop sites for public use.

Cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

2.5.2.2.1.5 Recreation Resources

Land Use Allocation

Table Mesa SRMA

Desired Future Condition

Promote a semi-primitive motorized setting. Recreational pursuits would impinge minimally on others in the area. Provide open space where users can learn and appreciate the natural environment while enjoying social contacts or developing new skills. Assure easy access to BLM lands. Provide a natural gateway into Maricopa County.

Management Actions

Manage for intensive camping, OHV use, equestrian activities, and casual use mining. The

SRMA would offer a diverse network of motorized single and two-track routes for general motorized recreation use, commercial use, and organized OHV events. Emphasize acceptable dust control and compatibility with neighboring communities and landowners.

Emphasize semi-primitive motorized recreation settings. Concentrate users in some areas but emphasize dispersed use.

Develop some facilities and promote preserving the natural environment. Develop the fewest sites needed to accomplish resource management objectives.

Designate vehicle routes within this SRMA for general motorized recreation use, commercial use, and organized OHV events.

Locate and develop a staging/camping area for the following purposes:

- meeting the high recreation demand,
- parking and unloading of OHVs,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- human health and safety.

Limit to 10 acres the area of exposed barren soil.

Prohibit motorized competitive races.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.1.7.

Administrative Actions

Conduct an objective, systematic, and comprehensive site inventory of the SRMA to determine existing site-specific environmental and social impacts of prospecting clubs, OHVs, equestrian activities, and other recreation uses. Assessments would determine site-specific desired conditions and define standards so monitoring plans could be developed to manage camping and other recreation uses.

Land Use Allocation

The remaining lands within the Management Unit would be allocated as an Extensive Recreation Management Area.

2.5.2.2.1.6 Wilderness Characteristics

Land Use Allocation

Within the Black Canyon Management Unit, 14,880 acres would be allocated to maintain wilderness characteristics as shown on Map 2-71.

Desired Future Condition

Promote non-motorized and primitive recreation experiences, with open space and natural landscapes. Retain undeveloped landscapes and the area's remote character. Preserve the area's outstanding solitude and primitive recreation experiences.

Management Actions

Close all secondary, tertiary, reclaiming, and single-track vehicle routes and washes to maintain recreation settings and associated landscapes of semi-primitive non-motorized.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.1.7.

Manage the Black Canyon Trail alignment as a non-motorized trail.

Locate and develop non-motorized trails to link with community trail systems.

Withdraw from mineral location.

Prohibit mineral material disposals and vegetation sales.

Administrative Actions

Conduct a detailed baseline inventory of disturbances. Determine detailed and site-specific standards using this baseline to maintain suitable levels of recreation disturbance to achieve the desired future settings.

2.5.2.2.1.7 Visual Resources***Land Use Allocations***

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59.

Within the Black Canyon Management Unit, allocate:

- Table Mesa SRMA to VRM Class III objectives.
- Lands allocated to maintain wilderness characteristics to VRM Class I objectives.
- Utility corridors would be allocated to VRM Class III or IV.
- Throughout the rest of the Management Unit, VRM classes would be allocated as portrayed on Map 2-59.

2.5.2.2.1.8 Mineral Resource Management***Management Actions***

Withdraw Black Mesa ACEC from mineral entry, close to mineral and geothermal leasing, and close to mineral material disposal.

Withdraw lands allocated to maintain wilderness characteristics from mineral entry and close to mineral material disposal.

2.5.2.2.1.9 Travel Management***Land Use Allocation***

The Black Canyon Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Section 2.5.2.2.1.1.

SCRMA and cultural resource sites allocated to Public Use are discussed in Section 2.5.2.2.1.4.

SRMAs and other recreation allocations are discussed in Section 2.5.2.2.1.5.

Allocations to maintain wilderness characteristics are discussed in Section 2.5.2.2.1.6.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Close all secondary, tertiary, reclaiming, and single-track vehicle routes and washes on 14,880 acres allocated to maintain wilderness characteristics as shown on Map 2-47.

Manage the Black Canyon Trail alignment as a non-motorized trail. Locate and develop non-motorized trails to link with community trail systems.

Establish the Table Mesa SRMA, as allocated in the Recreation section of this plan, and manage for a diverse network of motorized single and two-track routes for general motorized recreation use, commercial use, and organized OHV events. Designate vehicle routes within this SRMA for general motorized recreation use, commercial use, and organized OHV events.

Close all routes that lead directly to significant sites within the Black Mesa ACEC.

Consider construction of hard-surfaced walking trails at selected cultural sites within the Black Canyon Corridor SCRMA for interpretation, education, and visitation of prehistoric and historic sites.

2.5.2.2.2 Castle Hot Springs Management Unit

The Castle Hot Springs MU is bounded by State Route 74 (the Carefree Highway) to the south, Prescott National Forest to the north, Black Canyon MU to the east, and Hassayampa MU to the west (Map 2-66).

The Castle Hot Springs MU contains the following lands:

- 112,430 acres of BLM-administered lands,
- 53,730 acres of Arizona State land,
- 32,560 acres of private land,
- 22,870 acres of county parklands in both Maricopa and Yavapai Counties (Lake Pleasant Regional Park), and
- 1,100 acres of Bureau of Reclamation lands not in Lake Pleasant Regional Park.

Vision

During the scoping phase of this plan where BLM emphasized collaborative planning, a diverse group of interested citizens including: private landowners, OHV recreationists, several hiking clubs, and conservationists, and others saw the need to address issues in this area and formed into the Bradshaw Foothills Coalition. This is the area where the public plays on their OHVs, an area where private landowner concerns increased due to recreation activities and the lack of respect to private property, and an area bordered by the Lake Pleasant Regional Park and Hell's Canyon Wilderness where conflicting uses emerged.

This group is engaged in a collective effort to conserve the ecological, cultural, open space, and recreation values of the MU, so that it remains a place where people want to live, work, and recreate. Strong citizen stewardship and land use ethics help to preserve health, diversity, and productivity of the natural landscapes in the area. The values of open space and scenic and visual quality are emphasized. Recreational, cultural, and biological assets are maintained.

The MU's scenic and natural landscape settings are maintained while offering visitors a diverse array of recreation opportunities, including both human-powered and motorized-based activities. The following principles are emphasized:

- maintaining the rural and natural setting,
- protecting visual resources,
- allowing responsible recreation use in suitable areas,
- protecting natural and cultural resources, and
- recognizing and protecting private property rights.

A healthy, properly functioning, and natural-appearing landscape is preserved. Multiple uses that conform to and support the overall community vision continue.

A system of OHV and hiking trails exist that afford a multitude of opportunities for mountain bike, four-wheel drive, ATV, and motorcycle enthusiasts.

2.5.2.2.2.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Tule Creek ACEC (640 acres)***Relevance***

Tule Creek ACEC contains significant historic and cultural values, including the Fort Tule site, a prehistoric hilltop ruin occupied from A.D. 1100 to 1300, and a home-site occupied by miners in the 1920s and 1930s. Tule Creek is a rare Sonoran Desert riparian system dominated by emergent vegetation and occupied by the endangered Gila topminnow.

Importance

The Fort Tule cultural site was probably used as a significant connection in a regional communication system based on signaling among hilltop sites. Its role in the communication system can offer important information on prehistoric social systems during the era it was used.

Tule Creek and its sensitive biological resources are extremely vulnerable to disturbance and degradation from vehicle use, mining, and livestock grazing. Continued protection of Tule Creek is important to the recovery of the endangered Gila topminnow.

Desired Future Condition

Cultural resources, endangered species habitat, and the integrity of the riparian area are protected from degradation.

Management Actions

Close the ACEC to motor vehicles.

Withdraw the ACEC from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Administrative Decision

Continue to patrol archaeological sites and, where needed, implement measures to protect sites.

Baldy Mountain ONA ACEC (9,080 acres)***Relevance***

The area is characterized by highly scenic natural Sonoran Desert landscapes, primitive recreation and solitude opportunities, and desert washes without motorized use. It includes occupied desert tortoise habitat and is part of a wild burro HMA.

Importance

A quiet and natural landscape with little evidence of human disturbance. Scarce but accessible backcountry primitive recreation experiences for Phoenix and Peoria residents.

A portion of the area is within the city limits of the City of Peoria, a rapidly growing urban area.

Maintains wildlife and burro habitat and open space in a rapidly expanding, urban environment.

Desired Future Condition

Semi-primitive non-motorized recreation setting throughout the entire area.

A diversity of non-motorized trail-based opportunities in a natural setting.

Broad expanses of natural appearing Sonoran Desert landscapes that continue to contribute to the open space, primitive recreation, and solitude opportunities near the urban centers of the Greater Phoenix metropolitan area.

Management Actions

Close all secondary, tertiary, primitive, single-track, washes, and reclaiming vehicle routes.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.2.6.

Designate and build non-motorized trails to link with other non-motorized trails in the area.

Build non-motorized trails with up to three trailheads, offering loop hikes, connection to other trails.

Withdraw the ACEC from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Prohibit establishing new rights-of-way.

Prohibit vegetation sales.

Sheep Mountain RNA ACEC (4,270 acres)

Relevance

Open space and biological resources, including desert tortoise habitat and potential desert bighorn sheep habitat.

Importance

Highly scenic area with high-quality wildlife habitat, undisturbed by vehicle routes and human activities.

Desired Future Condition

Maintain semi-primitive non-motorized recreation setting.

Maintain the scenic natural landscape in current form.

Maintain the high quality and unfragmented wildlife habitat.

Management Actions

Close all reclaimed vehicle routes except those needed to facilitate public access. Designate routes needed for access through a structured evaluation process, such as that in Appendix D.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.2.6.

Withdraw the whole ACEC from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Prohibit vegetation sales.

Prohibit building of new fences and vehicle routes.

Build no new recreation sites.

Since *Alternative D* proposes cessation of grazing, remove all fences except those needed to keep livestock from wandering in from adjoining grazed lands.

2.5.2.2.2 Lands and Realty

Land Tenure Adjustments

Alternative D proposes no land tenure adjustment decisions for the Castle Hot Springs MU since no lands have been proposed for disposal or acquisition.

Communication Sites

No designated communication sites would be located within this MU.

2.5.2.2.2.3 Biological Resources

No biological resource allocations would be made within the Castle Hot Springs MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area

2.5.2.2.2.4 Cultural Resources

No cultural resources would be allocated to public use within this MU.

2.5.2.2.2.5 Recreation Resources

Land Use Allocation

Castle Hot Springs Regional Special Recreation Management Area

Desired Future Condition

Manage Castle Hot Springs MU outside of the Hieroglyphic Mountains SRMA (described below) as a regional special recreation management area, supported by local and regional communities and managed by BLM in partnership with communities and local governments. These communities and governments have a vested interest in open space, outdoor-based recreation opportunities, and local and regional air quality.

Management emphasis stresses meeting a wide range of regional recreation needs while doing the following:

- maintaining the quality of life for local communities,
- preserving open space and natural landscapes, and
- ensuring resource conservation.

The area would have an array of recreation settings (rural, roaded-natural, semi-primitive motorized, and semi-primitive non-motorized) and the following opportunities:

- intense motorized activity,
- permitted recreation events,
- developed facilities,
- highly dispersed motorized recreation,
- remote semi-primitive and wilderness, and
- non-motorized recreation.

Management Actions

Locate and develop facilities, staging areas, trails, signage, trailheads, and other sites, where needed, for resource protection or for maintaining recreation opportunities. Develop up to three designated staging and camping areas to meet high recreation demand, and provide for the following:

- parking,
- OHV unloading,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- human health and safety.

Limit to 100 acres the area of exposed barren soil.

Designate vehicle routes through a structured evaluation process such as in Appendix D within 5 years of the signing of this plan. Use a structured evaluation process to redesignate routes, as suitable, as conditions change because of:

- increased use,
- expanding wildland-urban interface (WUI),
- dust standard compliance, and
- other factors that affect vehicle routes.

Most motorized use in the Baldy Mountain ONA ACEC, the Hieroglyphic Mountains SRMA, and the BLM's lands west, east, and south of Quintero would be mitigated, or eliminated within 1 to 20 years.

Focus mitigation to reduce vehicular sources of noise and dust from BLM's lands affecting adjoining developing private lands.

Emphasize a semi-primitive non-motorized management setting for Baldy Mountain ONA ACEC immediately upon plan approval.

Implement a phase-in of OHV closures in response to citizens' requests, conflicts with

residents and communities, and the need to meet air quality and dust compliance standards.

Close areas to motorized use when needed to comply with county and City of Peoria land management and recreation use laws and ordinances for these areas.

Designated vehicle routes within the regional recreation management area would be available for up to four permitted commercial and competitive OHV events monthly. Such uses would eventually be phased out in areas adjoining the Quintero and Maughn properties, and other commercial or residential areas as they are developed.

Work closely with law enforcement authorities with the Arizona Game and Fish Department, Yavapai County, Maricopa County, City of Peoria, and other agencies with jurisdiction to enhance visitor safety; improve resource protection; or ensure BLM's compliance with county, State, or Federal environmental laws.

Designate and build up to 100 miles of non-motorized trail.

Designate 100 to 200 miles of motorized use routes (single-track, ATV, and four-wheel drive) with one-way trips, destination trips, loops, and tours within the MU.

Manage recreational target shooting consistent with Recreational Target Shooting in the Recreation discussion of the Management Common to the Bradshaw-Harquahala Planning Area section of this Chapter.

Site, plan, and develop multi-use trails and foot, bike, and horse trails linking Wickenburg and Lake Pleasant Regional Park, with other links to Peoria and Phoenix trail systems and the Black Canyon Trail.

Over a span of 15 to 20 years, as the adjacent City of Peoria, the Maughn and Quintero properties, and the Lake Pleasant area are commercially and residentially developed and

built out; phase out, mitigate, or eliminate conflicting motorized use in these areas.

Areas subject to phased-out motorized vehicle use would be located within a triangle defined by Castle Hot Springs/Lake Pleasant Road, Morristown Road, and State Route Highway 74. (This area essentially consists of the Hieroglyphic Mountain SRMA and the Baldy Mountain ONA). The Baldy Mountain area would become non-motorized immediately. Motorized use in the public land areas south and east of Quintero would be reduced or phased out in 1 to 15 years. The area west of the Hells Canyon Wilderness and east of the Maughn properties (essentially the Hieroglyphic Mountains SRMA proposal) would become mainly a non-motorized use area in 10 to 20 years. Open other parts of the area to dispersed motorized and non-motorized activities, but intensively manage such uses with a significant BLM ground presence in signing, facilities, law enforcement, and staffing.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.2.6.

Administrative Actions

Designate Castle Hot Springs MU as a regional recreation management area. If found suitable, recommend this area for inclusion into a BLM-administered system of national recreation areas or as a national conservation area.

Charter a citizen, Government, and organization-based working group to guide the area's management; including community groups, the City of Peoria, Maricopa and Yavapai Counties, and other interested parties.

Land Use Allocation

Hieroglyphic Mountains SRMA

Desired Future Condition

Manage the Hieroglyphic Mountains SRMA mainly for recreation settings of roaded-

natural and semi-primitive motorized, shifting towards progressively more semi-primitive motorized and semi-primitive non-motorized over a 10-20 year period.

Management Actions

Substantially mitigate, or eliminate motorized use in the Hieroglyphic Mountains SRMA (the area west of the Hells Canyon Wilderness and east of the Maughn properties) over a period of 10 to 20 years. The focus of mitigation is to reduce vehicular sources of noise and dust from BLM's lands affecting adjoining developing private lands.

Phase in the OHV closures in response to citizens' requests, conflicts with residents and communities, and the need to meet air quality standards.

Close areas to motorized use when needed to comply with county and City of Peoria land management, and recreation use laws and ordinances for these areas.

Work closely with law enforcement authorities, with the Arizona Game and Fish Department, Yavapai County, Maricopa County, City of Peoria, and other agencies with jurisdiction to:

- enhance visitor safety,
- improve resource protection, and
- ensure BLM's compliance with county, State, or Federal environmental laws.

Prohibit motorized competitive races.

Designate and develop a staging/camping area to meet the high recreation demand, providing for the following:

- parking and unloading OHVs,
- overnight camping,
- event operations,
- informational signing,
- dust abatement, and
- human health and safety.

Limit to 10 acres the areas of exposed barren soil.

As motorized use is phased out, redesign the staging area for non-motorized users. The area could be redesigned as a trailhead for hikers and equestrian users, with a place to park vehicles and unload horses.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.2.6.

2.5.2.2.2.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59.

Within the Castle Hot springs Management Unit, allocate:

- Baldy Mountain ONA ACEC and Sheep Mountain RNA ACEC to VRM Class I objectives.
- Hieroglyphics SRMA to VRM Class III objectives.
- Throughout the rest of the Management Unit, VRM classes would be allocated as shown on Map 2-59.

2.5.2.2.2.7 Mineral Resource Management

Management Actions

Withdraw Tule Creek ACEC from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Withdraw Baldy Mountain ONA ACEC and Sheep Mountain RNA ACEC from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

2.5.2.2.2.8 Travel Management

Land Use Allocation

The Castle Hot Springs Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Section 2.5.2.2.2.1.

SRMAs and other recreation allocations are discussed in Section 2.5.2.2.2.5.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Close the fenced area within Tule Creek ACEC to motor vehicles.

Close all secondary, tertiary, primitive, single-track, washes, and reclaiming vehicle routes within the Baldy Mountain ONA/ACEC (9,080 acres), undisturbed by vehicle routes and human activities.

Prohibit building of new vehicle routes within the Sheep Mountain RNA ACEC. Close all reclaimed vehicle routes except those needed to facilitate administrative or convert vehicle routes to non-motorized routes for public access within the RNA.

The Castle Hot Springs Regional Special Recreation Management Area would include up to 100 miles of non-motorized trail. Designate 100 to 200 miles of motorized use routes (single-track, ATV, and four-wheel drive) with one-way trips, destination trips, loops, and tours within the MU.

Substantially phase out, mitigate, or eliminate motorized use in the Hieroglyphic Mountains SRMA (the area west of the Hells Canyon Wilderness and east of the Maughn properties) over a period of 10 to 20 years. Phase in the OHV closures in response to citizen requests, conflicts with residents and communities, and the need to meet air quality standards. Close areas to motorized use when needed to comply with county and City of Peoria land management and dust ordinances for these areas.

2.5.2.2.3 Hassayampa Management Unit

The Hassayampa MU is located with the City of Wickenburg at its center. It is bounded on the east by Prescott National Forest and the Castle Hot Springs MU and on the west by the Harquahala MU. Its southern edge is south of the Vulture Mountains, and it extends north past Yarnell (Map 2-67).

The Hassayampa MU contains the following lands:

- 181,910 acres of BLM-administered lands,
- 130,580 acres of Arizona State land,
- 50,610 acres of private land, and
- 460 acres of county-administered lands in both Maricopa and Yavapai Counties.

2.5.2.2.3.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Area of Critical Environmental Concern

Vulture Mountains ACEC (6,120 acres)

Relevance

The cliffs along the crest of Vulture and Caballeros Peaks are significant habitat features used by many species of raptors. They are also a pristine, scenic landmark. They are essential to maintaining the current biological diversity of the surrounding area. Large concentrations of nesting hawks and falcons use these spectacular cliff faces.

Importance

The value of the cliffs for nesting raptors is significant for a large area. These cliffs are virtually the only suitable nesting cliffs for many miles. Nesting raptors are sensitive to construction-related human activities. If the cliffs and surrounding area are not protected from these activities, cliff-nesting raptors would disappear from much of the area.

Desired Future Condition

Maintain the raptor nesting habitat of the cliffs and surrounding foraging habitat.

Management Actions

The ACEC boundary would consist of a 1-mile buffer of significant cliffs.

Prohibit the building of new vehicle routes.

Withdraw the ACEC from mineral entry; close it to mineral and geothermal leasing, and mineral material disposal.

Prohibit the building of new recreation sites.

Prohibit rock climbing in the ACEC.

Close, limit, or suitably mitigate vehicle routes that conflict with wildlife values, in particular those that affect successful raptor nesting, to meet the DFCs.

Acquire non-Federal lands within the ACEC as available.

2.5.2.2.3.2 Lands and Realty**Land Tenure Adjustments**

No lands are identified for disposal within the Hassayampa MU.

Communication Sites

No designated communication sites are proposed for this MU.

2.5.2.2.3.3 Biological Resources

No allocations would be made for biological resources within Hassayampa MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.5.2.2.3.4 Cultural Resources

No cultural resources would be allocated to public use within this MU.

2.5.2.2.3.5 Recreation Resources***Land Use allocation***

Stanton SRMA

Desired Future Condition

Provide diverse recreation experiences while improving unacceptable environmental impacts from the following recreation:

- excessive and unregulated camping,
- activities of prospecting clubs, and
- motorized and other recreation uses.

Maintain roaded-natural and semi-primitive motorized recreation opportunities and settings.

Management Actions

Locate and develop trailheads, staging and camping areas, and other facilities.

Designate a diverse network of motorized vehicle routes and allow a range of OHV experiences and challenges.

Install informational, educational, and interpretive kiosks and trail signs, where suitable, for optimum user information and education. Placement of interpretive signs along the Stanton-Octave-Yarnell road, as proposed under the Lower Gila North MFP, would be consistent with this action.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.3.7.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

Yarnell SRMA

Desired Future Condition

This site is one of the most valued in Arizona for successful launching of long-distance, non-powered flights. Maintain long-term public access to the Yarnell hang gliding launching area. In addition, maintain the landing areas and

approaches to landing areas as free of flight hazards as possible (Map 2-32).

Management Actions

Retain in public ownership Sections 22, 23, and 27 and all landing zones below Yarnell Hill.

Acquire legal public access to the Yarnell hang gliding launching area through easements, rights-of-way, or land acquisition.

Acquire the Arizona State Trust Land parcel southwest of Yarnell containing Fool's Gulch (Section 22).

Prohibit new overhead powerlines, phone lines, or communication facilities within one mile of identified launching and landing zones.

Land Use Allocation

San Domingo SRMA

Desired Future Condition

Manage a Sonoran Desert wash and upland environment suitable for an array of motorized and non-motorized uses. Emphasize semi-primitive motorized and some roaded-natural settings in recreation management.

Provide opportunities for the following while protecting the natural and cultural resources in the area:

- intensive camping,
- OHV activities,
- equestrian use,
- recreation activities of prospecting clubs,
- event operations, and
- motorized single and two-track routes for general motorized recreation use.

Management Actions

Locate and develop trailheads, staging and camping areas, and other facilities as needed for

recreation activities. Limit to 10 acres the areas of exposed barren soil.

Prohibit motorized competitive races in the SRMA.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.3.7.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards,
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

The remaining lands within the Management Unit would be allocated as an Extensive Recreation Management Area.

2.5.2.2.3.6 Wilderness Characteristics

Land Use Allocation

Within the Hassayampa Management Unit, 13,200 acres would be allocated to maintain wilderness characteristics as shown on Map 2-71.

Desired Future Condition

Manage for open space and generally natural landscapes with primitive and semi-primitive non-motorized recreation settings.

Increase availability of non-motorized recreation opportunities.

Manage to complement the region's recreation opportunities.

In addition to the DFC described above, DFC and management actions described in the Wilderness Characteristics discussion under the Management Common to All Action Alternatives section of Chapter 2 also apply.

Management Actions

Close tertiary, primitive, reclaiming, single-track vehicle routes, and washes to motorized vehicles.

Withdraw from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Allow vehicle-based camping in designated areas.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.3.7.

Prohibit vegetation sales.

2.5.2.2.3.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59.

Within the Hassayampa Management Unit, allocate:

- Lands allocated to maintain wilderness characteristics to VRM Class I objectives.
- Stanton and San Domingo SRMAs to VRM Class III objectives.
- Utility corridors would be allocated to VRM Class III or IV.
- The rest of the Management Unit would be allocated to VRM classes as shown on Map 2-59.

2.5.2.2.3.8 Mineral Resource Management

Management Actions

Withdraw the Vulture Mountains ACEC and lands allocated to maintain wilderness characteristics from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

2.5.2.2.3.9 Travel Management

Land Use Allocation

The Hassayampa Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Section 2.5.2.2.3.1.

SRMAs and other recreation allocations are discussed in Section 2.5.2.2.3.5.

Allocations to maintain wilderness characteristics are discussed in Section 2.5.2.2.3.6.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Establish the Stanton SRMA and designate a diverse network of motorized vehicle routes and allow a range of OHV experiences and challenges.

Establish the San Domingo SRMA and maintain a Sonoran Desert wash and upland environment suitable for an array of motorized and non-motorized uses.

Prohibit the building of new vehicle routes and close, limit, or suitably mitigate vehicle routes within the Vulture Mountains ACEC (6,120 acres) that conflict with wildlife values, in particular those affecting successful raptor nesting, to meet the DFCs.

Close tertiary, primitive, reclaiming, single-track vehicle routes, and washes to motorized vehicles on 13,200 acres allocated to maintain wilderness characteristics as shown on Map 2-67.

2.5.2.2.4 Harquahala Management Unit

Alternative D would slightly expand the Harquahala MU. The MU is bounded on the east by the Hassayampa MU and extends west to the Phoenix District boundary, near the town of Wenden. The MU's southern boundary includes the private and State land south to Interstate 10. The northern boundary follows the BLM's property line south of State Route 60, which goes west of Wickenburg, through Aguila and Wenden (Map 2-68).

The Harquahala MU would include the following land:

- 420,730 acres of BLM-administered lands,
- 48,410 acres of Arizona State land, and
- 29,616 acres of private land.

Vision

The Harquahala Mountains are renowned for their cultural history, the quality and uniqueness of their biotic communities, and the diversity of their recreation opportunities. The mountain ranges in this MU (Harquahala, Big Horn, and Belmont Mountains) and the areas between them

create a complex of wildlife habitats and wildlife movement corridors that the AGFD recognizes as priority management areas. The abundant recreation opportunities include the following:

- primitive experiences,
- designated hiking trails,
- a back country byway,
- backpacking,
- wildlife viewing,
- hunting,
- rock hounding,
- equestrian uses,
- cultural sightseeing, and
- OHV-driving opportunities.

The MU's scenic and natural landscapes are maintained while offering visitors a diverse array of recreation opportunities. Such opportunities within the MU include both motorized and non-motorized activities. At the same time, a priority is placed on maintaining, enhancing, and restoring natural, biological, and cultural resources.

2.5.2.2.4.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with Management Actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Areas of Critical Environmental Concern

Belmont-Big Horn Mountains ACEC (77,730 acres)

Relevance

This area encompasses diverse biological resources within a scenic and undisturbed landscape of vegetation zones within the Sonoran Desert.

Importance

The area contains valuable habitat for desert tortoise and desert bighorn sheep.

Desired Future Condition

The unfragmented wildlife habitat provides adequate forage, cover, and access to water for healthy wildlife populations.

Management Actions

Prohibit mineral leasing and mineral material sales.

Prohibit the building of new vehicle routes and fences.

Acquire all available State and private lands from willing sellers.

Close, limit, or suitably mitigate vehicle routes that conflict with maintaining wildlife habitat values to ensure achieving DFC.

Prohibit the building of new recreation sites.

Since *Alternative D* proposes no authorizations for livestock grazing, remove all livestock control fences except those needed to keep livestock from wandering onto public lands from adjoining grazed properties.

Harquahala Mountains ONA ACEC (74,940 acres)

Relevance

The area constitutes a rare, intact, mountaintop vegetation community surrounded by low desert. The mountains contain a biologically diverse system, in stark contrast to the surrounding landscape, and support a diverse sky island ecosystem, with many species not found in the surrounding Sonoran Desert. The mountains are a natural area with few noticeable human intrusions in a primitive landscape setting.

Importance

The ONA encloses and preserves a unique assemblage of biological resources, conserves significant cultural and historic sites, and protects a distinctive vegetation community. The biological richness of the Harquahala Mountains is unique within southwest Arizona. The Harquahala Mountains and surrounding bajadas provide important wildlife habitat to a diverse array of wildlife species. The area is an ecoregional conservation site with important biodiversity values.

The ONA contains the Harquahala Mountain Observatory National Register of Historic Places District. Besides the observatory itself, the historic Harquahala Peak Pack Trail, Ellison's Camp, and other sites are also components of the historic district. The area also includes many well-preserved prehistoric sites along with historic ranching and mining sites. Some archaeological sites may be related to the use of the mountain range by a regional group of the Western Yavapai tribe.

The ONA will safeguard important and unfragmented wildlife habitat.

Desired Future Condition

Manage the area to emphasize protecting the sensitive resources presented in the statements of relevance and importance.

Achieve long-term conservation of scenic and cultural values. Preserve outstanding opportunities for primitive recreation and solitude, including high-quality hiking, backpacking, hunting, wildlife observation, and cultural study prospects.

Manage the ONA to preserve outstanding wilderness values. Permit vehicle access on designated routes only. Manage these routes to achieve semi-primitive motorized recreation settings. Prohibit vehicles from going cross-country off designated routes, and manage the area beyond 1/2 mile from vehicle routes to

achieve semi-primitive non-motorized and primitive recreation settings.

Emphasize the following:

- increasing primitive recreation opportunities,
- practicing backcountry skills,
- attaining isolation from other users, and
- maintaining remoteness.

Manage the ONA to restore and maintain the plant diversity and richness of the chaparral, riparian/wetland, and Sonoran Desert scrub vegetation communities. Conserving the vegetation communities and managing for healthy wildlife populations, are a priority in managing the ONA. Manage the area to achieve and maintain unfragmented wildlife habitat, which provides adequate forage, cover, and access to water for healthy wildlife populations.

Manage selected prehistoric and historic sites in the ONA for interpretive development, educational uses, and public visitation. For further information on public use of cultural resources, see Appendix E.

Management Actions

Conduct a route designation process, using a structured evaluation such as the one in Appendix D.

Close, limit, or suitably mitigate vehicle routes that conflict with maintaining wildlife habitat or cultural values to ensure achieving the DFC.

Close any routes that degrade natural, scenic, wildlife, primitive recreation opportunities, or cultural sites.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.4.7.

Withdraw the entire ACEC from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Allow primitive camping in designated areas only and establish standards to reduce evidence of human activity.

Prohibit building of new vehicle routes and fences.

Protect spring sources by prohibiting surface disturbance at them.

Acquire all available State and private lands from willing sellers.

Prohibit building of new recreation sites that conflict with bighorn sheep management, habitat, or movement.

Since *Alternative D* proposes cessation of grazing, remove all livestock control fences except those needed to keep livestock from wandering onto public lands from adjoining grazed properties.

Administrative Actions

Implement actions to find, monitor, and protect important cultural resources. Maintain the condition of the Harquahala Observatory historical site and its interpretive facilities. Undertake an inventory of cultural resources for the following purposes:

- to find and evaluate sites,
- to determine proper site uses, and
- to develop and implement protective measures for cultural resources within the ACEC.

Black Butte ONA ACEC (14,480 acres)

Relevance

The area contains the Vulture obsidian source used to make stone tools during prehistoric times.

The cliffs at the crest of Black Butte are significant habitat features used by many raptor species. The cliffs are also a pristine, scenic

landmark. They are essential to maintaining the current biological diversity of the surrounding area.

Importance

Archaeologists consider the Vulture obsidian source to be one of the major sources of a valuable trade commodity in prehistoric Arizona. Obsidian (volcanic glass) was used widely for producing stone tools. Nodules of Vulture obsidian have a distinctive chemical composition that allows archaeologists to map changes in its distribution, use, and trade by prehistoric peoples. Vulture obsidian has been traced to prehistoric sites within at least a 100-mile radius of Black Butte.

The value of the cliffs for nesting birds of prey is significant for a large area. Nesting raptors are sensitive to construction-related human activities. If these cliffs are not protected from these activities, cliff-nesting raptors would disappear from much of the surrounding area.

Desired Future Condition

Manage the ACEC to emphasize protecting the sensitive resources presented in the statements of relevance and importance.

Maintain current natural conditions and open space. Shift the management emphasis to management for wilderness character. Manage the area surrounding Black Butte and Jackrabbit Wash for primitive values. Preserve good non-motorized recreation opportunities and settings. Conserve scenic volcanic landscapes. Provide outstanding solitude opportunities.

Retain Black Butte's cultural significance as an important source and location of material for prehistoric tool production. Sustain important raptor nesting habitat in the central Black Butte cliffs area. Restore, enhance, and maintain wildlife and plant diversity and species richness of this Sonoran Desert vegetation community. Conserving the vegetation communities and managing for healthy wildlife populations are priorities in managing the ONA.

Management Actions

Management preserves and enhances the semi-primitive non-motorized setting.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.5.2.2.4.7.

Do not permit vegetation sales.

Withdraw the entire ACEC from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Prohibit the building of new recreation sites.

Prohibit rock climbing in the ACEC.

Close, limit, or suitably mitigate vehicle routes that conflict with maintaining wildlife habitat or cultural values to ensure achieving DFC.

Preserve the Vulture obsidian source, permit scientific study, and restrict activities that threaten the integrity of the source.

2.5.2.2.4.2 Lands and Realty**Land Tenure Adjustments**

Alternative D proposes no lands for disposal within the Harquahala MU.

Communication Sites

The Harquahala Peak communication site would be the only designated communication site within the Harquahala MU.

2.5.2.2.4.3 Biological Resources

No allocations would be made for biological resources within Harquahala MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this

chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.5.2.2.4.4 Cultural Resources**Land Use Allocation**

Harquahala Mountains SCRMA

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are allocated to public use and interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values. For further information on public use of cultural resources, see Appendix E.

Management Actions

A combination of some or all of following actions and others could be implemented at selected sites:

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes,
- brochures and related educational materials or programs, and
- actions to stabilize, repair, and maintain sites in good condition.

Authorize commercial and noncommercial group tours, conducted with protective stipulations in accordance with BLM's regulations and, where required, SRPs.

Administrative Actions

Select specific sites for public use by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- condition of the site and feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.5.2.2.4.5 Recreation Resources

Land Use Allocation

The entire MU would be allocated as an Extensive Recreation Management Area.

2.5.2.2.4.6 Wilderness Characteristics

Land Use Allocation

Within the Harquahala Management Unit, 76,545 acres would be allocated to maintain wilderness characteristics as shown on Map 2-71.

Desired Future Condition

In addition to the DFC described in the Wilderness Characteristics discussion of Management Common to Both Planning Areas section, the following conditions would also be managed for:

- to retain natural landscapes,
- to ensure high-quality primitive recreation experiences,
- to maintain the area's remote character,
- to preserve an array of scenic or special features,
- to attain a semi-primitive non-motorized setting,
- to maintain or enhance unfragmented desert tortoise, bighorn sheep, and other wildlife habitat, and
- to maintain wildlife habitat corridors for genetic migration.

Management Actions

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.4.2.2.4.7.

Withdraw from mineral entry, close to mineral and geothermal leasing, and mineral material disposal.

Prohibit vegetation sales.

Permit motorized and mechanized vehicular travel only on designated routes. Use a structured process such as the one in Appendix D to evaluate routes for designation to achieve the DFC and other management objectives.

2.5.2.2.4.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59.

Within the Harquahala Management Unit, allocate:

- Harquahala Mountains ONA ACEC, Black Butte ONA ACEC, and lands allocated to maintain wilderness characteristics to VRM Class I objectives.
- Utility corridors would be allocated to VRM Class III or IV.
- The rest of the Management Unit would be allocated to VRM classes as shown on Map 2-59.

2.5.2.2.4.8 Mineral Resource Management

Management Actions

Close Belmont-Big Horn Mountains ACEC to mineral and geothermal leasing, and to mineral material sales.

Withdraw from mineral entry, close to mineral and geothermal leasing, and close to mineral material disposal the following areas:

- Harquahala Mountains ONA ACEC.
- Black Butte ONA ACEC and lands allocated to maintain wilderness characteristics.

2.5.2.2.4.9 Travel Management

Land Use Allocation

The Harquahala Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Section 2.5.2.2.4.1.

SCRMA and cultural resource sites allocated to Public Use are discussed in Section 2.5.2.2.4.4.

Allocations to maintain wilderness characteristics are discussed in Section 2.5.2.2.4.6.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in Chapter 3.

Prohibit the building of new vehicle routes, and close, limit, or suitably mitigate vehicle routes that conflict with maintaining wildlife habitat values to ensure achieving DFC within the Belmont-Big Horn Mountains ACEC (77,730 acres).

Close any routes that degrade natural, scenic, wildlife, non-motorized primitive recreation opportunities, or cultural sites, and close, limit, or suitably mitigate vehicle routes that conflict with maintaining wildlife habitat or cultural values to ensure achieving the DFC within the Harquahala Mountains ONA ACEC (74,940 acres). Also prohibit building of new vehicle routes and fences within the ONA ACEC.

Close, limit, or suitably mitigate vehicle routes within the Black Butte ONA ACEC (14,480 acres) conflicting with maintaining wildlife habitat or cultural values to ensure achieving DFC.

Permit motorized and mechanized vehicular travel only on designated routes on 76,545 acres allocated to maintain wilderness characteristics as shown on Map 2-71.

Consider development of hard-surfaced walking trails at selected cultural sites within the Harquahala Mountains SCRMA for interpretation, education, and visitation to prehistoric and historic sites.

2.5.2.2.5 Harcuvar Management Unit

The Harcuvar MU encompasses the eastern most end of the Harcuvar Mountains within the PD's administrative area. Most of the Harcuvar Mountain range is administered by BLM's Lake Havasu Field Office. The Harcuvar MU is bounded on the west and north by the PD boundary with the Lake Havasu Field Office, and on the east and south by the boundary between BLM- and non-BLM-administered lands (Map 2-51).

The Harcuvar MU contains the following lands:

- 53,200 acres of BLM-administered lands,
- 6,280 acres of Arizona State land, and
- 3,360 acres of private land.

2.5.2.2.5.1 Special Designations

Alternative D proposes no Special Designations within the Harcuvar MU.

2.5.2.2.5.2 Lands and Realty

Land Tenure Adjustments

Alternative D identifies no lands for disposal or acquisition within this MU.

Communication Sites

There would be no designated communication sites within this MU.

2.5.2.2.5.3 Biological Resources

No allocations would be made for biological resources within Harcuvar MU.

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.5.2.2.5.4 Cultural Resource

No cultural resources would be allocated to public use within this MU.

2.5.2.2.5.5 Recreation Resources

Land Use Allocation

The entire MU would be allocated as an Extensive Recreation Management Area.

2.5.2.2.5.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59.

Within the Harcuvar Management Unit:

- The area along the Harcuvar Mountains would be allocated to VRM Class III.
- The rest of the Management Unit would be allocated to VRM Class IV.

2.5.2.2.5.7 Mineral Resource Management

Alternative D proposes no mineral withdrawals or closures for the Harcuvar MU.

2.5.2.2.5.8 Travel Management

Land Use Allocation

The Harcuvar Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. All vehicles would be limited to designated routes.

2.5.2.2.6 Peeples Valley Management Unit

Peeples Valley MU is located west of the Yarnell area in the Date Creek Mountains (Map 2-69). The MU has only a small proportion of BLM's land but offers some resource management opportunities.

The Peeples Valley MU contains the following land:

- 15,500 acres of BLM-administered lands,
- 207,040 acres of Arizona State land,
- 98,215 acres of private land.

Vision

BLM-administered lands in the Peeples Valley MU are generally distributed in relatively small, highly irregular pieces surrounded by State and private land. The resources on these lands are used by both local residents and recreation visitors and are considered important by those users. Further, regional features (mountain ranges, riparian areas) contain valuable wildlife habitat, especially for desert tortoise and bighorn sheep. The area also has a long mining and ranching history that has contributed to local settlement patterns and culture. For these

reasons, Peeples Valley MU was created to explore long-term, coordinated management of the region's valuable recreation, wildlife, minerals, and other resources.

A regional approach to development and land management that preserves the quality and quantity of valuable recreation, wildlife, and other resources, while maintaining the stability of local economies and cultures is emphasized.

A citizen, agency, and Government working group exists to explore a regional approach to planning and managing lands that emphasizes sustainability of both natural resources and local communities. In conjunction with State, county, and local governments with planning and management jurisdiction within the MU, a coordinated approach to achieving commonly established goals and objectives is used.

2.5.2.2.6.1 Special Designations

Alternative D proposes no Special Designations within Peeples Valley MU.

2.5.2.2.6.2 Lands and Realty

Land Tenure Adjustments

No lands are proposed for disposal within this MU.

Communication Sites

No designated communication sites are proposed for this MU.

2.5.2.2.6.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological

Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Land Use Allocation

Date Creek Mountains Wildlife Habitat Area.

Desired Future Condition

Maintain the wildlife/plant diversity and richness of the Sonoran Desert scrub vegetation community. Unfragmented wildlife habitat provides adequate forage, cover, and access to water for healthy wildlife populations.

Management Actions

Acquire high-quality desert tortoise habitat from willing sellers.

Prohibit the building of new vehicle routes and fences.

Remove all livestock control fences because *Alternative D* proposes no authorizations for grazing.

Close, limit, or suitably mitigate vehicle routes that conflict with maintaining riparian and wildlife values to ensure achieving DFC.

Prohibit mineral material disposal and vegetation sales.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

2.5.2.2.6.4 Cultural Resources

No cultural resources would be allocated to public use within this MU.

2.5.2.2.6.5 Recreation Resources

Land Use Allocation

Skull Valley Special Recreation Management Area (SRMA)

Desired Future Condition (DFC)

Retain landscape character while maintaining motorized access to routes in Prescott National Forest.

Management Actions

Transfer management of the SRMA to the adjacent Prescott National Forest.

Land Use Allocation

The remaining lands within the Management Unit would be allocated as an Extensive Recreation Management Area.

2.5.2.2.6.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59. Within the Peoples Valley Management Unit, VRM classes would be allocated the same as shown on the referenced map.

2.5.2.2.6.7 Mineral Resource Management

Management Action

Close Date Creek Mountains Wildlife Habitat Area to mineral material disposal.

2.5.2.2.6.8 Travel Management

Land Use Allocation

The Peoples Valley Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

The Date Creek Mountains WHA is discussed in the Biological Resources Section 2.5.2.2.6.3.

SRMAs and other recreation allocations are discussed in Section 2.6.2.2.6.5.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Prohibit the building of new vehicle routes and close, limit, or suitably mitigate vehicle routes that conflict with maintaining riparian and wildlife values within the Date Creek Mountains WHA, in order to ensure achieving DFC.

Within the Skull Valley SRMA, retain landscape character while maintaining motorized access to routes in Prescott National Forest.

2.5.2.2.7 Upper Agua Fria River Basin Management Unit

The Upper Agua Fria River Basin MU is sandwiched between the Bradshaw Mountains and Verde Ranger Districts of Prescott National Forest. It stretches from Cordes Lakes in the south to the Town of Prescott Valley in the north (Map 2-70).

The Upper Agua Fria River Basin MU contains the following land:

- 21,520 acres of BLM-administered lands,
- 36,990 acres of Arizona State land, and
- 39,290 acres of private land.

2.5.2.2.7.1 Special Designations

Nomination to National Recreation Trail System

Black Canyon Trail

Desired Future Condition

An ever-increasing urban population will seek out the trail for various recreation benefits and outcomes. Promote the preservation of the scenery, public access to the trail, safe travel on the trail, appreciation and enjoyment of the open space, and historic resources of the Black Canyon corridor. A National Recreation Trail should be established primarily within urban areas, secondarily, within scenic areas, and along historic travel routes of the areas.

Management Actions

Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Issue a right-of-way agreement for the trail and facilities to preserve their access and long-term character.

Acquire easements, rights-of-way, or both on non-Federal lands where the trail or facilities must cross or be built.

Any future land tenure action will recognize the trail and facilities and will retain a ¼-mile corridor (1/8 mile on each side) along the trail and any ancillary facility, as well as public access to them by easement, right-of-way, deed restriction, or other suitable means.

2.5.2.2.7.2 Lands and Realty

Land Tenure Adjustments

There would be no lands proposed for disposal.

Communication Sites

No designated communication sites have been proposed for this MU.

2.5.2.2.7.3 Biological Resources

Land Use Allocation

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Desired Future Condition

Maintain and enhance existing wildlife habitat and ensure unimpeded wildlife movement between BLM-managed Federal lands and adjacent national forest.

Management Actions

Prohibit building of new vehicle routes and fences on the remaining public lands.

Alternative D proposes making allotments unavailable for grazing and removing all livestock control fences, except those needed to keep livestock from wandering onto public lands from adjoining grazed properties.

Close, limit, or suitably mitigate vehicle routes that conflict with maintenance of riparian and wildlife values to ensure achieving DFC.

Maintenance of wildlife habitat would be given management priority in resolving resource conflicts.

2.5.2.2.7.4 Cultural Resources

No cultural resources would be allocated to public use within this MU.

2.5.2.2.7.5 Recreation Resources

Land Use Allocation

North Black Canyon Trail SRMA

Desired Future Condition

Complete the Black Canyon Trail from Highway 69 north and east to connect with trails in Prescott National Forest. Design the trail to provide a non-motorized experience along or near the historic sheep driveway. The trail and any ancillary facilities will generally lie along the corridor established by secretarial order in 1969. Determine exact locations of the trail or any ancillary facilities in conjunction with the Yavapai County Trails Committee and other interested citizens.

Evaluate the trail for inclusion into the National Recreation Trail System in order to provide for the ever-increasing outdoor recreation needs of an expanding urban population and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Black Canyon corridor. A National Recreation Trail should be established primarily, near urban areas, secondarily, within scenic areas and along historic travel routes of the area.

Management Actions

Issue a right-of-way agreement for the trail and facilities to preserve their access and long-term character.

Acquire easements, rights-of-way, or both on non-Federal lands where the trail or facilities must cross or be built.

Any future land tenure action will recognize the trail and facilities and will retain a ¼-mile corridor (1/8 mile on each side) along the trail and any ancillary facility, as well as public access to them by easement, right-of-way, deed restriction, or other suitable means.

Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Administrative Actions

Establish a citizen focus group to help with trail and facility sites, designs, and management.

With citizens' inputs, write a long-term SRMA management plan.

Land Use Allocation

The remaining lands within the Management Unit would be allocated as an Extensive Recreation Management Area.

2.5.2.2.7.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative D* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-59. The entire Upper Agua Fria River Basin Management Unit would be allocated as VRM Class III.

2.5.2.2.7.7 Mineral Resource Management

Alternative D proposes no mineral withdrawals or closures within this MU.

2.5.2.2.7.8 Travel Management

Land Use Allocation

The Upper Agua Fria River Basin Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16).

Other Resource Allocations with Travel Management Prescriptions

WHAs are discussed in the Biological Resources Section 2.5.2.2.7.3.

SRMAs and other recreation allocations are discussed in Section 2.5.2.2.7.5.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Establish the North Black Canyon Trail SRMA. Determine exact locations of the trail or any ancillary facilities in conjunction with the Yavapai County Trails Committee and other interested citizens. Travel Management related decisions within the SRMA include:

- Issue a right-of-way agreement for the trail and facilities to preserve their access and long-term character.
- Acquire easements, rights-of-way, or both on non-Federal lands where the trail or facilities must cross or be built.
- Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Prohibit building of new vehicle routes on public lands, and close, limit, or suitably mitigate

vehicle routes that conflict with maintenance of riparian and wildlife values within the Upper Agua Fria River Basin Habitat Corridor WHA, in order to achieve DFC.

2.6 Alternative E (Proposed Action)

Alternative E is the BLM's proposed management plan. It is designed to respond to each of the issues and management concerns recognized during the planning process in the most comprehensive manner possible. BLM has determined that the management actions presented under *Alternative E* would protect the resource values in the national monument and provide an optimal balance between authorized resource use and the protection and sustainability of sensitive resources in the Bradshaw-Harquahala area. The following discussion, along with the Desired Future Conditions (DFCs), land use allocations, and management actions described in the Management Common to All Action Alternatives section of this chapter, comprise the total proposed *Alternative E*.

2.6.1 Agua Fria National Monument

Introduction

Alternative E for the Agua Fria National Monument RMP is the BLM's proposed management plan. This plan would protect the resources described in the proclamation (Appendix A), while providing opportunities for public access, education, and appreciation of these values. The following section describes the elements of the proposed management plan for each resource, including DFC and relevant management actions.

2.6.1.1 Special Designations

Wild and Scenic River Eligibility

Analysis of eligibility of tributary streams to the Agua Fria River within the Agua Fria National Monument determined that the streams shown on Map 2-27 are eligible for consideration as potential additions to the National Wild and Scenic Rivers System. From north to south, these eight streams include Ash Creek/Little Ash Creek, Sycamore Creek, Indian Creek, Silver Creek, Bishop Creek, Tank Creek, Lousy Canyon/Creek and Larry Creek.

Following the guidance in BLM Manual 8351, *Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management*, staff evaluated the identified stream segments for free-flowing character and the presence of at least one “outstandingly remarkable” value.

“Free-flowing” is defined by Section 16(b) of the Wild and Scenic Rivers Act as “existing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.” Streams with intermittent flows may be eligible. According to BLM Manual 8351.31B, the existence of minor dams or diversion structures shall not by themselves render a river ineligible. The eligible streams in the monument are free-flowing. A small, low concrete dam exists in Silver Creek. It creates a pool from which a pipeline diverts water to Horseshoe Ranch, which claims a water right dating to 1875. Nevertheless, water can flow around this structure, and Silver Creek is determined to be free-flowing.

The eligible streams possess one or more outstandingly remarkable values. Outstandingly remarkable scenic values are characterized by notable or exemplary visual features of landforms, water, color, and related factors. Outstandingly remarkable values for fish and wildlife are characterized by the presence of exceptionally high quality habitat, especially for native fish and populations of state sensitive,

federally listed, or candidate threatened and endangered species. Outstandingly remarkable cultural values are characterized by rare or unusual prehistoric sites, or sites that may have national or regional importance for interpreting prehistory.

The Audubon Society has designated the Agua Fria River and these eight tributaries as an Important Bird Area (IBA). IBA's are sites that provide essential habitat for species of conservation concern, which may include breeding, wintering, or migrating birds. The yellow-billed cuckoo, a candidate species, is among the bird species in the Agua Fria IBA.

Ash Creek is the only perennial stream, even during drought conditions. Ash Creek and Little Ash Creek have outstandingly remarkable wildlife values, represented by riparian vegetation and the Agua Fria IBA. Sycamore Creek has similar values.

Indian Creek has outstanding wildlife values, represented by the Agua Fria IBA. The segment between Red Rock Gulch and the national forest boundary is designated critical habitat for endangered Gila chub, a native fish species.

Silver Creek has outstanding wildlife values, including the Agua Fria IBA and critical habitat for endangered Gila chub. It is also characterized by outstanding scenic values of Silver Creek Canyon, as well as outstanding cultural values of Pueblo la Plata and associated prehistoric sites within the Perry Mesa National Register District.

Bishop Creek is characterized by outstanding wildlife values associated with the Agua Fria IBA. It also has outstanding scenic values of Baby Canyon, as well as outstanding cultural values of Baby Canyon Pueblo, widespread petroglyph sites, and other sites within the Perry Mesa District.

Tank Creek has outstanding wildlife values within the Agua Fria IBA and outstanding scenic values of Perry Tank Canyon. Its outstanding cultural values include Pueblo Pato, widespread

rock art, and other prehistoric sites within the Perry Mesa District.

Lousy Creek is part of the Agua Fria IBA and its outstanding wildlife values include critical habitat for endangered Gila chub. It is also an introduction site for other species of native fish. Lousy Creek has outstanding scenic and cultural values associated with Lousy Canyon.

Larry Creek has outstanding wildlife values, as part of the Agua Fria IBA, and it is an introduction site for native fish species. A tributary is critical habitat for endangered Gila chub. Larry Canyon also has outstanding scenic values.

In addition to evaluations of free-flowing condition and outstandingly remarkable values, eligibility determinations involve tentative classifications of stream segments as wild, scenic, or recreational areas. Classification reflects the type and degree of human developments associated with the river and adjacent lands as they exist at the time of evaluation. Wild river areas are defined as free of impoundments and generally inaccessible except by trail, with shorelines essentially primitive and undeveloped. Scenic river areas have similar qualities but may be accessible in places by roads. Recreational river areas typically are more developed than are the areas within the monument.

As shown on Map 2-72, the following tentative classifications are assigned to the Agua Fria tributaries. The numbers of miles indicate the length of stream segments, which are limited to areas on BLM-administered lands within the monument.

- Ash Creek: scenic, 1.1 miles along Ash Creek and 2.7 miles along Little Ash Creek.
- Sycamore Creek: scenic, 3.3 miles.
- Indian Creek: scenic, 5.6 miles.
- Silver Creek: scenic, 4.9 miles.
- Bishop Creek: wild, 5.2 miles, south of Bloody Basin Road; scenic, 1.7 miles

from Bloody Basin Road to the national forest boundary.

- Tank Creek: wild, 3.4 miles.
- Lousy Creek: wild, 5.0 miles.
- Larry Creek and tributaries: wild, 3.4 miles.

The next step before making recommendations to Congress concerning designation of particular water courses is a suitability analysis.

Suitability determinations involve a more detailed, comprehensive analysis of a wider range of factors, based on the BLM Wild and Scenic Rivers Manual 8351. Suitability determinations will be conducted in the future as funding becomes available. Congress makes the final decisions regarding river designations and classification of streams as wild, scenic, or recreational. Regardless of whether these streams are ultimately determined as suitable for Wild and Scenic River designation, the BLM will continue to preserve their free-flowing condition and protect their outstandingly remarkable scenic, cultural, and fish and wildlife values in accordance with the Monument Proclamation and the Wild and Scenic Rivers Act.

Desired Future Condition

Tributary streams of the Agua Fria River, which are determined eligible for study as potential additions to the national Wild and Scenic Rivers System, are maintained in free-flowing condition and managed to protect their outstandingly remarkable scenic, wildlife, and cultural resource values.

Management Actions

In accordance with BLM Manual 8351, when a river segment is determined eligible and given a tentative classification, its identified outstandingly remarkable values shall be afforded adequate protection, subject to valid existing rights, until the eligibility determination is superseded (i.e., the segment is determined not suitable for designation, or Congress makes a decision regarding designation). Authorized uses shall not be allowed to adversely affect

either eligibility or the tentative classification, i.e., actions that would change a classification from wild to scenic).

If one or more stream segments were eventually found non-suitable for designation, those streams would be managed according to the Monument Proclamation and the allocated recreation settings and other resource allocations. The monument values that would be protected include the outstanding biological and cultural resource values that define the eligibility of these streams for consideration under the Wild and Scenic Rivers Act.

Management actions shall apply to areas within ¼ mile on either side of each eligible stream.

Maintain the free-flowing characteristics of eligible streams by prohibiting new stream impoundments, diversions, channelizations, or rip-rapping to the extent the BLM is authorized under law.

Implement actions to monitor and protect outstanding wildlife habitat, native fish species, other sensitive species, and cultural resources. Relevant management actions are described in Sections 2.6.1.3, 2.6.1.8, 2.7.1.1, 2.7.1.4, 2.7.1.5, 2.7.2.4, and 2.7.2.5.

Implement actions to protect outstanding scenic qualities in accordance with visual resource management objectives. Management actions are described in Sections 2.6.1.7, 2.7.1.8, and 2.7.2.8.

Implement proposed route closures, shown on Map 2-76, to help protect outstandingly remarkable values along Ash, Sycamore, Silver, Bishop, and Lousy Creeks. Prohibit new vehicle routes in areas managed as wild segments.

Continue to work with partners, such as the Audubon Society and the Arizona Site Stewards, to monitor, inventory, and protect outstandingly remarkable river values.

Administrative Actions

The BLM will evaluate the suitability of each eligible river segment for inclusion in the national Wild and Scenic Rivers System. The public will have opportunities to comment on the proposed suitability determinations. Suitability evaluations will be completed within four years after the Record of Decision for the RMP is signed.

2.6.1.2 Lands and Realty

Land Use Allocation

Utility and Transportation Corridors

Desired Future Condition

To continue to maintain utility and transportation connectivity along an important north-south route from the greater Phoenix area to suppliers to the north, while protecting the resources described in the National Monument Proclamation (Appendix A).

Management Actions

Narrow the existing utility corridor (designated by the Phoenix RMP [BLM 1988a] in the Black Canyon RCA), so that the utility corridor's eastern boundary follows the easternmost boundaries of any existing rights-of-way that are within the corridor identified in the Phoenix RMP. This corridor is also modified on the west side, and is further described in the Lands and Realty discussion under the Black Canyon Management Unit section of *Alternative E*.

2.6.1.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area

Land Use Allocations

Pronghorn Fawning Habitat Wildlife Habitat Area (16,810 acres) Map 2-73.

Pronghorn Movement Corridor Wildlife Habitat Area (22,520 acres) Map 2-73.

Desired Future Condition

Manage habitat to avoid fragmentation and provide conditions that promote natural movement and fawning behavior of pronghorn.

Restore and maintain habitat of suitable quality and quantity to promote long-term sustainability of a viable pronghorn population in the national monument.

Management Actions

To ensure achievement of DFC, limit or suitably mitigate vehicle routes that:

- cross known pronghorn movement corridors and
- have a type and volume of use that modifies pronghorn behavior in ways that fragment their habitat or adversely affect fawning.

Implement seasonal restrictions or closures when vehicle use degrades habitat values.

Apply prescribed fire and fuels management projects to improve habitat for pronghorn fawning and movement

Fence construction and maintenance will follow guidance provided in BLM's Handbook for Fencing H-1741.

Limit or suitably mitigate new recreation site developments in pronghorn movement corridors to avoid disturbing pronghorn movement.

Close pronghorn fawning areas to Special Recreation Permit activities between April 1 and June 1 annually.

Maintenance of wildlife habitat will be given management priority in resolving resource conflicts.

Additional management guidance is described in the Biological Resources discussion of the Management Common to Both Planning Areas and the Biological Resources discussion of Management Common to Agua Fria National Monument sections of Chapter 2.

Administrative Actions

Conduct site-specific studies to determine pronghorn fawning habitat quality and potential. Base implementation actions on the data acquired.

Following guidance in BLM's Handbook H-1741, construction and modification of fences to meet fence standards will include coordination with livestock operators, interested conservation organizations, and other Federal, State, or local governments as appropriate.

2.6.1.4 Cultural Resources

Land Use Allocations

SCRMA's are shown on Map 2-73.

Desired Future Condition

Cultural resources are being used to enhance scientific and public knowledge and understanding of the monument region during prehistoric and historic periods, while at the same time they are being preserved for future generations as well. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are allocated to public use and interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

Sites described below, allocated to High and Moderate public use would be developed consistent with discussion in Section 2.7.1.5, Cultural Resources, of the Management Common to Agua Fria National Monument. Interpretive development would be focused on the sites listed below, leaving the majority of the areas within each SCRMA's undeveloped.

High Use SCRMA (2,056 acres)

Sites allocated to public use within this SCRMA are:

- Pueblo la Plata and Fort Silver (Pueblo la Plata complex) north of Bloody Basin Road on Perry Mesa.
- Historic Teskey homestead near the Agua Fria River.

Moderate Use SCRMA (8,100 acres)

Sites allocated to public use within this SCRMA are:

- Baby Canyon Pueblo and Pueblo Pato on Perry Mesa.
- Badger Springs rock art and the Arrastre Creek site on Black Mesa.
- Prehistoric sites on the south rim of Black Mesa.
- Rollie Site (AZ N:16:231(ASM)) near Sunset Point on Black Mesa.

Low Use area (60,750 acres BLM)

All remaining areas outside the two SCRMA's would be excluded from on-the-ground interpretive development or commercial tours. No sites would be allocated to public use in these areas.

2.6.1.5 Recreation Resources

Alternative E would allocate the entire national monument to a Special Recreation Management Area with three Recreation Management Zones

within it. These zones include a Back Country RMZ of 57,650 acres to manage and maintain the natural landscape character (Map 2-74). A Passage RMZ of 1,350 acres would be allocated 100 feet from the centerline of designated routes that pass through or enter into the Back Country RMZ, to manage vehicle-based visitation. The remainder of the monument would be allocated as a Front Country RMZ of 11,900 acres, where management would focus more on recreation and interpretive opportunities. General descriptions of the Front Country, Back Country, and Passage RMZs, including DFCs common to all Alternatives, appear in the Management Common to Agua Fria National Monument section of Chapter 2 under the discussion of Recreation and Public Access.

Appendix S, Benefits-Based Recreation, contains detailed descriptions of recreation settings in each RMZ. In accordance with BLM Land Use Planning Handbook, Appendix C, this information addresses management objectives for the specific recreation opportunities to be produced and the outcomes to be attained (activities, experiences, and benefits). Also included are prescriptions for facilitating the attainment of beneficial outcomes and an activity planning framework that addresses management, marketing, and monitoring actions needed to achieve management objectives and setting prescriptions.

Land Use Allocation

Front Country Recreation Management Zone (11,900 acres).

Desired Future Condition

The DFC for the Front Country RMZ is described in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of this chapter. In addition, the Front Country RMZ would also:

- recognize that people are part of the ecosystem,
- allow visitors to responsibly interact with the resources,

- offer people with physical limitations a way to enjoy the monument while still maintaining the integrity of the resources and landscape characteristics, and
- give the public sustainable recreation/tourism opportunities while protecting the integrity of the monument's cultural sites and other resources.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.6.1.7.

Special Recreation Permits (SRPs) and Concessions:

- Require groups of 25 or more to obtain an SRP.
- Rather than defining a maximum allowable number of SRPs, the BLM will review permit applications on a case-by-case basis taking into account the following considerations. Permit numbers will be determined and may be increased or decreased through adaptive management, which is described in Section 2.7.2.7.
- Prohibit competitive motorized or mechanized races, and consider other competitive events on a case-by-case basis as long as they do not conflict with achievement of all resource DFCs for the location.
- Issue SRPs for vending operations for a permitted SRP activity or event in the monument or recreation site. Vending for permitted activities or events might be included with the SRP for the permitted activity or event if the permittee is responsible for the vending operations. If not, a separate SRP for vending would be required. Consider vending if the service or goods for sale directly enhance the recreation experience and cannot be adequately provided by the closest local

community. BLM would not authorize permanent structures.

- Issue recreation concession leases to enhance visitor use, visitor services, and visitor safety and enjoyment if leases are consistent with resource DFCs and monument objectives. Consider concessions on a case-by-case basis and base determinations on consistency with management objectives and a clearly, demonstrated need.
- Close pronghorn fawning areas to SRP activities between April 1 and June 1 annually.

Dispersed Camping:

- Require a free permit for camping. Camping permits could be limited in number if resource damage occurs that conflicts with achieving resource DFCs or threatens resources protected by the proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.
- Allow dispersed camping only in existing disturbed areas or at existing campsites, accessed by designated routes.
- Prohibit camping within a 200-foot radius (70 adult paces) of developed facilities, such as trails, kiosks, entrance signs, signed archeological sites, parking areas, and riparian and water source areas.
- Make management adjustments that respond to recent ecological research and data results (for example, using data from outdoor recreation research on human effects to natural and biological resources).
- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water

(Arizona Revised Statute 17-308, Unlawful Camping).

- The authorized officer may designate or close camping areas as needed to maintain, protect, or enhance resources.

Developed Campgrounds:

- None.

Campfires:

- Prohibit campfires within 1/4 mile of intensive and moderate public use archaeological sites.
- Prohibit campfires within a 200-foot radius of developed facilities, such as trails, kiosks, entrance signs, parking areas, archaeological sites including petroglyphs (rock art) sites, and riparian and water source areas.
- Limit firewood collection to campfire use only. Allow collection of dead, down, and detached material for campfire firewood. Monitor vegetation use and disturbance and temporarily or permanently suspend such use to prevent resource damage.

Recreational Target Shooting:

- Prohibit recreational target shooting throughout the monument.

Trail Construction for Non-motorized Recreation Use

Discussion of trail development can be found in Travel Management Section 2.6.1.9.

Badger Springs Area Management Actions:

- Enhance the entrance to Badger Springs, which may include rerouting, reclaiming, and recontouring routes.
- Enhance the Badger Springs Wash Trail complex, which might include redesigning, rerouting, reclaiming, and

recontouring the parking area, trailhead, and trails.

- At or near the trailhead provide visitor amenities, which may include rest and shade areas, restrooms, equestrian parking and supports, and interpretive and directional signs.
- Close to livestock grazing the area encompassing recreation facilities at the Badger Springs Wash trailhead.
- Consider pronghorn movement and habitat needs in any development in the Badger Springs area.
- Provide for route maintenance to reduce erosion and maintain routes to provide for public safety.

Cordes Lakes Area Management Actions:

- Fence the Cordes Lakes Area (T. 11 N, R. 3 E., Section 20) near the Agua Fria River to prevent motorized access and provide for safe vehicle parking.
- Provide access points for walk-in and universal access.
- Provide visitor amenities, which may include picnic tables, rest areas, shade facilities, directional signs, and interpretive and visitor information opportunities.

Bloody Basin Road Entrance (just beyond the existing kiosk)

- Reclaim and landscape west entrance on the southeast side for desert vegetation.

Land Use Allocation

Back Country Recreation Management Zone (57,650 acres).

Desired Future Condition

The DFC for the Back Country RMZ is described in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of Chapter 2.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.6.1.7.

Maintain river crossings at Kelton Ranch, EZ Ranch, Horseshoe Ranch, and Cross Y Ranch.

SRPs and Concessions:

- Require an SRP for groups of 25 or more.
- Rather than defining a maximum allowable number of SRPs, the BLM will review permit applications on a case-by-case basis taking into account the following considerations. Permit numbers will be determined and may be increased or decreased through adaptive management, which is described in Section 2.7.2.7.
- Authorize no competitive motorized or mechanized races. Consider other competitive events on a case-by-case basis on how they conform to the proclamation of the monument.
- Issue SRPs for vending operations if for permitted events on the monument or recreation site. Include with the SRP vending for permitted events if the permittee is responsible for the vending operations. If not, require a separate SRP for vending. Consider vending at recreation sites if the service or goods for sale directly enhances the recreation experience and cannot be adequately provided by the closest local community. Prohibit permanent structures.
- Issue recreation concession leases to enhance visitor use, visitor services, and visitor safety and enjoyment, if these leases conform to monument values and objectives. Consider concessions on a case-by-case basis and base determinations on consistency with management objectives and a clearly, demonstrated need.

- Close pronghorn fawning areas to SRP activities between April 1 and June 1 annually.

Dispersed Camping:

- Allow dispersed tent camping with free permits. Camping permits could be limited in number if resource damage occurs that conflicts with achieving resource DFCs or threatens resources protected by proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.
- Prohibit motorized campers/units in the back country since vehicles are not allowed off-road.
- Make management adjustments that respond to recent research and data results.
- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).
- The authorized officer may designate or close camping areas as needed to maintain, protect, or enhance resources.

Developed Campgrounds:

- None.

Campfires:

- Limit firewood collection to campfire use only. Allow collection of dead, down, and detached material for campfire firewood. Monitor vegetation use and disturbance and temporarily or permanently suspend use to prevent resource damage.
- Prohibit campfires within a 200-foot radius of petroglyphs (rock art),

archaeological sites such as pueblos, and riparian and water sources.

Recreational Target Shooting:

- Prohibit recreational target shooting throughout the monument.

Trail Construction for Non-motorized Recreation Use

Discussion of recreation trail development can be found in the Travel Management Section 2.6.1.9.

Land Use Allocation

Passage Recreation Management Zone (1,350 acres)

Desired Future Condition

This Passage RMZ consists of a 200-foot-wide corridor (100 feet on each side of centerline) along all designated vehicle routes passing through the Back Country RMZ. The DFC for the Passage RMZ is described in Section 2.7.2.7 of the Management Common to Agua Fria National Monument section of Chapter 2.

Management Actions

VRM Allocations to achieve the Desired Future Conditions of this Recreation Management Zone are described in Section 2.6.1.7.

SRP and Concessions:

- Require a SRP for groups of 25 or more.
- Rather than defining a maximum allowable number of SRPs, the BLM will review permit applications on a case-by-case basis taking into account the following considerations. Permit numbers will be determined and may be increased or decreased through adaptive

management, which is described in Section 2.7.2.7.

- Authorize no competitive motorized or mechanized races. Consider other competitive events on a case-by-case basis depending on how they conform to monument values.
- Issue SRPs for vending operations if for a permitted event on the monument or recreation site. Include vending for permitted events with the SRP for the permitted event if the permittee is responsible for the vending operations. If not, require a separate SRP for the vending. Consider vending at recreation sites if the service or goods for sale directly enhance the recreation experience and cannot be adequately provided by the closest local community. Prohibit permanent structures.
- Enter into recreation concession leases to enhance visitor use, visitor services, and visitor safety and enjoyment, if these leases conform to monument values and objectives. Consider concessions on a case-by-case basis and base determinations on consistency with management objectives and a clearly, demonstrated need.
- Close pronghorn fawning areas to SRP activities between April 1 and June 1 annually.

Dispersed Camping:

- Allow dispersed camping with a free permit. Camping permits could be limited in number if resource damage occurs that conflicts with achieving resource DFCs or threatens resources protected by proclamation, or if health and safety issues emerge. If damage continues, more limitations might be required, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.
- Allow dispersed camping only in existing disturbed areas or in existing

campsites, accessed by designated routes.

- Prohibit camping within a 200-foot radius (70 adult paces) of developed facilities, such as trails, kiosks, entrance signs, signed archeological sites, parking areas, and riparian and water sources.
- Camping would be prohibited within ¼ mile from water sources "...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water (Arizona Revised Statute 17-308, Unlawful Camping).
- Issue with each free permit, monument-specific Leave No Trace/Tread Lightly information to minimize impacts to resources and prevent pollution to desert water resources.
- Make management adjustments that respond to recent research and data results.
- The authorized officer may designate and close camping areas, as needed, to maintain, protect, or enhance resources.

Developed Campgrounds:

- None.

Campfires:

- Allow campfires in existing disturbed areas.
- Prohibit campfires within 1/4 mile of archaeological sites managed for High or Moderate public use.
- Prohibit campfires within a 200-foot radius of developed facilities, such as trails, kiosks, entrance signs, parking areas, archaeological--including rock art--sites, and riparian and water sources.
- Limit firewood collection to campfire use only. Allow collection of dead, down, and detached material for campfire firewood. Monitor vegetation use and disturbance and temporarily or

permanently suspend this use to prevent resource damage.

Recreational Target Shooting:

- Prohibit recreational target shooting throughout the Monument.

Trail Construction for Non-motorized and Non-mechanized Recreation Use

Discussion of recreation trail development can be found in the Travel Management Section 2.6.1.9.

Administrative Actions

With free permits for camping within the monument issue specific Leave No Trace/Tread Lightly information to minimize impacts to the resources and prevent pollution to desert water resources.

Monitor dispersed campsites and establishes limits of acceptable change. Base site carrying capacities on the limits of acceptable change.

Adopt measures to increase visitor responsibility for campfire etiquette and to reduce proliferation of campfire rings.

2.6.1.6 Wilderness Characteristics

Land Use Allocation

Within the national monument, 20,900 acres would be allocated to maintain wilderness characteristics as shown on Map 2-74.

Desired Future Condition

In addition to the DFC and management actions in the Wilderness Characteristics discussion of the Management Common to Both Planning Areas section of this chapter, the following DFC also applies:

Lands within the monument allocated to maintain wilderness characteristics contain outstanding opportunities for solitude and naturalness. Maintain these characteristics and provide opportunities for unconfined primitive recreation, adventure, and discovery. Important wildlife populations and habitat are also within these lands and they are recognized as an important component of the naturalness and will be actively managed.

Management Actions

Evaluate non-motorized trails between Bull Tank and Baby Canyon, between Badger Springs/Agua Fria confluence and Pueblo Pato, and in other areas if needed, to enhance resource protection by providing planned and accessible paths between major access points and interpretive sites.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.1.7.

Authorize no new rights-of-way.

2.6.1.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative E* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-75.

Within the Agua Fria National Monument, allocate:

- lands allocated to maintain wilderness characteristics (20,900 acres) to Class II objectives,
- remaining Back Country Recreation Management Zone and the Passage RMZ to Class II objectives (20,900 acres),
- the Front Country RMZ to VRM Class III (11,900 acres), and

- the utility corridor (which is within the Front Country RMZ) would be allocated to VRM Class III.

Desired Future Condition

Throughout the national monument, regardless of VRM class, the objective is to minimize the visual impacts of authorized activities. To the extent possible, keep night skies free of light pollution.

Administrative Actions

Cooperate with surrounding communities and national, State, regional, and local entities to minimize the impacts of lighting.

Include clear nights from light standards in new permits/authorizations and in renewing permits/authorizations within all the viewsheds affecting the monument.

2.6.1.8 Rangeland Management

Land Use Allocations

BLM would continue to administer the current 11 grazing authorizations on 10 allotments as shown on Map 2-5.

Desired Future Condition

Watersheds are in properly functioning condition, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes are maintained to support healthy biotic populations and communities.

Management Actions

Limit livestock grazing in riparian areas to the winter season (November 1 to March 1).

Inventory and/or monitoring studies will be used to determine if adjustments to permitted use

levels, terms and conditions and management practices are necessary in order to meet and/or make significant progress towards meeting the Arizona Standards for Rangeland Health and other Land Use Plan Objectives.

Fence construction and maintenance will follow guidance provided in BLM's handbook on Fencing No. 1741-1.

When lands are devoted to a public purpose that precludes livestock grazing, adjust allotment boundaries to allow for that use.

Remove the immediate area surrounding Badger Springs Wash from the Cordes allotment to provide for developing a visitor parking area, information kiosk, campground, and infrastructure.

2.6.1.9 Travel Management

Land Use Allocation

The entire monument is allocated as Limited to Designated routes (Map 2-16).

Management Actions

All vehicles would be limited to designated routes. Cross-country motorized travel is prohibited except in the case of an emergency or for approved administrative purposes. Although OHVs are manufactured to travel off regularly maintained roads or travel cross-country where no roads exist, OHVs throughout his planning area are restricted to designated roads. A back country zone is defined as: Areas with undeveloped, primitive, and self-directed visitor experiences without provisions for motorized or mechanized access, except for designated routes.

On the Bloody Basin Road provide a vehicle route accessible by high-clearance vehicles where views of the monument and interpretation of monument resources create a better understanding of the resources being protected. Along the central-monument travel route create a comprehensive visitor experience that is both

sensitive to monument resources and provides a high-quality visitor experience which would:

- Maintain at BLM Maintenance Intensity standard of Level 3 ‘Medium’ (BLM Roads and Trails Terminology Report), passable by high-clearance vehicles.
- Maintain the existing roaded-natural and rural settings ½ mile to either side of the road's centerline.
- Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.1.7.
- Secure easements and rights-of-way where needed to ensure long-term public access.

Interpret monument features along the route, including the following:

- prehistoric cultural features and
- historic homesteads, settlements, and ranching history, and other natural and cultural features.

Install directional, safety, and interpretive signs to enhance public use, enjoyment, and stewardship of the route.

Mitigate impacts to wildlife movement to ensure achievement of the DFC.

Within Front Country

Trail Construction for Non-motorized and Non-mechanized Recreation Use:

- Develop trails as needed to protect monument's resources and improve interpretive opportunities.
- Ensure that all construction is compatible for social and managerial settings, see Section 2.6.1.5.
- Design trails to blend into the environment.
- Build loop, connector, and linear trails, depending on recreation, access, interpretation, education, and resource objectives.

- Build trails to maintain connectivity to recreation opportunities such as equestrian use, hiking, and viewing cultural sites.
- Build trails to link with other connector trails outside the monument.
- Explore opportunities to link networks of trails within the monument to those outside the monument on other BLM's lands, or with the adjacent jurisdictions, where linkages would conform to monument's values and would not impair protecting monument resources.
- Place priority for trail development on archaeological sites developed for interpretive use and visitation.
- Build other trails for visitor access and enjoyment of the monument's resources, including the following: self-guided nature and cultural resource trails; trails to interpretive sites not accessible by vehicle; or longer trails linking multiple sites for day or multiple-day trips.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- Relocate segments of routes when needed to reduce resource damage and help protect the monument's resources.
- Allow relocation of routes for access to public lands around privately owned parcels (inholdings), if needed to meet administrative or public needs.
- All construction would be compatible with Desired Future Conditions for the construction area.
- Design construction to blend into the environment.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Public Access

- All vehicles would be limited to designated routes consistent with the discussion in the Travel Management Section 2.7.2.10. All public vehicle travel is restricted to designated routes.
- Require emergency vehicles, including air support, to use designated routes whenever possible and practical.
- Set speed limits for OHV use to provide for visitor safety and to minimize visitor conflicts.
- Maintain safe public access, which may include the following: designing and installing needed improvements at low-water crossings, installing vehicle control guards, and enforcing traffic laws and other applicable regulations for visitor safety.

Within Back Country

Trail Construction for non-motorized and non-mechanized recreation use:

- Build nonintrusive trails to allow visitors to access areas of interest, to enhance recreation experiences, and to protect monument's values. Trail design could vary from built, engineered routes to trails marked only with fiberglass posts without any construction.
- Do not allow trails or trail construction to degrade monument resources.
- Design trails to blend into the environment.
- Keep trails compatible with social and managerial settings and manage them to meet VRM II objectives.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Route Construction for Motorized Use:

- Routes open for administrative use will be maintained as needed to provide for the use.

- Allow emergency route construction to maintain access for permitted operations and administrative purposes within the Back Country RMZ. No other construction would be allowed unless necessary to meet DFCs.

Off-Highway Vehicles

- Prohibit OHV travel in the Back Country RMZ.
- Permit emergency response vehicles, including aircraft landing, in the Back Country RMZ. If practical, these vehicles should use existing routes or areas void of vegetation and cultural resources.
- Non-emergency administrative use of vehicles may be allowed in the Back Country on missions pre-approved by the BLM's field manager. If practical, these vehicles should use existing routes or areas void of vegetation and cultural resources.

Within Passage

Trail Construction for Non-motorized and Non-mechanized Recreation Use:

- Same as for Front Country RMZ.

Route Construction for Motorized Use:

- Relocate segments of existing routes to reduce resource damage and to help protect monument's resources.
- All construction would be compatible with Desired Future Conditions for the construction area.
- Design construction to blend into the environment.
- Where deemed necessary to achieve Desired Future Conditions, roads or trails may be closed and reclaimed to a natural state.

Off-Highway Vehicles

- All vehicles would be limited to designated routes consistent with the discussion in the Travel Management Section 2.7.2.10.
- Allow continued vehicular access (both motorized and non-motorized mechanized) along designated vehicle routes. Do not upgrade routes but maintain them for access at current levels, speeds, and types. In some cases, conduct route maintenance to purposely limit vehicular type or speed. For example, a route may be purposely maintained in a primitive condition to discourage ATVs or four-wheel drive vehicles from traveling at speeds exceeding 25 to 30 miles per hour.
- Ensure that emergency vehicles, including air support, use designated routes whenever possible and practical. When not possible or practical, emergency vehicles should, as much as possible, minimize disturbance of vegetation and the risk to monument resources by using existing openings and disturbed areas.
- Establish speed limits for OHV use to provide for visitor safety and to minimize visitor conflicts.
- Maintain access and provide for visitor safety.
- 25 miles of tertiary roads are closed to public use, yet administrative use will be permitted as necessary; and
- 52 miles of roads would be closed to all uses and be restored or allowed to naturally reclaim.

Please see Map 2-76 for route decisions. Routes designated in the monument are shown below.

Open Designated Routes 94 miles

Closed Routes 52 miles

Administrative Routes 25 miles

New Routes 0 miles

Appendix W provides detailed information on the basis for decisions on proposed route designations. It includes a Route Designation Summary Table that gives a brief summary of the rationale for each route decision, along with the corresponding number assigned by the BLM to each road and trail.

2.6.2 Bradshaw-Harquahala Planning Area

BLM has developed *Alternative E* as the proposed management plan for the Bradshaw-Harquahala Planning Area. The land use allocations and management actions under this *Alternative* would best facilitate responsible use of resources within the planning area, while continuing to protect fragile resources. *Alternative E* proposes six MUs (Map 2-77).

2.6.2.1 Management Applicable to the Entire Bradshaw-Harquahala under this Alternative

The following section presents management actions for *Alternative E* that apply throughout the Bradshaw-Harquahala Planning Area (i.e. they are not specific to any MU).

Implementation Actions

Public Access

The designated route network within the national monument would include the following:

- 25 miles of secondary roads, accessible in good weather by two-wheel-drive vehicles;
- 69 miles of tertiary roads, accessible mainly by four-wheel drive, ATVs and motorcycles or, in some areas, high-clearance, two-wheel drive vehicles;

2.6.2.1.1 Lands and Realty

Land Tenure Adjustments

Alternative E proposes 39,395 acres of the lands within the Bradshaw-Harquahala Planning Area as potentially suitable for disposal. Of these, 29,870 acres are potentially available for sale or disposal under any authority, and 9,525 acres would be available only through exchange. The lands include scattered parcels outside the planning area and others as shown in Map 2-78. Criteria limiting which lands might be selected as suitable for disposal are described in Management Common to Both Planning Areas section of this chapter in the discussion under Lands and Realty.

Lands considered for potential acquisition would include State and private lands (willing seller) within the planning area and would be in accordance with resource management prescriptions in this land use plan. These lands would meet the criteria described under Lands and Realty in the Management Common to Both Planning Areas section of this chapter, as well as program objectives reflected in *Alternative E*.

Utility and Transportation Corridors

New utility corridors within the Bradshaw-Harquahala Planning Area (Map 2-79) would be designated for future expected demands. These designations respond to the demand for the intensifying the power grid and conform to the utility regulations of the Arizona Corporation Commission.

To accommodate recent and future development needs, the Bradshaw-Harquahala Land Use Plan will designate two transportation corridors: the Wickenburg Bypass and the Canamex Corridor. No existing state highway system routes (Interstate, U.S. routes, and Arizona State routes) would be designated as transportation corridors. The existing highway system routes, as they pertain to public lands, have been issued right-of-ways, and will remain issued under a right-of-way.

In the newly designated transportation corridors, other uses would be allowed when the uses are compatible.

Management Actions

- The Wickenburg Bypass and the Canamex Corridor will be identified and designated as transportation corridors within the Bradshaw-Harquahala Land Use Planning Process.
- Co-locate other compatible uses within the designated transportation corridors, unless doing so would negatively impact the transportation corridors.

2.6.2.1.2 Rangeland Management

Land Use Allocation

Authorize 93 grazing authorizations within the grazing allotment boundaries shown on Map 2-21.

Desired Future Condition

Watersheds are in properly functioning condition, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

Ecological processes are maintained to support healthy biotic populations and communities.

Management Actions

Implement grazing management changes as needed to produce riparian areas that are in or are making progress toward proper functioning condition. Base grazing management changes on allotment evaluations, which analyze compliance with the Land Health Standards and the Guidelines for Grazing Administration described in the Rangeland Management discussion of the Management Common to Both Planning Areas section of this

chapter. Changes could include, but may not be limited to; seasonal grazing, grazing rotation, or no grazing.

Build livestock control fences and alternative water sources where needed to meet natural resource objectives. Fence construction and maintenance will follow guidance provided in BLM's handbook on Fencing No. 1741-1.

2.6.2.1.3 Mineral Resources Management

Leasable Minerals

Open all lands for mineral and geothermal leasing and exploration except lands with existing segregations or withdrawals. Map 2-80 shows the leasable mineral allocations.

Open lands reconveyed to the Federal Government to mineral and geothermal leasing, and exploration.

Issue lease applications, with needed restrictions, to protect important resources. Include stipulations based on interdisciplinary review of individual proposals and environmental analysis.

Saleable Minerals (Mineral Materials)

The following management actions for saleable minerals are shown on Map 2-81.

Except for legislatively withdrawn areas and other withdrawn and segregated areas, open all public lands within the planning area to mineral material disposal, on a case-by-case basis.

Open lands that have been reconveyed to the Federal Government and managed by BLM to mineral material disposal under applicable laws, except on the floodplain of riparian areas.

Locatable Minerals

The following management actions for locatable minerals are shown on Map 2-82.

Withdraw Tule Creek ACEC from mineral entry. All other public lands within the planning area would be open to locatable mineral activities except for legislatively withdrawn areas and other withdrawn and segregated areas.

Lands that have been reconveyed to the Federal Government and managed by BLM would be open to location under the mining laws, except within riparian areas.

2.6.2.1.4 Travel Management

Land Use Allocation

All public lands within the Bradshaw-Harquahala Planning Area would be allocated as limited use areas, with motorized and mechanized vehicle uses limited to designated routes. The Hassayampa River Canyon, Hells Canyon, Harquahala Mountains, Big Horn Mountains and Hummingbird Spring Wildernesses would remain closed to motorized and mechanized uses (Map 2-16).

Desired Future Conditions

Define, designate, implement, and monitor a comprehensive travel management network affording a range of high-quality and diverse motorized and non-motorized recreation opportunities. The network would consist of a system of roads, primitive roads, and trails. The travel management network and associated recreation opportunities would be consistent with other resource management objectives and recreation settings for the area.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until such time that final route designations are made, motorized and mechanized vehicles are restricted to currently inventoried routes. See Section 2.7.3.7 for a more detailed description of limitations.

Administrative Actions

BLM requires a standard evaluation process, supported by software and database and that is compatible with GIS functionality. An evaluation process, similar to one described in Appendix D, will be used to establish a designated public access and route system within the Black Canyon Management Unit to support resource objectives consistent with *Alternative E.*

Develop comprehensive Travel and Transportation Management Plans for the management units and other public lands within the planning area within five years of plan completion. These plans would implement route designations on the public lands.

2.6.2.1.5 Recreation Resources

Appendix S, Benefits-Based Recreation, contains detailed descriptions of special recreation management areas and recreation settings in each Management Unit of the Bradshaw-Harquahala Planning Area. In accordance with BLM Land Use Planning Handbook, Appendix C, this information addresses management objectives for the specific recreation opportunities to be produced and the outcomes to be attained (activities, experiences, and benefits). Also included are prescriptions for facilitating the attainment of beneficial outcomes and an activity planning framework that addresses management, marketing, and monitoring actions needed to achieve management objectives and setting prescriptions.

Rather than defining a maximum allowable number of Special Recreation Permits within a given Management Unit, the BLM will review permit applications on a case-by-case basis. Permit numbers will be determined and may be increased or decreased through adaptive management, which is described in section 2.7.2.7.

2.6.2.2 Management Units

The following is the list of list of MUs selected for *Alternative E* and the document sections they are discussed in (Map 2-77):

- Black Canyon MU, Section 2.6.2.2.1, Map 2-83.
- Castle Hot Springs MU, Section 2.6.2.2.2, Map 2-84.
- Hassayampa MU, Section 2.6.2.2.3, Map 2-85.
- Harquahala MU, Section 2.6.2.2.4, Map 2-86.
- Harcuvar MU, Section 2.6.2.2.5, Map 2-87.
- Upper Agua Fria River Basin MU, Section 2.6.2.2.6, Map 2-88.

Each MU represents a geographic region and contains a variety of land use allocations, Desired Future Conditions (DFC), and management actions for the allocations. General DFC and management actions can be found in the Management Units discussion of the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

2.6.2.2.1 Black Canyon Management Unit

The Black Canyon MU stretches from the southern end of Table Mesa on the south to Cordes Junction on the north. It is bounded by Agua Fria National Monument and Tonto National Forest on the east and the Prescott National Forest on the west (Map 2-83).

The Black Canyon MU contains the following land:

- 68,730 acres of BLM-administered lands,
- 12,600 acres of Arizona State land,
- 6,780 acres of private land, and
- 1,100 acres of county parklands in both Maricopa and Yavapai Counties.

2.6.2.2.1.1 Special Designations

Nomination to National Recreation Trail System

Black Canyon Trail

Desired Future Condition

Provide for the ever-increasing outdoor recreation needs of an expanding urban population to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Black Canyon corridor. A non-motorized National Recreation Trail should be established primarily near urban areas, secondarily within scenic areas, and along historic travel routes of the area. A motorized route will generally parallel the trail to improve administrative access needs and public long distance travel using vehicles.

Management Actions

Issue a right-of-way for the non-motorized, mechanized use trail of approximately 69 miles, and ancillary trails, and facilities to preserve public access and long-term character of this corridor.

Acquire easements or rights-of-way on non-Federal lands if trail segments or facilities are proposed to be located on any of these lands.

Recognize and accommodate long-term continuation of the trail and facilities in land tenure actions. Retain a 1/4-mile wide corridor (1/8 mile each side of the trail) along the trail and any ancillary facility for a permanent trail location. Ensure public access to the trail and related facilities through easements, rights-of-way, deed restrictions, or other suitable means.

Continue to work with the Black Canyon Trail Coalition and other public groups to build and maintain the trail. Engage motorized vehicle

groups and other interested groups to build and maintain the parallel motorized route.

Develop at least eight trailheads and staging or camping areas near communities and vehicle access points to serve the Black Canyon Trail and adjoining public lands for the following purposes:

- parking,
- unloading of OHVs and horses, and
- picnicking.

Development could include the following:

- information signs,
- kiosks,
- picnic tables,
- water,
- toilets,
- loading ramps, and
- soil stabilization for dust abatement.

Limit to 5 acres the area of exposed barren soil for each site. Mark or delineate the perimeters with barriers to prevent expansion of the exposed areas. One proposed site is the heavily used site near the intersection of County Road 59 (Crown King Road) and Forest Service Road 684 (Castle Creek Road).

Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 1968 (P.L.90-543).

2.6.2.2.1.2 Lands and Realty

Land Tenure Adjustments

Alternative E proposes no land tenure adjustments for the Black Canyon MU because it proposes no lands for disposal or acquisition.

Communication Sites

The MU has one designated communication site, the Black Canyon City communication site,

which would be retained and subject to valid existing rights.

Utility and Transportation Corridors

Alternative E adjusts the boundary of the Black Canyon corridor, shown on Map 2-79. The northern portion of the corridor is roughly three miles wide and narrows to approximately 1 mile wide at the Bumblebee Ranch. The eastern boundary of the middle portion of the revised corridor has been shifted to the west to put the majority of the corridor below the rim of Black Mesa, away from the edge of I-17. The southern portion of the revised corridor, from about the Bumblebee Ranch south to Black Canyon City, would remain about one mile wide, with the east boundary following the south-bound lanes of I-17 from near the Sunset Point Rest Area, south to Black Canyon City.

A new corridor southwest of Agua Fria National Monument would be added to extend the Black Canyon utility corridor completely across land south and west of Black Canyon City.

2.6.2.2.1.3 Biological Resources

No biological allocations would be made within the Black Canyon MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.6.2.2.1.4 Cultural Resources

Land Use Allocation

Black Canyon Corridor SCRMA (49,540 acres BLM). Allocate to public use sites that are easily accessible from the Black Canyon Trail.

Desired Future Condition

Selected prehistoric and historic sites are interpreted for public education and visitation. Interpretive projects are completed in a manner that monitors and protects sites while allowing for public use. For more information on public use of cultural resources, see Appendix E.

Management Actions

Build trails to link the following suitable selected sites to the Black Canyon Trail. Local site types potentially suitable for public use include prehistoric hilltop structures, rock art, mining camps, and features of the historic Black Canyon Sheep Driveway.

Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

Implement some or all of the following and other actions at selected sites:

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes, and
- brochures and related educational materials or programs.

Stabilize, repair, and maintain sites in good condition, as needed. Regularly monitor the condition of sites.

Authorize commercial and noncommercial group tours if they are conducted with protective stipulations in accordance with BLM's regulations and, where required, SRPs.

Administrative Actions

Select sites for public use by considering the following:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM's recreation program would participate in developing sites for public use.

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Historic properties for heritage tourism would be developed to contribute to their long-term preservation and productive use.

BLM would continue to work with the Site Steward Program to regularly monitor the condition of sites.

2.6.2.2.1.5 Recreation Resources

Land Use Allocation

The entire Management Unit would be allocated to the Black Canyon SRMA (68,730 acres BLM) with the following Recreation Management Zones within it:

- Black Canyon Hiking and Equestrian Trails RMZ.
- Table Mesa RMZ.

Desired Future Condition

Preserve scenic and open space values and provide an array of public opportunities for trail-based recreation within diverse and healthy landscapes.

Provide an assortment of intensively managed, intensively used trail-based motorized and non-motorized recreation uses within the SRMA. Emphasize motorized and non-motorized trail links east and west of I-17, links with Prescott and Tonto National Forests, Lake Pleasant Regional Park, the Castle Hot Springs area, the Great Western Trail, and connections to all communities.

Manage the recreation area to function as an open space gateway into Maricopa County from the north, managed for viewsheds and long-range vistas of valleys, hills, and the Bradshaw Mountains. Connect the Maricopa County Park System with a regional non-motorized trail system between Lake Pleasant Regional Park, the Cave Creek Recreation Area, and the Spur Cross Ranch Conservation Area.

Facilitate preserving a scenic open space corridor along I-17 between Yavapai and Maricopa Counties, welcoming visitors to Maricopa County and promoting area tourism.

Maintain recreation settings identified through inventory as shown on the Recreation Opportunity Spectrum on Map 3-11, except where otherwise stipulated in prescriptions of other allocations.

Secure more law enforcement and public user group involvement as a high priority to promote environmentally responsible recreation, discourage vandalism, protect the public, and protect the public investment in public lands.

Management Actions

Acquire legal public access to public lands through suitable easements, rights-of-way, or other methods.

Develop a comprehensive trail system centered on the Black Canyon Trail. Identify, analyze, build, and designate new single-use and multi-use, hiking, equestrian, and OHV/vehicle routes for hikers, equestrians, mountain bicycles, ATVs, and four-wheel-drive enthusiasts, and linked to other trail systems and communities. Routes would include motorized and non-motorized Wickenburg-Lake Pleasant-Black Canyon City trail corridors and direct links with the Great Western Trail.

Specific activities envisioned in this area include trail development for the following:

- differentiated use (separate motorized and non-motorized travel routes),
- single use (e.g. hiking or ATVs only),
- multi use (vehicles, bicycles, hiking, and equestrian use on a single trail), and
- single-track use (e.g. motorcycles or mountain bicycles only).

Locate, analyze, build and designate single or multiple-use, motorized (OHV) special recreation vehicle areas, loops, routes, and management strategies through interdisciplinary plans, with community and user input.

Locate and develop parking, staging areas and trailheads, as suitable, for the following purposes:

- facilitate responsible use,
- ensure resource protection,
- parking, and
- unloading OHVs and horses.

Limit five acres per site of exposed barren soil. Mark or delineate the perimeters with barriers to prevent expansion.

Prohibit motorized competitive races in the SRMA.

Minimize visual disturbances to the area's open spaces, vistas, and viewsheds. Co-locate communication towers/facilities on existing powerlines or communication towers, using identified utility corridors whenever possible.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.3.2.2.1.6. Apply visual resource prescriptions for the SRMA or RMZs to all governmental, commercial, and private rights-of-way, easements, and other conveyances.

Pursue legal public access through the Lake Pleasant Regional Park using existing routes to provide access to archaeological and historic sites allocated for public use, or to achieve other resource objectives.

Land Use Allocation

Black Canyon Hiking and Equestrian Trails RMZ (8,325 acres)

Desired Future Condition

Complete the Black Canyon Hiking and Equestrian Trails alignment from State Highway 74 to State Highway 69, with community and citizen participation. The trails will provide high-quality non-motorized recreation experiences for hikers, equestrians, and mountain bikers through the Black Canyon corridor.

Incorporate loops, links, and trailheads for both destination and point-to-point travel into the Black Canyon Trail design. Link the communities of Black Canyon, New River, Anthem, and Phoenix, and eventually develop a connecting trail system to include Lake Pleasant Regional Park and Tonto and Prescott National Forests.

Locate, analyze, build, and designate new trail segments as needed to replace those now used by motorized vehicles. Align these new segments as closely as possible along the historic sheep driveway corridor. Determine exact locations of the trail or any ancillary trails and facilities, in conjunction with; Maricopa and Yavapai County trails committees, communities, equestrian and other user groups, and interested citizens. Citizen working groups will help with

trail and facility alignments, site designation, design, and management.

Evaluate the trail for inclusion into the National Recreation Trail System in order to provide for the ever-increasing outdoor recreation needs of an expanding urban population and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Black Canyon corridor. A National Recreation Trail should be established primarily, near urban areas, secondarily, within scenic areas and along historic travel routes of the area.

Management Actions

Issue a right-of-way for the trail and ancillary trails and facilities to preserve public access and long-term character.

Acquire easements or rights-of-way on non-Federal lands if the trail or facilities are proposed for any of these lands.

Recognize and accommodate long-term continuation of the trail and facilities in land tenure actions. Retain a 1/4-mile wide corridor (1/8 mile each side of the trail) along the trail and any ancillary facility for a permanent trail location. Ensure public access to the trail and related facilities through easements, rights-of-way, deed restrictions, or other suitable means.

Develop at least eight trailheads and staging or camping areas near communities; vehicle access points to serve the Black Canyon Trail and adjoining public lands for the following purposes:

- parking,
- unloading of OHVs and horses, and
- picnicking.

Development could include the following:

- information signs,
- kiosks,

- picnic tables,
- loading ramps, and
- soil stabilization for dust abatement.

Limit to 5 acres the area of exposed barren soil for each site. Mark or delineate the perimeters with barriers to prevent expansion. One proposed site identified during planning is the heavily used site near the intersection of County Road 59 (Crown King Road) and Forest Service Road 684 (Castle Creek Road).

Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Land Use Allocation

Table Mesa RMZ (11,050 acres BLM)

Desired Future Condition

Manage for intensive motorized single and two-track routes and general motorized recreation.

Acceptable dust control and compatibility with neighboring communities and landowners.

Semi-primitive motorized and roaded-natural settings. Users will occasionally be concentrated in developed sites, but recreation use will generally be dispersed.

Facilities to meet the basic needs of visitors and to enhance resource protection. Clear yet non-intrusive signing in most of the RMZ.

Management Actions

Develop facilities, staging areas, trails, signage, trailheads, and other sites when needed to protect resources, to promote visitor health and safety, or to maintain recreation opportunities.

Develop large (five to ten acres) and small (one-acre) staging areas in the RMZ as needed for the following purposes:

- meet high motorized and non-motorized recreation demand,
- provide for parking,
- unloading of OHVs and horses,
- overnight camping, and
- large special events.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramp, and
- soil stabilization for dust abatement.

Limit the total acres of exposed barren soil for the staging area sites to a maximum of 20. Mark or delineate the perimeter of staging areas with barriers to prevent expansion.

Develop at least two small day use areas for up to ten vehicles with trailers for the following purposes:

- parking,
- unloading of OHVs and horses, and
- picnicking.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramps, and
- soil stabilization for dust abatement.

Limit to 2 acres the area of exposed barren soil for each site. Mark or delineate the perimeters with barriers to prevent expansion.

Manage recreational target shooting consistent with the "Recreational Target Shooting" guidelines in the Recreation discussion of the Management Common to the Bradshaw-Harquahala Planning Area section of this Chapter.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.1.7 (Map 2-75).

Administrative Actions

Engage a diverse group of stakeholders in a collective effort to conserve the scenery, open space, and recreation values of the Black Canyon SRMA. Promote citizen involvement and partnerships as an integral component to the SRMA management. Empower community workgroups to carry out stewardship and resource management activities.

Collaborate with the AGFD, Prescott and Tonto National Forests, Maricopa and Yavapai Counties, Lake Pleasant Regional Park, and land managers of other trails to link to trails on BLM's land.

Complete an OHV designation for all existing and proposed motorized (OHV) routes and non-motorized trails on public land within the Black Canyon SRMA within 2 years of plan approval.

Develop and implement collaborative management partnerships with the Maricopa County Parks and Recreation Department and the communities to share recreation management of the SRMA areas within Maricopa County.

Collaborative efforts would do the following:

- ensure consistent management between partners,
- enhance the recreation experience of visitors and recreation permit holders,
- maintain open space and provide a natural gateway into Maricopa County, and
- facilitate development of the Maricopa County Regional Trails System Plan.

Develop a long-term Black Canyon Hiking and Equestrian Trails master plan within 2 years of plan approval. Define proposed trail alignments, trailheads, linking trails, and other alignments within 1 year of plan approval.

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards,
- establish monitoring plans to manage camping and other recreation uses.

2.6.2.2.1.6 Wilderness Characteristics

Land Use Allocation

Within the Black Canyon Management Unit, 13,490 acres would be allocated to maintain wilderness characteristics as shown on Map 2-89.

Desired Future Condition

Maintain and enhance non-motorized and primitive recreation experiences, tied to open space and natural landscapes. The desired recreation setting is semi-primitive non-motorized. Management retains the area's undeveloped natural desert landscapes and scenic remote character and preserves outstanding opportunities for solitude and primitive recreation experiences. Conserve rock cabins, artifacts, petroglyph sites, prehistoric structures, and riparian areas. Manage the motorized segment of the Black Canyon Trail, which crosses this allocation, as a semi-primitive motorized corridor. This trail segment is multi-use, open to both motorized and non-motorized users. Recognize that wildlife populations and habitat are important aspects of the naturalness and actively manage them.

Management Actions

Manage for a semi-primitive motorized recreation setting along designated routes and semi-primitive non-motorized recreation setting beyond ½ mile from designated routes.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.1.7.

Develop non-motorized trails when such trails are determined to be needed to protect resources, enhance recreation opportunities, or provide links with other trail systems.

Administrative Actions

Conduct a detailed site-specific inventory to determine the current level of disturbance. From this baseline data, establish standards to maintain proper levels of recreation and landscape disturbance to conserve the DFCs.

2.6.2.2.1.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative E* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-75.

Within the Black Canyon Management Unit, allocate:

- Lands allocated to maintain wilderness characteristics to VRM Class II objectives.
- Black Canyon SRMA to VRM Class II objectives, except
 - Table Mesa RMZ to VRM Class III objectives, and a corridor along Interstate 17 near New River to VRM Class IV
 - Utility corridors would be allocated to VRM Class III or IV.

2.6.2.2.1.8 Mineral Resource Management

Management Actions

Close riparian areas in reconveyed lands to mineral entry, and close riparian areas throughout the MU to mineral material disposal, to preserve riparian values (Map 2-82 and Map 2-81).

2.6.2.2.1.9 Travel Management

The Black Canyon Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16). Until such time that final route designations are made, motorized and mechanized vehicles are restricted to currently inventoried routes. See Section 2.7.3.7 for a more detailed description of limitations.

Land Use Allocation

Other Resource Allocations with Travel Management Prescriptions

SCRMA's and cultural resource sites allocated to Public Use are discussed in Section 2.6.2.2.1.4.

SRMA's and other recreation allocations are discussed in Section 2.6.2.2.1.5.

Allocations to maintain wilderness characteristics are discussed in Section 2.6.2.2.1.6.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in Chapter 3.

Develop non-motorized and non-mechanized trails when such trails are determined to be necessary to protect resources, enhance recreation opportunities, or provide links with other trail systems within the 13,490 acres allocated to maintain wilderness characteristics as shown on Map 2-83.

Build trails to link the area's cultural sites to the Black Canyon Trail.

Establish the Black Canyon SRMA (68,730 acres BLM), as allocated in the Recreation section of this plan with two Recreation Management Zones: Black Canyon Hiking and Equestrian Trails RMZ and the Table Mesa RMZ. Complete an OHV designation for all existing and proposed motorized (OHV) routes and non-motorized trails on public land, within the Black Canyon SRMA, within 2 years of plan approval.

Establish the Black Canyon Hiking and Equestrian Trails RMZ (8,325 acres). Issue a right-of-way for the trails, ancillary trails, and facilities to preserve public access and long-term character. Acquire easements or rights-of-way on non-Federal lands if the trail or facilities are proposed for any of these lands.

Establish the Table Mesa RMZ (11,050 acres BLM). Manage for intensive motorized single and two-track routes and general motorized recreation.

2.6.2.2.2 Castle Hot Springs Management Unit

Castle Hot Springs MU is bounded by State Route 74 (Carefree Highway) on the south, Prescott National Forest on the north, Black Canyon MU on the east, and Hassayampa MU on the west (Map 2-84). The MU contains the following lands:

- 112,430 acres of BLM-administered lands,
- 53,730 acres of Arizona State land,
- 32,560 acres of private land,
- 22,870 acres of county park lands in both Maricopa and Yavapai Counties (Lake Pleasant Regional Park), and
- 1,100 acres of Bureau of Reclamation lands outside Lake Pleasant Regional Park.

2.6.2.2.2.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent

with Management Actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section.

Area of Critical Environmental Concern

Tule Creek ACEC (640 acres)

Relevance

The Tule Creek area contains significant historic and cultural values, including the Fort Tule site, a prehistoric hilltop ruin occupied from A.D. 1100 to 1300, and a home site occupied by miners in the 1920s and 1930s. Tule Creek is an example of rare Sonoran Desert riparian system dominated by emergent vegetation and occupied by the endangered Gila topminnow.

Importance

The Fort Tule cultural site was probably used as a significant connection in a regional communication system based on signaling among hilltop sites. Fort Tule's role in the communication system can offer important information on prehistoric social systems during the era it was used.

Tule Creek and its sensitive biological resources are extremely vulnerable to disturbance and degradation from vehicle, mining, and livestock use. Continued protection of Tule Creek is important to the recovery of the endangered Gila topminnow.

Desired Future Condition

The integrity of the riparian area, endangered species habitat quality, and cultural resources are maintained and protected from degradation.

Management Actions

Close the fenced area to livestock grazing and motor vehicles.

Withdraw the ACEC from mineral entry, and close it to mineral materials disposal and mineral leasing.

Develop an interpretive site for biological and cultural resources.

Continue patrols of archaeological sites with help from Site Steward Volunteers. Where needed, take measures to protect sites such as the following:

- stabilizing structures,
- fencing or closing sensitive sites to public visitation,
- excavating to collect scientific information from threatened sites, and
- taking other actions to be determined by site-specific needs.

Ensure that activities that change the visual landscape conform to the historical setting.

2.6.2.2.2 Lands and Realty

Land Tenure Adjustments

Alternative E proposes no land tenure adjustments for the Castle Hot Springs MU because no lands there have been proposed for disposal or acquisition.

Communication Sites

The Castle Hot Springs MU has no designated communication sites.

Utility and Transportation Corridors

No new utility corridors would be designated within this MU.

All State highway system routes would be designated as transportation corridors, including a new 1-mile-wide corridor along SR 74, 1/2 mile on either side of the highway centerline.

Public access would be acquired from Highway 74 to Castle Hot Springs Road through Morgan

City Wash across several Arizona Trust and private land parcels in Township 6 North, Range 1 West, sections 6, 9, 22, and 23; Township 7 North, Range 2 West, sections 2 and 36; and in Township 7 North, Range 1 West, section 31 (Map 2-90).

Select and develop an improved route north of Lake Pleasant to Table Mesa, extending from French Creek Road to Interstate 17, for public safety, administrative, and recreation access.

To ensure long-term public access, secure easements or rights-of-way crossing private or State parcels, when identified. This action would secure motorized legal public access from the Castle Hot Springs community to Interstate 17.

2.6.2.2.2.3 Biological Resources

No allocations would be made for biological resources within Castle Hot Springs MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.6.2.2.2.4 Cultural Resources

Land Use Allocation

Lake Pleasant/Agua Fria SCRMA (27,240 acres BLM)

Desired Future Condition

Selected prehistoric and historic sites are interpreted for public education and visitation. Interpretive projects are completed in a manner that monitors and protects sites while allowing for public use. For further information on public use of cultural resources, see Appendix E.

Management Actions

The following sites north of Lake Pleasant are allocated to public use: Agua Fria Fort and AZ T:4:1 (PC), which are prehistoric hilltop sites, and the historic Humbug hydraulic mining complex.

Select other sites for public use by considering the following:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

Implement a combination of the some or all of following and other actions at selected sites:

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes, and
- brochures and related educational materials or programs.

Stabilize, repair, and maintain sites in good condition. Regularly monitor the condition of sites.

Authorize commercial and noncommercial group tours, if they are conducted with

protective stipulations, in accordance with BLM's regulations and, where required, SRPs.

Administrative Actions

Select sites for public use by considering the following:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- condition of the site and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

The BLM recreation program would participate in developing sites for public use.

Cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

BLM continues to work with the Site Steward Program to regularly monitor the condition of sites.

2.6.2.2.2.5 Recreation Resources

Land Use Allocation

The entire Management Unit would be allocated to the Castle Hot Springs SRMA (112,430 acres BLM) containing the following Recreation Management Zones:

- Hieroglyphic Mountains RMZ.
- Sheep Mountain RMZ.
- Baldy Mountain RMZ

Desired Future Condition

Emphasize preserving open space and retaining scenic and visual qualities. Sustain recreation, cultural, and biological assets while recognizing and protecting private property rights. Retain and acquire legal access to public lands.

Management emphasizes a wide range of regional recreation needs, while accomplishing the following:

- maintaining the quality of life for local communities,
- preserving open space and natural landscapes, and
- ensuring resource conservation.

Partnerships and collaborative efforts play a key role in successfully managing this SRMA.

Maintain an array of recreation settings (rural, roaded-natural, semi-primitive motorized, and semi-primitive non-motorized) and opportunities. Recreation activities include the following:

- intense route-based motorized use,
- permitted recreation events,
- developed facilities,
- developed hiking and equestrian trails, and
- remote semi-primitive wilderness settings with non-motorized recreation opportunities.

Intensively manage all recreation uses with a significant BLM ground presence by using signing, facilities, law enforcement, and volunteers.

Establish over the long term a system of high-quality OHV and hiking trails affording many opportunities for hikers, equestrians, mountain bikers, four-wheel drivers, ATVs, and motorcycle enthusiasts.

Management Actions

Manage recreational target shooting consistent with the "Recreational Target Shooting" guidelines in the Recreation discussion of the Management Common to the Bradshaw-Harquahala Planning Area section of this Chapter.

Analyze the feasibility and manageability of establishing parts of the SRMA as a fee-for-use area. The feasibility study would include an analysis to determine if fees are necessary to maintain or enhance the recreation opportunities and conditions of the area. Fees would be used to:

- maintain motorized and non-motorized trails and facilities,
- improve law enforcement, and
- enhance user and community education, stewardship, and volunteer programs.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.2.7 (Map 2-75).

Evaluate and designate all existing and potentially mechanized (OHV), non-mechanized trails and routes on public land in the Castle Hot Springs SRMA within three years of plan approval using a structured process, such as the one described in Appendix D.

Design and develop a comprehensive motorized and non-motorized vehicle route system.

Identify, analyze, build, and designate new single-use and multi-use hiking, equestrian, and OHV/vehicle routes. Network design emphasizes connections that would link them to local trail systems and communities. Routes include a proposed motorized and non-motorized Wickenburg-Lake Pleasant Regional Park-Black Canyon Trail corridor. Planning for this network requires collaboration with the AGFD, Prescott National Forest, Maricopa and Yavapai Counties, and Lake Pleasant Regional Park, to link to trails on BLM's land. Activities

envisioned in this area include trail development for:

- differentiated use (motorized and non-motorized travel),
- single use (e.g. hiking or ATVs only),
- multi-use (vehicles, bicycles, hiking, and equestrian use),
- single-track use (e.g. motorcycles or mountain bicycles only), and
- multi-use trails and foot, bike, and horse trails linking Wickenburg and the Lake Pleasant Regional Park, with other links to Peoria and Phoenix trail systems, and the Black Canyon Trail.

Locate and develop staging areas, trails, signs, trailheads, and other sites when needed for resource protection, visitor health and safety, or maintaining recreation opportunities.

Locate and develop small day-use areas for up to ten vehicles with trailers to provide the following:

- parking,
- unloading OHVs and horses, and
- picnicking.

Development could include the following:

- informational signing,
- kiosks,
- picnic tables,
- loading ramp, and
- soil stabilization for dust abatement.

Limit to two acres the area of exposed barren soil for each site. Mark or delineate the perimeter with barriers to prevent expansion.

Confine motorized competitive races to the Hieroglyphic Mountains RMZ.

Land Use Allocation

Hieroglyphic Mountains RMZ (16,510 acres BLM).

Desired Future Condition

Manage mainly for intensive camping and OHV use. The area would include motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events and competitive races.

Emphasize acceptable dust control and compatibility with neighboring communities and landowners.

Maintain semi-primitive motorized and roaded-natural recreation settings with users concentrated in some areas.

Develop facilities with a variety of amenities consistent with the desired recreation setting. Provide nonintrusive directional route signs and user information in the RMZ.

Management Actions

Make all designated routes within this zone available for general motorized recreation use, commercial use, organized OHV events and competitive races.

The number of miles of single and two-track motorized routes allocated to motorized competitive races will be determined by trail sustainability and durability along with our ability to reduce environmental issues and social conflicts. A course of routes used for competitive races would optimally provide for an array of challenges for truck, buggy, ATV, and motorcycle competitive races.

Locate at least 20 miles of single and two-track motorized routes to provide a unique array of challenges for truck, buggy, ATV, and motorcycle competitive races.

Limit the number of motorized competitive races to two per year.

Locate and develop the Boulders staging area for the following purposes:

- meeting intense motorized recreation demands,
- parking,
- unloading of OHVs,
- overnight camping, and
- large special-event operations.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- vault toilets,
- campground host facilities, and
- soil stabilization for dust abatement.

Limit to 25 acres the area of exposed barren soil. Mark or delineate the perimeter to prevent further expansion.

Manage recreational target shooting consistent with the "Recreational Target shooting" guidelines in the Recreation discussion of the Management Common to the Bradshaw-Harquahala Planning Area section of this Chapter.

Locate and develop at least one small staging and camping area for up to ten vehicles with trailers for the following purposes:

- parking,
- unloading OHVs, and
- picnicking.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramp, and
- soil stabilization for dust abatement.

Limit to 5 acres the areas of exposed barren soil. Mark or delineate the perimeter to prevent expansion.

Apply proactive adaptive management to manage potential conflicts with surrounding communities and landowners, and potential

impacts to resources. Mitigation may be needed to reduce these problems. The following are examples of mitigation:

- implementing speed limits on routes to reduce fugitive dust,
- stabilizing soil on routes,
- closing routes for some types of activities,
- imposing stricter noise reduction standards, and
- establishing seasonal or time-of-day use restrictions or both.

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Conduct these assessments with public collaboration involving interested residents, users, and other interested parties.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.7.

Land Use Allocation

Sheep Mountain RMZ (4,270 acres).

Desired Future Condition

Preserve Sheep Mountain's natural landscape, open-space values, and wildlife habitat.

Maintain a semi-primitive non-motorized recreation setting.

Management Actions

Close all vehicle routes identified as reclaimed during our route inventory, except those

evaluated to be needed for administrative access to the area.

Prohibit the building of new motorized routes and commercial rights-of-way.

Prohibit discretionary surface-disturbing activities not compatible with achieving the DFC.

Administrative Actions

Establish a citizen, Government, and organization-based partnership to guide management of the SRMA, including community groups, the City of Peoria, Maricopa and Yavapai Counties, user groups, and other interested parties.

Work closely with law enforcement authorities with the Arizona Game and Fish Department, Yavapai County, Maricopa County, City of Peoria, and other agencies with jurisdiction to:

- enhance visitor and resident safety,
- improve resource protection, and
- ensure BLM's compliance with county, State, or Federal environmental laws.

Land Use Allocation

Baldy Mountain RMZ (6,550 acres)

Desired Future Condition

Retain a natural landscape between the Hells Canyon Wilderness and Lake Pleasant Regional Park. This area complements the landscape and recreation opportunities in the regional county park and the entire Castle Hot Springs SRMA. Provide high-quality non-motorized recreation in a region otherwise allocated to motorized recreation. Preserve desert tortoise habitat, sustain riparian areas, and maintain the area's value for use by a wild burro herd. Maintain semi-primitive motorized recreation setting along designated routes. Manage areas beyond ½ mile from a designated route for a semi-primitive non-motorized setting.

Management Actions

Limit motorized vehicle use to designated routes.

Develop up to five non-motorized trails and trailheads to link with the Hells Canyon trail system and ultimately to the Maricopa County trail system. Emphasize hiking, bicycling and equestrian opportunities in recreation management planning.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.2.7.

2.6.2.2.2.6 Wilderness Characteristics***Land Use Allocation***

No allocation to maintain wilderness characteristics would be made within the Castle Hot Springs MU.

2.6.2.2.2.7 Visual Resources***Land Use Allocations***

VRM classes for *Alternative E* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-75.

Within the Castle Hot Springs Management Unit, allocate:

- Hells Canyon Wilderness Area is allocated to VRM Class I,
- Constellation Mine Road/Buckhorn Mine Road to Class II standards ½ mile to either side of the road's centerline, and
- Castle Hot Springs SRMA to Class II objectives, except Hieroglyphics Mountain RMZ to Class III objectives.

2.6.2.2.2.8 Mineral Resource Management***Management Actions***

Withdraw Tule Creek ACEC from mineral entry; close it to mineral and geothermal leasing, and close to mineral material disposal.

2.6.2.2.2.9 Travel Management***Land Use Allocation***

The Castle Hot Springs Management Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16). Until such time that final route designations are made, motorized and mechanized vehicles are restricted to currently inventoried routes. See Section 2.7.3.7 for a more detailed description of limitations.

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Section 2.6.2.2.2.1.

SCRMA and cultural resource sites allocated to Public Use are discussed in Section 2.6.2.2.2.4.

SRMAs and other recreation allocations are discussed in Section 2.6.2.2.2.5.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Close the fenced area within the Tule Creek ACEC (640 acres) to motor vehicles.

The Castle Hot Springs SRMA (112,430 acres BLM) would include two Recreation Management Zones as allocated in the Recreation section of this plan, the Hieroglyphic Mountains RMZ and the Sheep Mountain RMZ, with specific vehicle and access prescriptions. Evaluate and designate all existing and potentially mechanized (OHV), non-mechanized trails and routes on public land in the Castle Hot Springs SRMA within three years of plan approval using a structured process, such as the one described in Appendix D. Design and develop a comprehensive motorized and non-motorized vehicle route system.

The Hieroglyphic Mountains RMZ (16,510 acres BLM) would include motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events, and competitive races. Make all designated routes within this zone available for general motorized recreation use, commercial use, organized OHV events, and competitive races. Locate at least 20 miles of single and two-track motorized routes to provide a unique array of challenges for truck, buggy, ATV, and motorcycle competitive races.

Within the Sheep Mountain RMZ (4,270 acres) all vehicle routes identified as reclaimed through the route designation process would be closed except those necessary to facilitate administrative access to the area. Prohibit the building of new motorized routes.

Consider development of hard-surfaced walking trails at selected cultural sites within the Lake Pleasant/Agua Fria SCRMA (27,240 acres BLM) for interpretation, education, and visitation to prehistoric and historic sites.

Implementation Actions

Designation of a route network within 3 years of plan completion will be considered an implementation action.

2.6.2.2.3 Hassayampa Management Unit

The Hassayampa MU is bounded on the east by Prescott National Forest and the Castle Hot Springs MU and on the west by Harquahala MU. The southern edge is south of the Vulture Mountains, and the northern boundary is north of Yarnell. The Town of Wickenburg is located at the MU's center (Map 2-85). The MU contains the following land:

- 181,910 acres of BLM-administered lands,
- 130,580 acres of Arizona State land,
- 50,610 acres of private land, and
- 460 acres of county-administered lands in Maricopa and Yavapai Counties

2.6.2.2.3.1 Special Designations

Current Special Designations within the Management Unit would be managed consistent with management actions described in Section 2.7.3.2 in the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Areas of Critical Environmental Concern

Vulture Mountain ACEC (6,120 acres BLM)

Relevance

The cliffs along the crest of Vulture and Caballeros Peaks are significant habitat features used by many raptor species. Also, they are a pristine, scenic landmark. These cliffs are essential to maintaining the current biological diversity of the surrounding area. Large concentrations of nesting hawks and falcons use these spectacular cliff faces.

Importance

The value of the cliffs for nesting raptors is significant for a large area. These cliffs are virtually the only suitable nesting cliffs for many miles. Nesting raptors are sensitive to

construction-related activities. If the cliffs and surrounding area are not protected from these activities, cliff-nesting raptors would disappear from much of the area.

Desired Future Condition

Maintain the raptor nesting habitat values of the cliffs and the surrounding foraging habitat.

Management Actions

Consider building new routes only when necessary to meet natural resource objectives and where routes would not degrade the resources for which the ACEC is being created.

Prohibit building new recreation sites; however, maintain the Vulture Peak Trail and trailheads to their current condition and standards.

Mitigate vehicle routes that conflict with maintaining wildlife values to ensure achieving the DFC. Mitigation measures include relocating routes, limiting season, and closing routes.

Prohibit rock climbing within the ACEC.

Acquire non-Federal lands within the ACEC as available.

2.6.2.2.3.2 Lands and Realty

Land Tenure Adjustments

Alternative E proposes 741 acres in Hassayampa MU as suitable for disposal. These lands were selected in accordance with resource management prescriptions in this land use plan as limited by criteria described in Section 2.7.1.2 Lands and Realty.

Communication Sites

No designated communication sites are within this MU, and *Alternative E* proposes none for this area.

Utility and Transportation Corridors (Map 2-79)

Multiple-Purpose Corridors

Designate a new 1-mile-wide corridor leg on the Meade-Phoenix corridor (partly in Hassayampa MU, partly in Harquahala MU).

Transportation Corridors

Transportation corridors are discussed in Section 2.6.2.1.1.

Two locations for the Wickenburg Bypass are currently under consideration by Arizona Department of Transportation. Once the route is chosen, a 1-mile-wide transportation corridor will be designated along the route. The corridor may not be centered on the right-of-way, but will be located with the bypass within it, and the boundaries adjusted to minimize conflict with resources or management objectives.

2.6.2.2.3.3 Biological Resources

Alternative E proposes no biological designations for the Hassayampa MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.6.2.2.3.4 Cultural Resources

Land Use Allocations

Wickenburg/Vulture SCRMA (124,000 acres BLM)

Weaver/Octave SCRMA (2,730 acres BLM)

Desired Future Condition

Manage selected prehistoric and historic sites for interpretive development, educational uses, and

public visitation. For further information on public use of cultural resources, see Appendix E.

Coordinate with the BLM's recreation program in developing sites for public use.

Cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Develop historic properties for heritage tourism in a manner that contributes to their long-term preservation and productive use.

Management Actions

Develop the following historic sites for public use: Vulture City Cemetery, Constellation Road, Monte Cristo Mine, and a cemetery and stone structures in Weaver.

Select other sites for public use by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

A combination of the some or all of the following and other actions could be implemented at selected sites:

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,

- signs along routes and trails to direct visitors to interpreted sites
- hard-surfaced walking trails,
- interpretive signs and register boxes, and
- brochures and related educational materials or programs.

Stabilize, repair, and maintain sites in good condition. Regularly monitor the condition of sites.

Authorize commercial and noncommercial group tours, conducted with protective stipulations in accordance with BLM's regulations and, where required, SRPs.

2.6.2.2.3.5 Recreation Resources

Land Use Allocation

The entire Management Unit would be allocated to the Hassayampa SRMA (181,910 acres BLM) with the following Recreation Management Zones (Map 2-85):

- Stanton RMZ,
- Wickenburg Community RMZ,
- San Domingo Wash RMZ,
- Vulture Mine RMZ.

Desired Future Condition

The long-term goals for the area are to:

- conserve the area's natural, scenic, recreation, and cultural resources,
- recognize and protect private property rights, and
- maintain diverse recreational opportunities for residents and visitors.

Management emphasizes meeting a range of local and tourism-based regional recreation needs while maintaining the quality of life for local communities. Recreation activities include the following:

- intense motorized uses,
- permitted recreation events,
- developed facilities, and
- intense non-motorized trail system.

Intensively manage all recreation uses with a significant BLM and citizen volunteer ground presence through signing, facilities, and law enforcement.

Establish a system of high-quality equestrian and motorized trails surrounding Wickenburg. This trail system would afford many opportunities for all recreationists and enhance the lifestyle, culture, and cultural history of community residents.

Emphasize and maintain, in suitable areas, an array of rural, roaded-natural, semi-primitive motorized, and semi-primitive non-motorized settings; and experiences and opportunities for residents, tourists, and winter visitors. Maintain current recreation settings as depicted on the Recreation Opportunity Spectrum on Map 3-11, except where otherwise stipulated in RMZ allocations.

Maintain long-term public access to the Yarnell hang gliding launching area and landing zones (Map 2-32). This site is one of the most valued in Arizona for successful launching of long-distance nonpowered flights.

Management Actions

Work closely with law enforcement authorities; including the Arizona Game and Fish Department, Yavapai County, Maricopa County, City of Peoria, and other agencies with jurisdiction to:

- enhance visitor and resident safety,
- improve resource protection, and
- ensure BLM's compliance with county, State, or Federal environmental laws.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.3.7 (Map 2-75).

Limit motorized use to designated routes. Develop and designate a comprehensive motorized and non-motorized trail system.

Identify, analyze, build, and designate new single- and multi-use, hiking, equestrian, and vehicle routes, and link them to local trail systems and communities. Routes include a proposed motorized and non-motorized Wickenburg-Lake Pleasant Regional Park-Black Canyon Trail corridor. Activities envisioned in this area include trail development as follows:

- Differentiated use (motorized and non-motorized travel),
- Single use (e.g. hiking or ATVs only),
- Multi-use (vehicles, bicycles, hiking, and equestrian use),
- Single-track use (e.g. motorcycles or mountain bicycles only), and
- Multi-use trails and foot, bicycle, and horse trails linking Wickenburg and Lake Pleasant Regional Park, with other links to the Peoria/Phoenix trail systems and the Black Canyon Trail.

Confine motorized competitive races to the San Domingo, Stanton, and Vulture RMZs.

Trial sustainability will determine the uses on the trail systems and the extent of the number of miles allocated to races. Sustainability determination will consider environmental factors (including, but not limited to: soil erosion, wildlife or cultural resource conflicts, conflicts with grazing management, air quality) as well as social concerns (including, but not limited to: noise, conflict with casual uses or other organized events, conflicts with other recreation activities such as hunting.)

Administrative Actions

Establish a working group to provide recommendations for managing the SRMA, including community groups, the Town of Wickenburg, Maricopa County, civic organizations, user groups, and other interested parties.

Complete a detailed, comprehensive, site-specific inventory and designation of all existing and proposed motorized (OHV) routes and non-motorized trails on public land in the SRMA within 3 years of plan approval.

Land Use Allocation

Stanton RMZ (6,050 acres BLM)

Desired Future Condition

Provide diverse recreation experiences while reducing unacceptable environmental impacts from the following recreation uses:

- excessive and unregulated camping,
- activities of prospecting clubs, and
- motorized activities

Maintain a variety of recreation settings and opportunities with an emphasis on semi-primitive motorized and roaded-natural settings and opportunities.

Management Actions

Allow for up to two motorized competitive races between October 1 and March 30. The number of miles of single and two-track motorized routes allocated to motorized competitive races will be determined by trail sustainability and durability along with our ability to reduce environmental issues and social conflicts. A course of routes used for competitive races would optimally provide for an array of challenges for truck, buggy, ATV, and motorcycle competitive races.

Locate and develop trailheads, staging and camping areas, and other facilities as needed for resource protection. Provide for visitor safety. Resolve social conflicts. Improve the quality of recreation experiences. Increase recreation opportunities.

Develop a diverse network of motorized vehicle routes for a range of OHV experiences and

challenges, compatible with the existing non-motorized trails in the RMZ.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.3.7.

Install informational, educational, and interpretive kiosks and trail signs where needed and suitable. Placement of interpretive signs along the Stanton-Octave-Yarnell road, as proposed under the Lower Gila North MFP, would be consistent with this management action.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

Wickenburg Community RMZ (72,040 acres BLM) including the Red Top Trail System and "The Box" (Map 2-91).

Desired Future Condition

Collaborate with a diverse group of Wickenburg citizens and organizations in a collective effort to conserve the ecological, cultural, open space, and recreation values of the Wickenburg area, so that it remains a place where people want to live, work, and recreate.

Preserve open space and provide a wide array of landscape-based recreation while conserving scenic landscapes and maintaining cultural and biological assets.

Offer quality recreation and tourism with proper management and marketing. Users exhibit a

strong land ethic for conserving and protecting the natural resources and cultural heritage of the Wickenburg RMZ.

Develop a system of high-quality equestrian and hiking trails that surround Wickenburg, buffer the area from urban sprawl, and preserve the open space of the local landscape. This trail system affords many opportunities for recreationists and enhances the lifestyle and cultural history of community residents.

Emphasize and maintain an array of rural, roaded-natural, semi-primitive motorized, and semi-primitive non-motorized settings; and opportunities in suitable areas for the enjoyment of residents, tourists, and winter visitors.

Conserve the canyon on the Hassayampa River known as "The Box" and surrounding lands as a recreation area for hiking, horseback riding, limited motorized use, picnicking, camping, and social gatherings, while protecting and enhancing the values of the riparian habitat.

Management Actions

Acquire the 19,396 acres of Arizona State land within the SRMA. Prioritize and pursue acquisition using the criteria in the Lands and Realty discussion of the Management Common to Both Planning Areas section of Chapter 2. Lands will be acquired according to the following priorities:

- maintaining access and securing trail alignments,
- enhancing recreation opportunities,
- preserving scenery and open space, and
- conserving riparian values.

Maintain and upgrade the Vulture Peak Trail by rerouting or reengineering eroded trail segments.

Develop and install facilities for horse camping south of Vulture Peak and south of Congress. Amenities could range from developed to more primitive facilities.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.3.7.

Administrative Actions

Complete a comprehensive strategy and trails plan to select and develop new single- and multi-use hiking, equestrian, and OHV trails for all lands in the RMZ.

Land Use Allocation

Red Top Trail System within the Wickenburg Community RMZ

Desired Future Condition

Provide a high-quality non-motorized trail network and amenities in the Red Top Mountain area. Allow another route system for motorized uses where appropriate to avoid conflicting uses.

Management Actions

Identify, analyze, build and designate new trails less than 52 inches wide, as needed, for resource protection, visitor safety, or meeting management objectives.

Locate and develop a large non-motorized trailhead and staging area for the Red Top Trail System for the following purposes:

- meeting the high demand for non-motorized recreation,
- parking,
- unloading horses,
- overnight camping, and
- organized events.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- hitching posts,
- troughs for water hauled to the site, and
- soil stabilization for dust abatement.

Limit to 10 acres the area of exposed barren soil. Mark or delineate the perimeter as needed to prevent expansion.

Locate and develop a small day use motorized trailhead and staging area for the Red Top Trail System, to accommodate up to ten vehicles with trailers, for the following purposes:

- meeting motorized recreation demand
- reduce user conflicts,
- parking,
- unloading OHVs, and
- picnicking.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramp, and
- soil stabilization for dust abatement.

Limit to 2 acres the area of exposed barren soil for each site. Mark the area's perimeter with barriers to prevent expansion.

Identify, analyze, build, and designate an ATV and a motorcycle trail network in the Red Top Trail area to give the local community opportunities to shift motorized use from the designated non-motorized trails. Use existing designated motorized vehicle routes and create new trails less than 52 inches wide, if needed, to meet management objectives.

Administrative Actions

Revise the existing Red Top Trail Project Plan, in cooperation with the local community and interested user groups, to expand the non-motorized Red Top Trail network. The revised plan would address actions to meet the high demand for non-motorized recreation.

Land Use Allocation

"The Box" RMZ (Map 2-91)

Desired Future Condition

Provide a high-quality non-motorized recreation use area with amenities in Box Canyon, known as "The Box".

Management Actions

Locate and develop picnic, camping, and public use areas and develop access to these sites.

Designate access routes for varied uses such as hiking and horseback riding.

Identify, analyze, build, and designate four-wheel drive, jeep, ATV, sand rail, and dirt bike trails with suitable use areas and limitations. Close areas where sustainability cannot be achieved.

Develop facilities such as toilets, tables, parking, campsites, and other amenities where needed to protect resources or reduce user conflicts.

Administrative Actions

Establish partnerships with the Town of Wickenburg, Yavapai County, and community groups to pursue management endeavors in this area. Such endeavors include developing and implementing a site plan to guide recreation use.

Create a volunteer service and community partnership program to aid in visitor outreach efforts and organize community cleanup efforts.

Develop and conduct monitoring as facilities are built or designated so that suitable use limits can be set for picnic areas and campsites.

Land Use Allocation

San Domingo Wash RMZ (16,040 acres BLM)

Desired Future Condition

Provide a Sonoran Desert wash and upland environment suitable for an array of motorized

and non-motorized uses. Manage for semi-primitive motorized and some roaded-natural settings.

Provide opportunities for the following while protecting the natural and cultural resources in the area:

- intensive camping,
- OHV activities,
- equestrian use,
- recreation activities of prospecting clubs,
- event operations, and
- motorized single and two-track routes for general motorized recreation use and competitive races

Management Actions

The number of miles of single and two-track motorized routes allocated to motorized competitive races will be determined by trail sustainability and durability along with our ability to reduce environmental issues and social conflicts. A course of routes used for competitive races would optimally provide for an array of challenges for truck, buggy, ATV, and motorcycle competitive races.

Limit the number of motorized competitive to 2 per year.

When needed for resource protection, visitor health and safety, or maintaining recreation opportunities, develop facilities such as the following:

- staging areas,
- trails,
- signs,
- trailheads, and
- other sites.

Locate and develop one large motorized and non-motorized staging and camping area for the following purposes:

- meeting the high motorized and non-motorized recreation demand,

- parking and unloading OHVs and horses,
- overnight camping, and
- event operations.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramp, and
- soil stabilization for dust abatement.

Limit to 20 acres the site's areas of exposed barren soil. Mark or delineate the perimeter with barriers to prevent expansion.

Locate and develop at least one day-use staging area for the following purposes:

- meeting the high motorized and non-motorized recreation demand and
- parking and unloading OHVs and horses, and picnicking.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramp, and
- soil stabilization for dust abatement.

Limit to 5 acres the site's areas of exposed barren soil. Mark or delineate the perimeter with barriers to prevent expansion.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.3.7.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,

- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Land Use Allocation

Vulture Mine RMZ (30,100 acres BLM)

Desired Future Condition

Provide a Sonoran Desert landscape suitable for intensive motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events and competitive races.

Emphasize and maintain the roaded-natural and semi-primitive motorized recreation settings.

Preserve the site and interpret mining and settlement history of the Vulture City Cemetery.

Management Actions

The number of miles of single and two-track motorized routes allocated to motorized competitive races will be determined by trail sustainability and durability along with our ability to reduce environmental issues and social conflicts. A course of routes used for competitive races would optimally provide for an array of challenges for truck, buggy, ATV, and motorcycle competitive races.

Limit the number of motorized competitive races to 4 per year.

Locate and develop one large motorized staging and camping area for the following purposes:

- meeting the high motorized recreation demand,
- parking,
- unloading OHVs,
- overnight camping, and
- event operations.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramp, and
- soil stabilization for dust abatement

Limit to 20 acres the area of exposed barren soil. Mark or delineate the perimeter with barriers to prevent expansion.

Manage recreational target shooting consistent with guidelines for target shooting in the Recreation discussion of the Management Common to the Bradshaw-Harquahala Planning Area section of this chapter.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.3.7.

Administrative Actions

Determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards, and
- establish monitoring plans to manage camping and other recreation uses.

Develop a site management and interpretation plan for the Vulture City Cemetery.

2.6.2.2.3.6 Wilderness Characteristics

Alternative E proposes no allocations to maintain wilderness characteristics for the Hassayampa MU.

2.6.2.2.3.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative E* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-75.

Within the Hassayampa Management Unit, allocate:

- Constellation Mine Road/Buckhorn Mind Road (½ mile to either side of the road's centerline) to VRM Class II,
- Hassayampa SRMA to VRM Class II except
 - San Domingo Wash RMZ to VRM Class III,
 - Vulture Mine RMZ to VRM Class III,
 - Stanton RMZ to VRM Class III, and
 - Wickenburg Community RMZ to VRM Class II where desired recreation settings are semi-primitive motorized and semi-primitive non-motorized and VRM Class III where desired settings are Rural or Roaded Natural.
- Utility corridors would be allocated to VRM Class III or IV.
- Areas not listed above, VRM classes would be as portrayed on Map 2-75.

2.6.2.2.3.8 Mineral Resources Management

Alternative E proposes no mineral withdrawals or closures within the Hassayampa MU.

2.6.2.2.3.9 Travel Management

Land Use Allocation

The Hassayampa Management Unit would be allocated as a limited use area, with

motorized and mechanized vehicle uses limited to designated routes (Map 2-16). Until such time that final route designations are made, motorized and mechanized vehicles are restricted to currently inventoried routes. See Section 2.7.3.7 for a more detailed description of limitations.

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Section 2.6.2.2.3.1.

SCRMA and cultural resource sites allocated to Public Use are discussed in Section 2.6.2.2.3.4.

SRMAs and other recreation allocations are discussed in Section 2.6.2.2.3.5.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in Chapter 3.

Mitigate vehicle routes within the Vulture Mountain ACEC (6,120 acres BLM) that conflict with maintaining wildlife values to ensure achieving the DFC. Mitigation measures include relocating routes, limiting season or time-of-day use, and closing routes.

Consider building new routes only when needed to meet natural resource objectives. Maintain the Vulture Peak Trail to the current condition and standards.

The Hassayampa SRMA (181,910 acres BLM) would include four Recreation Management Zones. These are the Stanton RMZ, the Wickenburg Community RMZ, the San Domingo Wash RMZ, and the Vulture Mine RMZ. All the RMZs have motorized and non-motorized use prescriptions, which have been discussed in the Recreation sections of this plan.

The Hassayampa SRMA would include a system of high-quality equestrian and motorized trails surrounding Wickenburg. Travel management prescriptions include: develop and designate a comprehensive motorized and non-motorized trail system; identify, analyze, build, and designate new single- and multi-use hiking, equestrian, and vehicle routes; and link trails to local trail systems and communities. New proposed routes for the route system would include a motorized and non-motorized Wickenburg-Lake Pleasant Regional Park-Black Canyon Trail corridor. BLM will complete a detailed, comprehensive, site-specific inventory and designation of all existing and proposed motorized routes and non-motorized trails on public land in the SRMA within three years of plan approval.

The Wickenburg Community RMZ (72,040 acres BLM) would include the Red Top Trail System and "The Box" (Map 2-91). Develop a system of high-quality equestrian and hiking trails surround Wickenburg. Maintain and upgrade the Vulture Peak Trail by rerouting or re-engineering eroded trail segments. Complete a comprehensive strategy and trails plan to select and develop new single- and multi-use hiking, equestrian, and OHV trails for all lands in the RMZ.

The Stanton RMZ (6,050 acres BLM) would offer a diverse network of motorized vehicle routes for a range of OHV experiences and challenges, compatible with the existing non-motorized trails in the RMZ. No more than two competitive races may occur in this RMZ based on trail sustainability. Sustainability determination will consider environmental factors (including, but not limited to: soil erosion, wildlife or cultural resource conflicts, conflicts with grazing management, air quality) as well as social concerns (including, but not limited to: noise, conflict with casual uses or other organized events, conflicts with other recreation activities such as hunting.)

Establish the Red Top Trail System to provide high-quality non-motorized trail network experiences. Allow for motorized uses where

appropriate to avoid conflicting uses. Identify, analyze, build, and designate new trails less than 52 inches wide, as needed, for resource protection, visitor safety, or meeting management objectives. Identify, analyze, build, and designate an ATV and motorcycle trail network in the Red Top Trail area. Use existing designated motorized vehicle routes and create new trails less than 52 inches wide, if needed, to meet management objectives.

"The Box" area would be designed to provide a high-quality non-motorized recreation use experience. Develop passenger car access to these sites. Designate access routes for varied uses such as hiking and horseback riding. Identify, analyze, build, and designate four-wheel drive, jeep, ATV, sand rail, and dirt bike trails with suitable use areas and limitations. Close areas where improper vehicle activity is occurring.

The San Domingo Wash RMZ (16,040 acres BLM) would offer a Sonoran Desert wash and upland environment experience suitable for an array of motorized and non-motorized uses. Single and two-track motorized routes *would* provide an array of challenges for ATV, and motorcycle competitive races. No more than 2 competitive races may occur in this area based on trail sustainability.

The Vulture Mine RMZ (30,100 acres BLM) would offer intensive motorized single and two-track routes for general motorized recreation use, commercial use, organized OHV events and competitive races. Single- and two-track motorized routes ~~to~~ would provide an array of challenges for truck, buggy, ATV, and motorcycle competitive races. No more than 4 competitive races may take place in area based on trail sustainability.

Consider development of hard-surfaced walking trails at selected cultural sites within the Wickenburg/Vulture SCRMA (124,000 acres BLM) and the Weaver/Octave SCRMA (2,730 acres BLM) where needed for for interpretation, education, and visitation to prehistoric and historic sites.

Administrative Actions

Develop a Wickenburg RMZ Travel and Public Access Plan.

Revise the existing Red Top Trail Project Plan, in cooperation with the local community and interested user groups, to expand the non-motorized Red Top Trail network.

2.6.2.2.4 Harquahala Management Unit

The Harquahala is bounded on the east by the Hassayampa MU and extends west to the Hassayampa Field Office boundary near the town of Wenden. However, the MU would include private and State land south to Interstate 10. The northern boundary still follows the BLM's property line south of State Route 60, which goes west of Wickenburg through Aguila and Wenden (Map 2-86). The Harquahala MU contains the following land:

- 420,730 acres of BLM-administered lands,
- 48,410 acres of Arizona State land, and
- 29,616 acres of private land.

2.6.2.2.4.1 Special Designations

Areas of Critical Environmental Concern

Harquahala Mountains ACEC (74,950 acres BLM).

Relevance

The area constitutes a rare intact, mountaintop vegetation community surrounded by low desert. As the highest topographic feature in the region, the mountains contain a biologically diverse system, in stark contrast to the surrounding landscape. The mountain range supports a diverse sky island ecosystem, with many species not found in the surrounding Sonoran Desert. The mountains are a natural area with few noticeable human intrusions in a primitive landscape setting. The mountain range is high

enough that, from the summit, mountains in Mexico are visible during very clear air conditions. Conversely, the mountain range is a dominant landscape feature for travelers in many areas of southwest Arizona, visible from major highways (such as Interstate 10 and US Highway 60) as much as a hundred miles away.

Importance

The ACEC designation would protect unique biological resources and significant cultural resources, including prehistoric and historic sites. This area also is of cultural importance to the Yavapai Tribe, as it was a major area of settlement for the Western Yavapai groups.

The biological richness of the Harquahala Mountains is unique within southwest Arizona. The Harquahala Mountains and surrounding bajadas provide important wildlife habitat to a diverse array of species. The area is an ecoregional conservation site with important biodiversity values.

The ACEC contains the Harquahala Mountain Observatory, which is within a National Register of Historic Places district. The historic Harquahala Peak Pack Trail, Ellison's Camp, and other sites are components of the historic district. The area also includes many well-preserved prehistoric sites along with historic ranching and mining sites. Some archaeological sites may be related to the use of the mountain range by a regional group of the Western Yavapai tribe. The ACEC will safeguard important and unfragmented wildlife habitat.

Desired Future Condition

Protect sensitive resources discussed in the statements of relevance and importance. Minimize the visual intrusion of any management activity so as to retain the outstanding scenic quality and natural landscape appearance consistent with VRM Class II standards.

Achieve long-term conservation of scenic, natural resource, and cultural values.

Preserve outstanding opportunities for high-quality hiking, backpacking, hunting, wildlife observation, and cultural study prospects. Permit vehicle access only on designated routes.

Maintain the plant diversity and richness of the chaparral, riparian/wetland, and Sonoran Desert scrub vegetation communities.

Achieve and maintain unfragmented wildlife habitat, which provides adequate forage, cover, and access to water for healthy wildlife populations.

Maintain the existing interpretive facilities in good condition to promote public education and appreciation of the area's cultural traditions and history. Allocate selected sites to public use to support public education in conjunction with heritage tourism along the existing back-country byway and hiking trails.

Management Actions

Limit motorized vehicle use to designated routes.

Continue to manage the existing Harquahala Mountain Back Country Byway as described in Section 2.7.3.1.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.4.7.

Mitigate surface disturbance inconsistent with achieving the DFC.

Unless new vehicle routes and fences are needed to mitigate resource conflicts and achieve DFC, prohibit such construction.

In the Inner Basin, which encompasses a valley just below and east of the summit, prohibit grazing improvements that encourage concentrated livestock use.

Approve improvements in this area if they

- are needed to meet resource objectives,
- would help achieve DFC, and

- conform to the standards and objectives for the area.

Restore and protect all spring sources and the wildlife habitat values of springs.

Acquire from willing parties State and private lands containing resource values that are consistent with the relevance and importance of the ACEC.

Identify, monitor, and protect important cultural resources.

Maintain the Harquahala Observatory historical site and its interpretive facilities to current standards and conditions.

Select specific cultural sites for public use by considering the following factors:

- presence of aboveground features of interest to the public and amenable to interpretive development,
- accessibility to communities, travel routes, and recreation trails,
- site condition and the feasibility of stabilizing selected areas or features to withstand visitation,
- visitor safety,
- compatibility with other land uses and site values, such as traditional use by Native Americans,
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

Implement the following actions:

- build visitor facilities,
- install signs along routes and trails to direct visitors to interpreted sites,
- build hardened walking trails,
- install interpretive signs and register boxes, and
- prepare brochures and related educational materials or programs.

Implement actions to stabilize, repair, and maintain selected cultural sites in a condition that preserves their value to scientific or public uses as needed. Regularly monitor the condition of these sites for possible remedial action. Authorize commercial and noncommercial group tours if they are conducted with protective stipulations, in accordance with BLM's regulations and, where required, special SRPs.

Administrative Actions

The BLM's recreation program would help develop sites for public use. Cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local economies. Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

Black Butte ACEC (8,260 acres BLM)

Relevance

The area contains the Vulture obsidian source, which was a major source of "Apache tears" used to make stone tools during prehistoric times. The cliffs at the crest of Black Butte are significant habitat features used by raptor species and are a pristine, scenic landmark. These cliffs are essential to maintaining the biological diversity of the surrounding area.

Importance

Archaeologists recognize the Vulture obsidian source as one of the major sources of a valuable trade commodity in prehistoric Arizona. Obsidian (volcanic glass) was used widely in making stone tools. Nodules of Vulture obsidian have a distinctive chemical composition that allows archaeologists to map changes in its distribution, use, and trade by prehistoric peoples. Vulture obsidian has been traced to prehistoric sites within at least a 100-mile radius of Black Butte.

The value of the cliffs for nesting raptors is significant for a large area. Nesting raptors are sensitive to construction-related human activities. If these cliffs are not protected from

these activities, cliff-nesting raptors would disappear from much of the surrounding area.

Desired Future Condition

Manage the area to emphasize protecting the sensitive resources discussed in the statements of relevance and importance. Maintain current natural conditions and open space. Minimize the visual intrusion of any management activity so as to preserve the outstanding scenic quality and natural landscape appearance.

Manage the area surrounding Black Butte and Jackrabbit Wash to:

- preserve good non-motorized recreation opportunities and settings,
- conserve scenic volcanic landscapes,
- Maintain a semi-primitive non-motorized recreation setting.

Retain Black Butte's cultural significance as an important source of material for prehistoric tool production. Sustain important raptor nesting habitat in the central Black Butte cliffs area. Restore, enhance, and maintain wildlife and plant diversity and species richness of this Sonoran Desert vegetation community. Set as ACEC priorities conserving vegetation communities and managing for healthy wildlife populations.

Management Actions

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.4.7.

Mitigate surface disturbance that conflicts with the protection of biological and cultural resources for which the ACEC is designated.

Prohibit building new recreation sites that conflict with raptor management or cultural prescriptions. Build non-motorized trails and recreation facilities, if needed, to ensure resource protection, protect wildlife habitat, or enhance recreation opportunities.

Manage the ACEC to preserve the Vulture obsidian source, permit scientific study of it, and implement actions to restrict activities that threaten its integrity.

Prohibit rock climbing in the ACEC.

2.6.2.2.4.2 Lands and Realty

Land Tenure Adjustments

The land in the Harquahala MU proposed as suitable for disposal amounts to 3,528 acres (Map 2-78). This land has been selected in accordance with the resource management prescriptions in this land use plan as limited by criteria described in Section 2.7.1.2 Lands and Realty.

Communication Sites

The Harquahala Peak communication site is the only such designated site within this MU.

Utility and Transportation Corridors (Map 2-79)

Multiple-Purpose Corridors

- Shift the Central Arizona Project (CAP) corridor to the north, extending it one mile north from the southern CAP right-of-way boundary.
- Add a new 1-mile-wide corridor leg on the Meade-Phoenix corridor (partly in Harquahala MU, partly in Hassayampa MU).

Transportation Corridors

Transportation corridors are discussed in Section 2.6.2.1.1.

2.6.2.2.4.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this

chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

Land Use Allocation

Belmont/Big Horn Mountains Wildlife Habitat Area (140,310 acres BLM)

Desired Future Condition

Restore, enhance, and maintain the wildlife, plant diversity, and species richness of the Sonoran Desert scrub vegetation community. Unfragmented wildlife habitat provides adequate forage, cover, and access to water for healthy wildlife populations. Conserving and managing for healthy wildlife populations are priorities in managing the area.

Management Actions

Modify existing fences and incorporate design features in new fences to ensure free movement of mule deer and bighorn sheep.

Mitigate vehicle routes that conflict with maintaining wildlife habitat values to ensure achieving DFC. Mitigation includes the following:

- relocating route segments,
- building wildlife passes,
- limiting seasonal or time-of-day use, and
- closing routes.

Acquire State and private lands within the WHA from willing sellers.

Mitigate the impact of future vehicle route improvements on priority wildlife species, especially desert bighorn sheep and desert tortoise to ensure achieving DFC.

Mitigate recreation use and development to minimize impacts on priority wildlife species to ensure achieving DFC.

2.6.2.2.4.4 Cultural Resources

Nearly the entire area of the Harquahala SCRMA is included within the Harquahala Mountains ACEC. Management of cultural resources in the Harquahala SCRMA within the Harquahala Mountains ACEC can be found in Section 2.6.2.2.4.1. The historic Harquahala Peak Smithsonian Observatory and the Harquahala Peak Pack Trail would be allocated to public use. Allocate other sites for public use and interpretive development consistent with management actions described for the Harquahala Mountains ACEC.

Manage cultural resources to conform to prescriptions for the Harquahala Mountains ACEC. Acquire significant cultural sites on other State and private lands within the MU on a willing seller/willing buyer basis, consistent with priorities in the Lands and Realty discussion of the Management Common to Both Planning Areas section of Chapter 2.

2.6.2.2.4.5 Recreation Resources

Though the entire Harquahala MU would be allocated as an ERMA, the following recreation management would apply in addition to those actions described in the Recreation and Public Access - Travel and Transportation Planning discussions of the Management Common to the Bradshaw-Harquahala Planning Area:

Implementation Actions

Select, plan, and develop at least one staging and camping area to meet motorized and non-motorized recreation demand. Have this area provide accommodation for the following:

- parking,
- unloading OHVs and horses,
- overnight camping, and
- large organized event operations.

Development may include the following:

- informational signs,
- kiosks,
- picnic tables,
- hitching posts,
- troughs for water hauled to the site,
- loading ramp, and
- soil stabilization for dust abatement.

Limit to 20 acres the area of exposed barren soil. Mark or delineate the perimeter with barriers to prevent expansion.

Develop at least one day-use area near or adjacent to lands allocated to maintain wilderness characteristics in the Belmont Mountains. The development would be designed for up to 50 vehicles with trailers to meet the non-motorized recreation demand. The facility would provide for parking, unloading horses, picnicking, and small special event operations. Development may include:

- informational signs,
- kiosks,
- picnic tables,
- hitching posts,
- loading ramp, and
- soil stabilization for dust abatement.

Mark or delineate the perimeter of the Belmont Mountain day-use area to prevent expansion. Limit to 5 acres the site's area of exposed barren soil.

2.6.2.2.4.6 Wilderness Characteristics

Land Use Allocation

Within the Harquahala Management Unit, 53,789 acres would be allocated to maintain wilderness characteristics as shown on Map 2-89.

Desired Future Condition

Maintain and manage wilderness characteristics, open space, and wildlife habitat. Retain natural landscapes. Provide opportunities for solitude

and outstanding primitive recreation opportunities in a remote setting. Preserve an array of scenic and special features. Restore, enhance, and maintain the wildlife/plant diversity and species richness of this Sonoran Desert scrub vegetation community. Wildlife populations and habitat are important aspects of the naturalness and will be actively managed. Maintain important and unfragmented habitat for desert tortoises and desert bighorn sheep.

Management Actions

Limit motorized vehicle use to designated routes

Manage the recreation setting along designated routes for a semi-primitive motorized setting. Manage areas away from designated motorized routes as semi-primitive non-motorized.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.4.7.

Prohibit building new fences, unless their construction helps to achieve the DFC.

Acquire State and private lands on a willing seller/willing buyer basis.

Prohibit building new recreation sites that would conflict with wildlife management, habitat, or movement, or would affect sensitive cultural or botanical resources. Build non-motorized trails and recreation facilities only if needed for the following purposes:

- to ensure resource protection,
- to protect wilderness characteristics, and
- to protect wildlife habitat

2.6.2.2.4.7 Visual Resources

Land Use Allocations

VRM classes for *Alternative E* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-75.

Within the Harquahala Management Unit, allocate:

- Harquahala Mountains ACEC, Black Butte ACEC, VRM Class II.
- Lands allocated to maintain wilderness characteristics VRM Class II and continue VRM Class I in designated wilderness.
- Utility corridors would be allocated to VRM Class III or IV.
- The rest of the Management Unit would be allocated to VRM classes as portrayed on the above referenced map.

2.6.2.2.4.8 Mineral Resource Management

Alternative E proposes no withdrawals or mining closures.

2.6.2.2.4.9 Travel Management

Land Use Allocation

The Harquahala Management Unit (420,730 acres of BLM-administered lands) would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16). Motorized and Mechanized travel is limited to currently inventoried routes until final route designations are completed. See Section 2.7.3.7 for a more detailed description of limitations.

Other Resource Allocations with Travel Management Prescriptions

ACECs are discussed in Section 2.6.2.2.4.1.

WHAs are discussed in the Biological Resources Section 2.6.2.2.4.3.

Allocations to maintain wilderness characteristics are discussed in Section 2.6.2.2.4.6.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Limit motorized vehicle use to designated routes within the Harquahala Mountains ACEC (74,950 acres BLM). Prohibit new vehicle routes unless needed to mitigate resource conflicts and achieve DFC. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in chapter 3.

Limit motorized vehicle use to designated routes within the Black Butte ACEC (8,260 acres BLM). Build non-motorized trails and recreation facilities within the Black Butte ACEC if needed, to ensure resource protection, protect wildlife habitat, or enhance recreation opportunities.

Mitigate vehicle routes within the Belmont/Big Horn Mountains WHA (140,310 acres BLM) by relocating route segments, building wildlife passes, limiting seasonal or time-of-day use, or closing routes that conflict with maintaining wildlife habitat values to ensure achieving DFC.

Coordinate the route system designation with the Lake Havasu Field Office for connectivity as outlined in Common to All Section 2.7.3.7.

Implementation Actions

BLM requires a standard evaluation process, supported by software and database and that is compatible with GIS functionality. Designation of a route network using a process described in Appendix D, or one similar, would be considered an implementation action. Route designation will be done within 5 years of RMP signing.

2.6.2.2.5 Harcuvar Management Unit

The Harcuvar MU encompasses the easternmost end of the Harcuvar Mountains within the PD's administrative area. Most of the Harcuvar Mountain range is administered by BLM's Lake Havasu Field Office. The Harcuvar MU is bounded on the west and north by the PD boundary with the Lake Havasu Field Office, and on the east and south by the boundary between BLM and non-BLM-administered lands (Map 2-87). The MU contains the following land:

- 53,200 acres of BLM-administered lands,
- 6,280 acres of Arizona State land, and
- 3,360 acres of private land.

The MU contains no proposed Special Area Designations. VRM classes for *Alternative E* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-75. The entire Management Unit would be allocated as an Extensive Recreation Management Area and managed consistent with the discussion in Section 2.7.3.7 of the Management Common to the Bradshaw-Harquahala Planning Area portion of this Chapter. Connectivity of the route system with BLM Lake Havasu and Kingman Field Offices would be addressed consistent with the long distance route network discussions under Common to All Section 2.7.3.7.

No allocations would be made for biological resources within Harcuvar MU. Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area.

2.6.2.2.6 Upper Agua Fria River Basin Management Unit

The Upper Agua Fria River Basin MU is sandwiched between Prescott National Forest's Bradshaw Mountains and Verde Ranger Districts. The MU stretches from Cordes Lakes in the south to the Town of Prescott Valley in the north (Map 2-88). The MU contains the following lands:

- 21,520 acres of BLM-administered lands,
- 36,990 acres of Arizona State land, and
- 39,290 acres of private land.

2.6.2.2.6.1 Special Area Designations

Nomination to National Recreation Trails System

Black Canyon Trail

Desired Future Conditions

Provide for the ever-increasing outdoor recreation needs of an expanding urban population to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Black Canyon corridor. A non-motorized National Recreation Trail should be established primarily, near urban areas; secondarily, within scenic areas and along historic travel routes of the area.

Management Actions

Consider and study the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Issue a right-of-way for the non-motorized, mechanized use trail, of approximately 69 miles, and ancillary trails and facilities to preserve public access and long-term character.

Acquire easements or rights-of-way on non-Federal lands if the trail or facilities are proposed for any of these lands.

Continue to work with the Black Canyon Trail Coalition and other public groups to build and maintain the trail. Engage motorized vehicle groups and other interested groups to build and maintain the parallel motorized route.

Recognize and accommodate long-term continuation of the trail and facilities in land tenure actions. Retain a 1/4-mile wide corridor (1/8 mile each side of the trail) along the trail and any ancillary facility for a permanent trail location. Ensure public access to the trail and related facilities through easements, rights-of-way, deed restrictions, or other suitable means. A motorized route will generally parallel the Black Canyon Trail to improve administrative access and public long distance travel using vehicles.

2.6.2.2.6.2 Lands and Realty

Land Tenure

No lands would be disposed of within the Upper Agua Fria River Basin MU.

Communication Sites

No designated communication sites are proposed for this MU.

Utility and Transportation Corridors

Multiple-Purpose Corridors

Establish a new 1-mile-wide corridor leg centered on the El Paso Natural Gas Line.

Transportation Corridors

Designate all State highway system routes as transportation corridors, including a new 1-mile-wide corridor along SR-69, a 1/2-mile on each side of the centerline.

2.6.2.2.6.3 Biological Resources

Biological resources would be subject to management guidance in Section 2.7.1.4 - Biological Resources in the Management Common to Both Planning Areas section of this chapter and in Section 2.7.3.4 - Biological Resources in the Management Common to the Bradshaw-Harquahala Planning Area. No biological allocations would be made within the Upper Agua Fria River Basin MU.

- platforms,
- restrooms,
- picnic tables,
- benches,
- trash receptacles,
- signs along routes and trails to direct visitors to interpreted sites,
- hard-surfaced walking trails,
- interpretive signs and register boxes, and
- brochures and related educational materials or programs.

2.6.2.2.6.4 Cultural Resources

Land Use Allocation

Galena Gulch SCRMA (2,500 acres BLM). Allocate to public use selected sites that are suitable for interpretive development, as described below under *Administrative Actions*.

Take actions to stabilize, repair, and maintain sites in good condition. Regularly monitor site conditions.

Authorize commercial and noncommercial group tours if they are conducted with protective stipulations in accordance with BLM regulations. Where required, issue SRPs.

Desired Future Condition

Selected prehistoric and historic sites are interpreted for public education and visitation. Interpretive projects are completed in a manner that monitors and protects sites while allowing for public use. For more information on public use of cultural resources, see Appendix E.

Administrative Actions

Select sites for public use by considering the following factors:

Management Actions

Build trails to link public use sites to the Black Canyon trail. Local site types potentially suitable for public use include the following:

- prehistoric hilltop structures,
- rock art,
- mining camps, and
- features of the historic Black Canyon sheep driveway.

- presence of aboveground features of interest to the public and amenable to interpretive development.
- accessibility to communities, travel routes, and recreation trails.
- condition of the site and the feasibility of stabilizing selected areas or features to withstand visitation.
- visitor safety.
- compatibility with other land uses and site values, such as traditional use by Native Americans.
- feasibility of regular inspections by BLM's staff and volunteers, and
- partnership opportunities for interpretive and educational projects.

Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

The BLM recreation program would participate in developing sites for public use.

Implement a combination of some or all of following and other actions at selected sites:

BLM would cooperate with agencies, tribes, and local communities in supporting heritage tourism programs that benefit local

economies. Develop historic properties for heritage tourism to contribute to their long-term preservation and productive use.

2.6.2.2.6.5 Recreation Resources

Land Use Allocation

Upper Agua Fria River Basin SRMA (21,440 acres BLM)

Desired Future Condition

Maintain the SRMA's natural landscape and open space. Offer visitors recreation opportunities, scenic views, access to the Black Canyon Trail, and other trail systems.

The open space character of the land is retained, maintaining natural landscapes and recreation opportunities for the future.

Emphasize rural, roaded-natural, and semi-primitive motorized recreation settings where suitable.

Management Actions

Locate, and develop new trails, parking, and staging areas, where suitable, for motorized and non-motorized use.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.6.6 (Map 2-75).

Land Use Allocation

North Black Canyon Hiking and Equestrian Trails RMZ (3,210 acres BLM)

Desired Future Condition

Complete the Black Canyon Trail north and east of Highway 69 to connect with trails in Prescott National Forest. Analyze, build and designate the trail to provide a non-motorized experience along the historic sheep driveway. Identify

exact locations of the trail and facilities in conjunction with the Yavapai Trails Association and other interested citizens. Maintain rural roaded-natural and semi-primitive motorized settings as suitable. Consider and study the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 1968 (P.L.90-543).

Management Actions

Locate and develop staging, or camping areas near communities and vehicle access points to service the north Black Canyon Trail and adjoining public lands for the following purposes:

- parking,
- unloading OHVs and horses, and
- picnicking.

Development could include the following:

- informational signs,
- kiosks,
- picnic tables,
- loading ramps, and
- soil stabilization for dust abatement.

Limit to five acres the area of exposed barren soil on each site. Mark or delineate the perimeters to prevent expansion.

Issue a right-of-way for the trail and facilities to preserve public access and protect the trail from incompatible land uses.

Acquire access easements or rights-of-way for non-Federal lands where the trail or facilities are proposed.

Recognize the trail and facilities in any land tenure actions. Retain a 1/4-mile corridor (1/8 mile each side) along the trail.

Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in Section 2.6.2.2.6.6.

Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Administrative Actions

Work with citizen volunteer groups to complete a comprehensive strategy and trails plan for selecting and developing new single- and multi-use hiking, equestrian, and OHV trails for all lands in the SRMA. Collaborate with the following entities:

- Arizona Game & Fish Department,
- Prescott National Forest,
- Yavapai County,
- Yavapai County Trails Association, and land managers of other trails.

Establish a citizens' working group to help with trail and facility sites, designs, and management. Develop a Black Canyon Trail management and partnership plan with community and citizen input in conjunction with the Black Canyon Trail Plan for the Black Canyon SRMA. Within one year of plan approval define the following:

- proposed trail alignments,
- trailheads,
- linking trails, and
- other alignments.

Complete this master plan within 2 years of plan approval.

2.6.2.2.6.6 Visual Resources

Land Use Allocations

VRM classes for *Alternative E* throughout the planning area would be allocated as described in Table 2-2 and as portrayed on Map 2-75. The entire Upper Agua Fria River Basin MU would be allocated to VRM Class III objectives.

2.6.2.2.6.7 Mineral Resource Management

Alternative E proposes no mineral withdrawals or closures within the MU.

2.6.2.2.6.8 Travel Management

Land Use Allocation

The Upper Agua Fria River Basin Management Unit, 21,520 acres of BLM-managed lands, would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16). Motorized and Mechanized travel is limited to currently inventoried routes until final route designations are completed. See Section 2.7.3.7 for a more detailed description of limitations.

Other Resource Allocations with Travel Management Prescriptions

SCRMA's and cultural resource sites allocated to Public Use are discussed in Section 2.6.2.2.6.4.

SRMA's and other recreation allocations are discussed in Section 2.6.2.2.6.5.

Desired Future Conditions

Define, designate, implement, and monitor a designated and travel management network. The travel management network and associated recreation opportunities would be consistent with other resource management objectives for the area.

Management Actions

All vehicles would be limited to designated routes. No cross-country motorized travel would be permitted except in cases of emergency or for approved administrative purposes. Until route designation is completed, all vehicle travel is restricted to inventoried routes as shown in Chapter 3.

The Upper Agua Fria River Basin SRMA (21,440 acres BLM) would offer visitors' access to the Black Canyon Trail and other trail systems. Locate, and develop new trails, where suitable, for motorized and non-motorized uses.

Locate a motorized route generally parallel to the Black Canyon Trail to support a long distance motor vehicle route network.

Within the North Black Canyon Hiking and Equestrian Trails RMZ (3,210 acres BLM), locate and develop staging, or camping areas near communities and vehicle access points to service the north Black Canyon Trail. Issue a right-of-way for the trail and facilities to preserve public access and protect the trail from incompatible land uses. Acquire access easements or rights-of-way for non-Federal lands, where the trail or facilities are proposed. Recognize the trail and facilities in any land tenure actions. Retain a 1/4-mile corridor (1/8 mile each side) along the trail. Evaluate the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543). Complete a new BCT this master plan within 2 years of plan approval.

Build trails to link cultural public use sites to the Black Canyon Trail. Trails could lead to suitable sites including prehistoric hilltop structures, rock art, mining camps, and features of the historic Black Canyon sheep driveway.

Administrative Actions

Apply an evaluation process, similar to one described in Appendix D, to guide establishment of a designated public access and route system to support resource objectives consistent with *Alternative B*.

Develop a Travel Management Plan. This plan would implement the designated route system for the Management Unit.

2.7 Management Common to All Action Alternatives

Introduction

While certain planning components vary across the Alternatives, others apply to all Alternatives. Some components common to all Alternatives result from previous land use decisions determined still to be valid and carried forward into the revised plans. Others originate from new planning decisions made since adopting the pre-existing plans. The common actions that apply to both planning areas appear first; those that apply only to Agua Fria National Monument are presented second, and those that apply only to the Bradshaw-Harquahala Planning Area are presented third.

Many scattered, isolated BLM-administered parcels are located outside the planning area boundaries (Map 1-2). These parcels are included in this plan as BLM is responsible for managing them. Some of the lands are managed under the *Kingman RMP* (BLM 1993a), whereas others are managed under the *Phoenix RMP* (BLM 1988a). They are difficult to manage because of their isolation and the small size of the individual parcels. As in the *Kingman RMP* and the *Phoenix RMP*, BLM has elected to deal with these lands more generally than with lands inside the planning areas. Still, the scattered parcels are included in the land tenure decisions for each Alternative. The actions or components described below are common to all Action Alternatives.

2.7.1 Management Common to Both Planning Areas

2.7.1.1 Land Health Standards

In managing and implementing all resource programs, BLM must consider the Land Health Standards described in *Arizona Standards for*

Rangeland Health and Guidelines for Grazing Administration (Rangeland Management). The Land Health Standards were developed, pursuant to 43 CFR 4180, through a collaborative process involving BLM's staff and the Arizona Resource Advisory Council (RAC). The Land Health Standards were approved by the Secretary of the Interior in April 1997. These standards have been developed to determine the characteristics of healthy ecosystems on public lands and management actions to promote them. When approved, the Land Health Standards became BLM Arizona policy, guiding the planning for and management of BLM-administered lands. The Land Health Standards, therefore, have been incorporated into both the Agua Fria National Monument and Bradshaw-Harquahala RMPs. Listed below are the standards that describe the conditions needed to encourage proper functioning of ecological processes and that have been adopted as the Land Health Standards applicable program wide to BLM Arizona.

Standard One: Upland Sites

Upland soils exhibit infiltration, permeability, and erosion rates that are appropriate to soil type, climate, and landform (ecological site).

Criteria for Meeting Standard One

Soil conditions support the proper functioning of hydrologic, energy, and nutrient cycles. Many factors interact to maintain stable soils and healthy soil conditions, including suitable amounts of vegetation cover, litter, and soil porosity and organic matter. Under proper functioning conditions, rates of soil loss and infiltration are consistent with the site's potential.

Ground cover in the form of plants, litter, or rock is present in pattern, kind, and amount sufficient to prevent accelerated erosion for the ecological site; or ground cover is increasing as determined by monitoring over an established period of time.

Signs of accelerated erosion are minimal or diminishing for the ecological site as determined by monitoring over an established period of time.

As indicated by such factors as:

- ground cover,
- litter,
- live vegetation (e.g., grass, shrubs, trees) amount and type,
- rock ,
- signs of erosion,
- flow pattern,
- gullies, and
- rills and plant pedestaling.

Exceptions and exemptions (where applicable):

- None.

Standard Two: Riparian-Wetland Sites

Riparian-wetland areas are in properly functioning condition.

Criteria for Meeting Standard Two

Stream channel morphology and functions are appropriate for proper functioning condition for existing climate, landform, and channel reach characteristics. Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate the stream energy of high-water flows.

Riparian-wetland functioning condition assessments are based on examination of hydrologic, vegetation, soil and erosion-deposition factors. BLM has developed a standard checklist to address these factors and make functional assessments. Riparian-wetland areas are functioning properly as shown by the results of applying the appropriate checklist.

The checklist for riparian areas is in Technical Reference 1737-9, Process for Assessing Proper Functioning Condition (BLM 1993d). The checklist for wetlands is in Technical Reference 1737-11, Process for Assessing Proper

Functioning Condition for Lentic Riparian-Wetland Areas (BLM 1994c).

As indicated by such factors as the following:

- gradient,
- width/depth ratio,
- channel roughness and sinuosity of stream channel,
- bank stabilization,
- reduced erosion,
- captured sediment,
- ground water recharge, and
- dissipation of energy by vegetation.

Exceptions and exemptions (where applicable):

- Dirt tanks, wells, and other water facilities built or placed at a location to provide water for livestock or wildlife and not determined through local planning to provide for riparian or wetland habitat are exempt.
- Water impoundments permitted for construction, mining, or other similar activities are exempt.

Standard Three: Desired Future Conditions

Productive, diverse upland and riparian-wetland plant communities of native species exist and are maintained.

Criteria for Meeting Standard Three

Upland and riparian-wetland plant communities meet DPC objectives. Plant community objectives are determined with consideration for all multiple uses. Objectives also address native species and the requirements of the Taylor Grazing Act (TGA); FLPMA; Endangered Species Act (ESA); Clean Water Act (CWA); and suitable laws, regulations, and policies.

DPC objectives will be developed to assure that soil conditions and ecosystem function described in Standards 1 and 2 are met. These objectives detail a site-specific plant community, which when obtained, will assure rangeland health; State water quality standards; and habitat

for endangered, threatened, and sensitive species. Thus, DPC objectives will be used as an indicator of ecosystem function and rangeland health.

As indicated by such factors as the following:

- composition,
- structure, and
- distribution.

Exceptions and exemptions (where applicable):

Ecological sites or stream reaches on which a change in existing vegetation is physically, biologically, or economically impractical are exempt.

2.7.1.2 Lands and Realty

Land Tenure Adjustment

Management Actions

Land tenure decisions determine which lands will be retained, which will be proposed for disposal, and which will be proposed for acquisition. These decisions must achieve the goals, standards, and objectives in the land use plan.

Lands found to be potentially suitable for disposal by sale or exchange in this land use plan meet the criteria in Sections 203 and 206 of the FLPMA of 1976, and other laws and regulations.

For land tenure adjustments, BLM prioritizes acquiring lands that contain habitat recognized by the U.S. Fish and Wildlife Service (USFWS) as needed for the recovery of federally listed threatened or endangered species.

BLM does not dispose of land:

- occupied by species that are listed or proposed to be listed as threatened or endangered under the ESA,

- with designated or proposed critical habitat for a listed or proposed threatened or endangered species,
- supporting listed or proposed threatened or endangered species if such transfer would conflict with recovery needs and objectives or would likely impede the recovery of the listed or proposed species, and/or
- supporting Federal candidate species if such action would contribute to the need to list the species as threatened or endangered.

Exceptions to the above may occur if the recipient of the lands would protect the species or critical habitat equally well under the ESA, such as disposal to a non-Federal governmental agency or private organization if conservation purposes for the species would still be achieved and ensured.

Maintain, obtain, and secure access rights to all BLM-administered lands to meet BLM goals and objectives. This action is accomplished by requiring reciprocal grants (where needed) when granting rights-of-way across BLM-administered lands and pursuing land disposal actions.

Issue right-of-way reservations to BLM on existing designated routes that are needed for implementing the RMP.

In determining whether to adjust land tenure (including land exchange, purchase, sale, and donation), consider the following:

- Evaluate and balance all resource requirements and consolidate land ownership to achieve management efficiency and reduced costs of administration, thereby improving Federal land management.
- Evaluate the effects of land adjustments on sensitive species habitat. Avoid land adjustments that could result in a trend toward Federal listing or a loss of population viability for sensitive species.
- Acquire land that contains resources determined to be important in contributing toward BLM resource management goals and objectives, when these resources are threatened by land use change or when management may be enhanced by public ownership. Resources so identified may include historical or heritage resources, outstanding scenic values, critical ecosystems, or potential recreation opportunities.
- Acquire land that reduces conflicts between public and private landowner objectives.
- Evaluate the long-term effects of adjustments in jurisdiction near urban and rural communities on community economic and social stability and environmental sustainability. Work with a diverse network of residents, user groups, and governments to determine if land tenure adjustments could enhance both local communities and environmental health.

Land Use Allocations

Transportation Corridors

A designated transportation corridor means a *designated* parcel of land with specific boundaries identified by law, Secretarial Order, the land-use planning process, or other management decision, as being a proposed location for one or more transportation rights-of-way and other compatible facilities. The designated transportation corridor may be suitable to accommodate more than one type of right-of-way use or facility or one or more right-of-way uses or facilities which are similar, identical, or compatible.

Title V, Section 503 of [43 U.S.C. 1763] provides the guidelines in which transportation corridors will be identified and designated. Any existing transportation corridor may be

designated as a transportation corridor without further review.

A corridor differs from a right-of-way in that a right-of-way authorizes a holder to use or occupy public lands under a grant, and is specific in its location. A transportation corridor will be *identified by law, Secretarial Order, the land-use planning process, or other management decision*, and is general in location and is designated to accommodate one or more rights-of-way.

Facilities significant enough to be the basis for corridor designation are the following:

- natural gas and other pipelines at least 10 inches in diameter,
- electric transmission facilities accommodating 115 kV lines or greater voltage, and
- significant canals delivering water to urban areas.

Management Actions

Route major utility systems through designated corridors. Encourage new rights-of-way within designated corridors to promote the maximum use of existing routes. Encourage joint use whenever possible.

Collocate smaller utility lines needed for local service near corridors or within a corridor unless doing so would limit the opportunity to collocate other major utility lines in the corridor.

Whenever possible, promote energy transfer efficiency and support alternative energy sources, such as the use of photovoltaic cells (solar energy) and wind power.

Whenever possible, design or route utility transmission lines to minimize adverse visual impacts to the surrounding lands and vistas.

Designate BLM utility corridors consistent with authorities granted under the following:

- FLPMA Title V, Sections 501-511 (43 USC 1761-1771),
- Mineral Leasing Act of 1928 (CFR 2880), and
- BLM Right-of-Way Manual, Sections 2801.11 and 2801.12.

Administrative Actions

BLM will continue to cooperate as a partner (with the Forest Service, Arizona Public Service, and Salt River Project, in Arizona) in the Western Utility Group, whose mission is to facilitate an exchange of information and coordinate planning between Federal agencies and utility providers throughout the western United States.

Land Use Allocation

Communication Sites

Management Actions

BLM planning related to communication infrastructure must, in accordance with the Telecommunications Act of 1996, help facilitate implementing wireless telephone systems, in compliance with existing law, by making Federal lands and facilities available for communication sites.

Accept applications for communication sites on a case-by-case basis and in accordance with the resource management prescriptions in this land use plan.

Consider communication site applications on lands that have been identified for disposal on a case by case basis. If an application is approved and the lands are subsequently exchanged or sold, reserve the communication site, subject to valid existing rights. Retain and make subject to valid existing rights previously designated communication sites. On lands that have been acquired or identified for retention, limit communication site development to previously designated sites. Develop communication site plans for all designated sites.

Design communication sites following guidelines developed by the USFWS to minimize impacts to migratory birds.

Administrative Actions

As suitable, coordinate communication-related planning with the Federal Communications Commission (FCC).

Land Use Allocation

Land Use Authorizations

Management Actions

Continue to issue land use authorizations (rights-of-way, leases, permits, easements) on a case-by-case basis and in accordance with resource management prescriptions in this land use plan.

Prohibit apiary (bee keeping) permits within 1/4 mile of facilities such as the following:

- high-use recreation areas such as campgrounds, trailheads, and staging areas,
- designated non-motorized trails,
- areas or routes with permitted recreation activities, and
- active scientific and research areas.

Land Use Allocation

Recreation and Public Purposes (R&PP) Act

Management Actions

Under the R&PP Act, accept applications from State and local governments and non-profit organizations on a case-by-case basis and in accordance with resource management prescriptions in this land use plan.

Land Use Allocation

Public Land Withdrawals and Classifications

Management Actions

Consider public land withdrawals and classifications on a case-by-case basis and in accordance with resource management prescriptions in the land use plans. Actions prohibited by the terms of the withdrawal or classification remain in effect until such withdrawals are revoked or classifications terminated.

2.7.1.3 Soil, Air, and Water Resources

Implementing the *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (Land Health Standards) (BLM 1997a) would meet the requirement for soils to support proper functioning of hydrologic, energy, and nutrient cycles.

Identify, quantify, and secure legal entitlement to all existing water sources on the public lands and seek to acquire water rights, when possible, to ensure water availability to meet multiple-resource needs. Assert Federal reserved water rights, where suitable, in Agua Fria National Monument and the five wilderness areas to secure water for the purposes of the reservations.

Monitor and protect water quality to meet Federal and State standards. Ensure that the water needs of flora and fauna are met.

Ensure that all land tenure decisions are reviewed for their impacts to water resources, including protection of instream flows.

2.7.1.4 Biological Resources

Land Use Allocation

Management of Desert Tortoise Habitat

Desired Future Conditions - Desert Tortoise

Desert tortoise habitat, by habitat category, will be managed to achieve the following desired conditions:

- Category I - Maintain stable, viable populations and protect existing tortoise habitat values and increase populations where possible,
- Category II - Maintain stable, viable populations and halt further declines in tortoise habitat values, and
- Category III - Limit tortoise habitat and population declines to the extent possible through mitigation.

Categories I and II desert tortoise habitat will be managed to retain all natural sheltersites (boulders or caliche caves or similar features used by tortoises for sheltering) and be unfragmented.

Vegetation will consist of at least 5 percent native perennial grasses, at least 10 percent native perennial forbs or subshrubs, at least 30 percent native trees and cacti, by dry weight, as limited by the potential of the ecological site as described by the Natural Resource Conservation Service (NRCS) ecological site guides.

Management Actions - Desert Tortoise

Standardize desert tortoise management throughout its habitat. Management will be consistent with the following documents:

- Desert Tortoise Habitat Management on Public Lands: A Rangeland Plan (BLM 1988b).
- Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona, Instruction Memorandum No. AZ-91-16 (BLM 1990a)
- Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona: New Guidance on Compensation for the Desert Tortoise, Instruction Memorandum No. AZ-92-46 (BLM 1992), and
- Supplemental Guidance for Desert Tortoise Compensation, Instruction Memorandum No. AZ-99-008 (BLM 1999).

Desert tortoise habitat will be managed according to the categories shown on Map 2-92. Habitat management categories and boundaries will be revised as new population information becomes available. The criteria that will be used in revising categories and boundaries are those in the 1988 Rangeland Plan (BLM 1988b).

The criteria for Category I tortoise habitat areas are the following:

- Habitat areas are essential to maintenance of large, viable populations.
- Conflicts are resolvable.
- Populations are medium to high density or low density contiguous with medium or high density.
- Populations are increasing, stable, or decreasing.

The criteria for Category II tortoise habitat areas are the following:

- Habitat areas may be essential to maintenance of viable populations.
- Most conflicts are resolvable.
- Populations are medium to high density or low density contiguous with medium or high density.
- Populations are stable, or decreasing.

Category III tortoise habitat areas are the following:

- Habitat areas are not essential to maintenance of viable populations.
- Most conflicts are not resolvable.
- Populations are low to medium density not contiguous with medium or high density.
- Populations are stable or decreasing.

No net loss will occur in the quality or quantity of Category I and II desert tortoise habitat to the extent practicable. BLM will address and include mitigation measures in decision documents to offset the loss of quality or quantity of Category I, II, and III tortoise habitats.

Compensation may be required to mitigate residual impacts from authorized actions.

Evaluate on a case-by-case basis all proposed activities, including the following, for impacts to desert tortoise population or habitats:

- requests for rights-of-way,
- easements,
- withdrawals,
- other land tenure actions,
- range improvements,
- wildlife habitat projects,
- mineral material sales, and
- commercial and organized group SRP applications.

Mitigation for adverse impacts is permissible to achieve no net loss in quantity or quality of desert tortoise habitat.

In Category I and II tortoise habitats, all motorized competitive races will be prohibited from March 31 through October 15. All other use requests during this time will be reviewed on a case-by-case basis and may be denied or adjusted to avoid conflict with tortoise activity and habitat. Mitigation for conflicts will be permissible to achieve no net loss in quantity or quality of desert tortoise habitat.

All mining plans of operations will be assessed for impacts to desert tortoise habitat on a case-by-case basis. Adverse impacts to desert tortoise would be mitigated to the extent allowable in the 3809 regulations.

Administrative Actions - Desert Tortoise

Maintain and develop a proactive public education program on the desert tortoise and its habitat requirements, including participation in public events with tortoise habitat information. Update existing tortoise brochure every five years or as needed.

Continue to work with and support other agencies and public entities in desert tortoise conservation.

Management Actions - Priority Species and Priority Habitats

Emphasize and give priority to managing priority species and priority habitats in the event of conflicts between resource management objectives. Priority species include the following:

- game species,
- special status species,
- birds of conservation concern, and
- raptors.

See Appendix H for a complete list of priority species.

Priority habitats include areas allocated as WHAs (pronghorn fawning habitat, pronghorn movement corridors, and bighorn sheep habitat), ACECs, riparian areas, springs, bat roosts, and desert tortoise habitat.

Reintroductions, transplants, and supplemental stockings (augmentations) of wildlife populations will be carried out in collaboration with AGFD or the USFWS for the following purposes:

- to maintain current populations, distributions, and genetic diversity,
- to conserve or recover threatened or endangered species, and
- to restore or enhance native wildlife species diversity and distribution.

Species that may be reintroduced, transplanted, or augmented include but are not limited to pronghorn; desert bighorn sheep; mule deer; desert tortoise; beavers; lowland leopard frogs; Mexican garter snakes; and native fishes like spikedace, Gila chub, Gila topminnow, desert pupfish, longfin dace, speckled dace, and desert sucker.

Management Actions - Threatened or Endangered Species

The actions described below implement the relevant Terms and Conditions and Conservation

Recommendations contained in the following Biological Opinions and Conference Opinion:

- [2-21-88-F-167] The Phoenix Resource Management Plan and Environmental Impact Statement.
- [2-21-96-F-421] The Lower Gila North Management Framework Plan (1983), and Lower Gila North Grazing EIS (1982).
- [2-21-96-F-422] The Eastern Arizona Grazing EIS, Phoenix District Portion.
- [2-21-99-F-031] Reintroduction of Gila Topminnow and Desert Pupfish into Three Tributaries of the Agua Fria River.
- [2-21-03-C-409] Existing Phoenix Resource Management Plan for the Agua Fria National Monument.
- [2-21-03-F-210] BLM Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management.

Acquisition criteria for non-Federal lands will include the potential

- to enhance the conserving and managing of threatened or endangered species habitat, riparian habitat, desert tortoise habitat, key big game habitat and
- to improve the overall manageability of wildlife habitat.

BLM will not transfer from Federal ownership the following:

- designated or proposed critical habitat for a listed or proposed threatened or endangered species,
- lands supporting listed or proposed threatened or endangered species if such transfer would be inconsistent with recovery needs and objectives or would likely affect the recovery of the listed or proposed species, and
- lands supporting Federal candidate species if such action would contribute to the need to list the species as threatened or endangered.

Exceptions to the above could occur if the recipient of the lands would protect the species or critical habitat equally well under the ESA, such as disposal to a non-Federal governmental agency or private organization if conservation purposes for the species would still be achieved and ensured.

Wildlife and prescribed fire management will incorporate the T/E Species Conservation Measures described in Appendix P which resulted from the BLM Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management (BO #2-21-03-F-210).

Desired Future Condition - Gila Topminnow, Gila Chub and Desert Pupfish

All biologically suitable perennial waters on public lands in the planning areas will be occupied by thriving populations of Gila topminnow, Gila chub, and desert pupfish.

Management Actions - Gila Topminnow, Gila Chub and Desert Pupfish

In cooperation with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service, re-establish Gila topminnow, Gila chub and desert pupfish into suitable habitat sites throughout the planning area.

Stream bank alteration due to recreation activities and livestock grazing in areas occupied by Gila topminnow, Gila chub, and desert pupfish will be limited to 25 percent annually.

Domestic livestock utilization of native riparian trees seedlings along streams occupied by Gila chub, Gila topminnow, and desert pupfish will be limited to 30 percent of the apical stems per growing season.

Fuels treatments on watersheds for habitat occupied by Gila topminnow, Gila chub, and desert pupfish will be limited to no more than 1/2 the watershed in any 2-year period.

Administrative Actions - Gila Topminnow, Gila Chub and Desert Pupfish

In coordination with the Arizona Game and Fish Department, monitor all Gila topminnow, Gila chub and desert pupfish populations annually.

Monitor for mortality of Gila topminnow, Gila chub and desert pupfish populations following significant runoff events within a year of treating the watershed with prescribed burns.

All monitoring results will be shared with the U.S. Fish and Wildlife Service annually.

BLM will coordinate all fire suppression actions in watersheds occupied by Gila topminnow, desert pupfish and Gila chub with the U.S. Fish and Wildlife Service (FWS). If incidental take of these species is likely to occur due to suppression actions, BLM will cooperate with appropriate agencies to collect and salvage fish, if collection and salvage operations can be accomplished safely. BLM will renovate/restore the population site(s) and aid in the re-establishment of the species into the original site(s). If repatriation is not possible due to extreme effects at the site, BLM will coordinate with the FWS to locate or restore a substitute site. Once conditions are suitable for the fish or a substitute site has been selected, the salvaged fish shall be reintroduced. BLM shall coordinate the salvage and release with the FWS and AGFD.

The BLM will monitor the effects of fire suppression actions on Gila topminnow, desert pupfish and Gila chub using approved protocols. Where fire suppression actions may have resulted in fish mortality, the BLM will investigate fire suppression related fish mortality and determine if there have been measurable reductions in abundance from that previously determined by status reviews. The BLM will monitor post-fire levels of sediment, debris, and fire-fighting chemicals and water quality at Gila topminnow, desert pupfish and Gila chub sites to ensure the habitat remains capable of supporting these fish. Water quality data will include temperature, pH (acidity), dissolved oxygen,

total dissolved solids, and turbidity. This monitoring will occur as soon as practicable after the fire and will be coordinated with FWS.

BLM will provide a brief report of monitoring results to the FWS by February of each year following monitoring efforts along with the Wildfire Suppression Documentation forms which will contain the data agreed upon (see FWS File # 02-21-03-F-0210).

At Silver Creek and Indian Creek:

- Monitor stream bank alteration and vegetation two times annually, during and following livestock seasonal use period.
- Monitor functional condition and trend every 3 years.

At Tule Creek:

- Inspect and maintain the fenced enclosure two times annually when livestock are present in the area.
- Monitor stream bank alteration and vegetation annually when livestock are present.
- Monitor functional condition and trend every 3 years.

Desired Future Condition - Spikedace

The Agua Fria River, where biologically suitable, is occupied by a thriving population of spikedace.

Management Actions - Spikedace

In cooperation with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service, re-establish a spikedace population in the Agua Fria River.

Desired Future Condition - Southwestern Willow Flycatcher

Riparian areas that could physically support (due to floodplain width and gradient) southwestern willow flycatcher habitats will attain the

vegetation structure, plant species diversity, density, and canopy cover to constitute suitable habitat. Vegetation in these riparian areas will be sufficiently dense and structurally complex to inhibit flycatcher predators and cowbirds from finding flycatcher nests. Livestock management facilities or other facilities will not be located so that they would attract cowbirds to suitable flycatcher habitat.

Management Actions - Southwestern Willow Flycatcher

Within the range of southwestern willow flycatcher, livestock grazing will conform to the guidelines described in the "Not Likely to Adversely Affect" section of Guidance Criteria for Determinations of Effects of Grazing Permit Issuance and Renewal on Threatened and Endangered Species (BLM and US Fish and Wildlife Service, Arizona and New Mexico 1999) or any subsequent agreed-upon amendment to these guidelines.

The current guidance criteria for Not Likely to Adversely Affect states:

1. Disturbance of individuals or nests, predation, or parasitism would not be likely because livestock use would not occur in occupied habitat during any time of the year.
2. Suitability for nesting flycatchers would not be reduced because livestock grazing in unoccupied suitable habitat would not occur during the growing season (key vegetation characteristics are maintained or enhanced and conditions promoting cowbird parasitism are avoided).
3. Cowbird parasitism would be unlikely because grazing would occur greater than five miles from occupied habitat during the breeding season, or
4. Monitoring of flycatcher nests demonstrates that no cowbird parasitism is occurring when livestock use occurs closer than 5 miles, but not within, occupied habitat, or
5. Cowbird parasitism would be unlikely due to the physical juxtapositions of habitat type, terrain, facilities, elevation, and other factors.
6. Progression of potential habitat towards becoming suitable within 10 years would not be impeded by livestock grazing (e.g. regeneration or maintenance of woody vegetation is not impaired by trampling, bedding, or feeding).
7. Sufficient monitoring is in place to demonstrate that habitat suitability is being maintained or enhanced in accordance with two and four above. Such monitoring would continue through the life of the grazing action under consideration.

Desired Future Condition - Bald Eagle

Habitat quality and quantity of riparian areas within the foraging range of bald eagles in the Lake Pleasant area is maintained and nesting and habitat for wintering birds in the Agua Fria River drainage is maintained. Sufficient quantity and quality of these riparian areas provide roosting and potential nesting trees and adequate prey.

Desired Future Condition - Yellow-billed Cuckoo

Riparian areas that could physically support (due to floodplain width and gradient) yellow-billed cuckoo habitats will attain the vegetation structure, plant species diversity, density, and canopy cover to constitute suitable habitat. Livestock utilization will not substantially reduce the abundance, density or distribution of native riparian tree species through herbivory.

Management Actions – Other Priority Species – Desert Bighorn Sheep

Domestic sheep and goat grazing will be prohibited within nine miles of occupied desert bighorn sheep habitat to avoid disease transmission and comply with Bureau

guidelines. Desert bighorn sheep habitat is depicted on Map 3-10.

Management Actions – Other Priority Species – Birds of Conservation Concern

Management of habitat for Birds of Conservation Concern will emphasize avoidance or minimizing impacts and restoring and enhancing habitat quality to implement Executive Order 13186. Through the permitting process for all land use authorizations, ensure the maintenance of habitat quantity and quality. Take (as defined in the Glossary) of migratory birds from authorized activities will be minimized or avoided.

Desired Future Condition – Riparian Habitat

Riparian areas will include a plant community that consists of streambanks dominated (> 50 percent) by native species from the genera *Scirpus*, *Carex*, *Juncus*, and *Eleocharis*. The size class distribution of native riparian obligate trees will be > 15 percent seedlings, > 15 percent mid-size, and > 15 percent large size (depending on existing conditions and the site potential). Size classes are defined as follows:

- Seedlings are < 1 inch in basal diameter.
- Mid-sizes are 1 to 6 inches in basal diameter.
- Large sizes are > 6 inches in basal diameter.

Management Actions - Springs

Developed springs, seeps, and other projects affecting water and related resources will be designed to protect ecological functions and processes and to continue to provide habitat at the source for endemic invertebrates, native fishes, and other native aquatic species that may be present.

Water rights needs will be quantified, filed for, and protected, including those for instream flows, streams, springs, and other water sources important to wildlife, fish, and riparian values.

Water quality will be monitored and protected to meet Federal and State standards and to ensure that the needs of fish and wildlife are met along with the needs of people.

Desired Future Conditions – Bat Roosts

The bat roost habitats values associated with natural caves and abandoned mine features are protected and these sites do not pose a threat to human safety.

Management Actions - Bat Roosts

Authorized activities will ensure the maintenance of bat roost habitat quantity and quality, using mitigation to achieve the DFC.

Desired Future Conditions – Wildlife Habitat Across All Areas

Maintain, restore, or enhance the diversity, distribution, and viability of populations of native plants and wildlife, and maintain, restore, or enhance overall ecosystem health. Discretionary activities in the planning areas will be managed to ensure connectivity of habitats and maintenance of unrestricted wildlife movement.

All upland areas will include:

- a plant community that consists of native perennial grass and ground cover adequate to improve wildlife habitat and
- improved watershed function based on monitoring and ecological site potential. Upland sites include five percent or greater dry-weight composition of native perennial grass, as limited by the potential of the ecological site as described by the Natural Resource Conservation Service (NRCS) ecological site guides.

The Desired Plant Community for upland sites will have a long-term stable population of columnar cacti and paniculate agave, where the sites have the potential for such plant communities.

Management Actions - Wildlife Habitat Across All Areas

Identify, minimize, and mitigate for wildlife habitat degradation, loss, and fragmentation to achieve the DFC.

The *Land Health Standards described in Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (BLM 1997a) will be applied to all activities on the public land.

The density and distribution of wildlife waters will be maintained, improved, or increased throughout the planning areas to sustain and enhance wildlife populations across their range.

All existing wildlife waters will be maintained or improved as needed to maintain the presence of perennial water for wildlife.

New wildlife waters will be built when needed to maintain, restore, or enhance native wildlife populations or distributions.

Reasonable administrative vehicular access will be allowed for AGFD staff to wildlife water facilities for maintenance, repair, or research.

Water developments, including those for purposes other than wildlife will include design features to ensure safe and continued access to water by wildlife.

The planning areas contain suitable habitat for relocating and releasing individual animals and release of rehabilitated wildlife. These types of wildlife releases are not intended to establish new populations but are appropriate in areas of suitable habitat. Wildlife species that can be released include but are not limited to black bears; mountain lions; burrowing owls; and other raptors, reptiles, and game species.

The evaluation of vehicle routes, in conjunction with the route designation process, will consider the effect of routes on wildlife habitat values. Routes that conflict with maintaining sensitive wildlife habitat will be mitigated to achieve

DFC. Mitigation will include, but not be limited to the following:

- route closure,
- seasonal use restrictions,
- rerouting,
- vehicle type restrictions,
- vehicle speed restrictions, and
- other mitigation suitable to the nature of the conflict.

Administrative access will be allowed by law for enforcement and AGFD and USFWS staff for natural resource management. AGFD's use of motorized and mechanized equipment off designated routes is considered an administrative use and will be allowed in suitable locations (as agreed to by BLM and AGFD) for such purposes including, but not limited to the following:

- water supplementation,
- collar retrieval,
- capture and release of wildlife, and
- maintenance, repair, and building or rebuilding of wildlife waters.

Administrative Actions - Wildlife Habitat Across All Areas

Through cooperative partnerships with AGFD and other State and private entities, BLM will conserve, enhance, and restore wildlife habitats, including natural springs, wetlands, and streams.

Continue to implement wildlife habitat management through wildlife HMPs, developed in cooperation with AGFD to meet the requirements of the Sikes Act and address site-specific habitat management objectives. Existing HMPs will be used until new plans are developed.

Desired Future Condition – Invasive Species

The distribution and abundance of invasive plants and animals will be limited to current levels and through active management, the impact of invasive species on native ecosystems will be reduced from current levels.

Management Actions – Invasive Species

Adverse impacts to natural plant and animal communities from invasive species would be reduced. Efforts to control or eradicate invasive wildlife species will be carried out in cooperation and collaboration with AGFD or suitable weed management associations or other organizations.

Nonintrusive, non-native plant species will be considered suitable where native species:

- are not available,
- are not economically feasible,
- cannot achieve ecological objectives as well as non-native species, and
- cannot compete with already established non-native species.

The use and perpetuation of native plant species will be emphasized when restoring or rehabilitating disturbed or degraded rangelands.

Administrative Actions – Invasive Species

A monitoring, management, and educational program will be established to reduce the spread of plants classified as invasive by the U.S. Department of Agriculture (USDA).

2.7.1.5 Cultural Resources

Land Use Allocation

Allocate sites to one or more of the six use categories defined in BLM's Manual 8110.4:

- scientific use,
- conservation for future use,
- traditional use,
- public use,
- experimental use, and
- discharged from management.

Manage sites in accordance with the guidelines in Manual 8110.4. See Appendix E for information on these use categories.

Permit scientific and historical studies by qualified researchers at selected sites allocated to scientific use. The highest priority for study will be assigned to significant sites that are threatened by vandalism or other types of disturbance. Scientific studies will be guided by historic contexts and research designs. Priorities will also emphasize sites that have the potential to yield important information, as defined in approved research designs.

Allocate selected sites to public use for long-term preservation and public visitation.

Consider the following factors in selecting sites suitable for this type of use:

- presence of aboveground features, such as structures or rock art, that are of interest to the public and are amenable to interpretive development,
- the condition of the site and the feasibility of treating or stabilizing selected areas to withstand visitation,
- accessibility to travel routes, and
- visitor safety.

Desired Future Condition

Cultural resources are protected to sustain their irreplaceable scientific, heritage, and educational values. Actions are implemented to monitor, limit, and repair damage. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

Management Actions

Design and maintain facilities to preserve the visual integrity of cultural resource settings and cultural landscapes consistent with VRM objectives established in the RMP. These measures include, but are not limited to:

Implement physical and administrative protection measures to stop, limit, or repair damage and vandalism to sites. A variety of protection measures, described in BLM's

Manual 8140, may be used to protect the integrity of sites at risk:

- closing routes,
- restricting grazing or other uses,
- building fences or other barriers,
- installing erosion control devices,
- placing soil into exposed vandal pits or rooms,
- erecting signs, and
- repairing, shoring up, or stabilizing walls or other parts of structures.

Install and maintain protective signs, including carsonite posts, with the message of the Arizona Site Steward Program on sites that are vulnerable to vandalism. Install protective signs in a manner to avoid drawing attention to sites.

In evaluating project designs and proposed activities, seek to avoid disturbing or removing Native American human remains and associated items. Avoid directing site visitors toward areas where these items could be observed or disturbed.

Include stipulations in Special Recreation Permits (SRPs) to ensure that commercial tour operations will not damage cultural resources. Require tour operators to report any new vandalism or damage to sites.

Limit groups visiting archaeological sites to 25 people/sites at a time. BLM may permit larger groups on a case-by-case basis for educational events, if it implements mitigation to minimize adverse impacts.

Administrative Actions

Ensure that all proposed undertakings and authorizations are reviewed and conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), and other applicable laws.

Continue to consult with Indian tribes to identify places of traditional importance and associated access needs. Develop measures for managing and protecting places that might be identified by tribes during the life of the plan.

Complete documentary research and oral histories to gain a better understanding of cultural resources from homesteading, mining, ranching, and other historical period activities.

Restrict public information about the locations of sites that are not allocated to public use (selected for interpretive and educational uses).

Establish collaborative research partnerships with academic institutions, professional and non-profit organizations, and avocational organizations. Provide opportunities for volunteer training and participation in site documentation, research, protection, and educational projects.

Continue to participate in Arizona Archaeology Awareness Month events, along with other educational outreach that highlights the values of cultural heritage resources and the need to protect these resources.

Provide opportunities for tribal participation in research and interpretation.

Honor tribal requests to protect the confidentiality of sensitive information, to the extent permitted by law.

Complete Class II (sample) and Class III (intensive) field inventories to identify cultural resources and evaluate the condition of sites, in accordance with Section 110 of the NHPA. Use the information obtained through these surveys to allocate sites to proper use categories, develop protection measures, and integrate survey results into research designs and interpretation efforts.

Map and document sites before interpretive development for public use, as needed to

- preserve archaeological data,
- plan for interpretive facilities, and

- establish a baseline condition assessment for monitoring changes resulting from visitor use.

Complete interpretive plans for sites allocated to public use through interpretive development.

Implement procedures for systematic monitoring of all sites developed or authorized for public visitation. Restrict visitor access or group tours to prevent any damage from visitor use.

Require that holders of SRPs give site visitors suitable educational information on archaeological site etiquette and resource conservation.

2.7.1.6 Wilderness Characteristics

Land Use Allocation

Lands allocated to maintain wilderness characteristics.

This allocation complies with guidance in Instruction Memorandum (IM) 2003-275 Change 1, (Appendix I). This allocation is managed consistently with the directions in the referenced IM to maintain the landscape values described in Attachment 1 of that IM (which can be found in Appendix I).

Desired Future Condition

Lands allocated to maintain wilderness characteristics contain few human intrusions with primitive and natural landscape settings, providing self-reliant and self-directed visitor experiences. These characteristics have been determined to be reasonably present and of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and to be practical to manage. Wildlife populations and habitat are recognized as important aspects of the naturalness and will be actively managed.

Lands and resources within these areas exhibit a high degree of naturalness. These areas are affected mainly by the forces of nature, and the imprint of human activity is substantially unnoticeable. Naturalness is evaluated by the following:

- occurrence of vehicle routes, fences, wildlife, and range facilities,
- nature and extent of landscape modifications,
- presence of native plant and wildlife communities, and
- habitat connectivity.

Outstanding opportunities for solitude or primitive and unconfined recreation may be present. Travel will generally occur through non-motorized and non-mechanical means. Motorized use that does not degrade natural and cultural resources or conflict with DFC may be allowed on designated routes. Non-motorized conveyances (such as bicycles) will be allowed on designated trails. The use of wheeled game carriers will be allowed away from designated routes.

There will be no or minimal developed recreation facilities. Lands allocated to maintain wilderness characteristics will provide opportunities for visitor adventure, challenge, solitude, and discovery. Recreation settings and associated experiences will be semi-primitive non-motorized to primitive with limited areas of semi-primitive motorized around designated vehicle routes. Hunting, hiking, backpacking, camping, horseback riding, mountain bicycling, wildlife observation, photography, and historic/cultural study will be the chief activities with foot or horseback the customary means of travel.

Non-motorized access may include developing some trails, or simply marking foot routes with posts for minimal disturbance of the ground surface. Installing trails may be considered, where needed; to protect resources, to ensure public safety, or to advance public education and interpretation of objectives.

The rapid urbanization of central Arizona is expected to continue and demands on public lands are expected to increase. During the life of the plan, lands allocated to maintain wilderness characteristics will constitute some of the remaining large unaltered natural vistas within near proximity to the urbanizing areas. This "open space" would be maintained by careful project planning and design to minimize the visual intrusion of any management activity.

Management Actions

Lands allocated to maintain wilderness characteristics will be managed to protect primitive characteristics. The management actions are designed to

- maintain low interaction among users away from designated routes,
- provide opportunities for experiencing isolation from the sights and sounds of other humans.

Lands allocated to maintain wilderness characteristics will be managed to have limited evidence of human-induced management restrictions and controls. Visitors will be encouraged to practice Leave No Trace skills to avoid human-induced impacts.

Motorized vehicle routes within lands allocated to maintain wilderness characteristics will be designated in the Travel Management Plan within 5 years of plan approval. Vehicle routes would be mitigated to resolve conflicts with cultural, biological, or other resources to achieve DFC objectives (which may allow for motorized access in these areas). Mitigation measures may include the following:

- rerouting conflicting route segments,
- engineering to reduce conflicts ,
- limiting seasons of use, vehicle type, vehicle speed, or vehicle numbers, and
- closing routes.

BLM would consider building new routes only as a mitigation measure for route and resource

conflicts or where necessary to meet approved administrative actions.

Sites and areas affected by human activities would be reclaimed when such locales or sites are no longer needed by authorized land uses.

Commercial recreation and vending operations, guided hunt and associated activities, and concession leases would be allowed when such activities conform to to the following:

- land use plan objectives,
- desired recreation settings,
- VRM classes, and
- other social and managerial settings.

AGFD's use of motorized and mechanized equipment off designated routes is considered an administrative use and will be allowed in suitable locations (as agreed to by BLM and AGFD) for such purposes including, but not limited to the following:

- water supplementation,
- collar retrieval,
- capture and release of wildlife, and
- maintenance, repair, and building or rebuilding of wildlife waters.

Discretionary surface-disturbing activities that involve excavations or the use of motorized or mechanized equipment and are not compatible with achieving the DFC or specifically described for each area would be prohibited.

Administrative Actions

Develop and adopt measurement standards for limits of acceptable change for the following:

- trail conditions,
- visitor-to-visitor encounters,
- vegetation changes,
- applying Arizona Land Health Standards, and
- approved motorized and mechanized activities.

A permit system would be applied, if needed, for the following purposes:

- to conserve solitude and primitive recreation opportunities,
- to preserve desired social and managerial settings,
- to safeguard resources, and
- to mitigate resource impacts.

Any permit system would include coordination with other State and Federal entities that issue use permits on Federal lands to assure that authorized permittees have fair and reasonable access to their permitted activity. For example, should a permit system be implemented, BLM will coordinate with AGFD to allow access for hunters with valid hunting licenses.

2.7.1.7 Paleontological Resources

Desired Future Condition

Paleontological resources will be managed for their scientific, educational, recreation values, and adverse impacts to these resources will be mitigated. BLM will preserve and protect significant vertebrate paleontological resources for present and future generations. Scientifically significant invertebrates (to be determined by a qualified paleontologist) will also be protected.

Land Use Allocations

Areas will be classified according to their potential to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. Paleontological Sensitivity Classes are listed in Table 2-6.

Management Actions

BLM will identify and protect significant fossils and allow for scientific research at paleontological sites, in accordance with permitting procedures.

Should paleontological resources be discovered within the planning area, the sites will be evaluated for sensitivity. The sites would then be classified and managed consistent with the land use allocation classifications described above.

Administrative Actions

BLM will include paleontological resources in its cultural resources public education.

Educational programs will:

- provide information directly related to procedures to be followed if fossils are found, and
- identify types of fossils that cannot be collected without a permit from the BLM.

BLM will analyze the potential for paleontological resources and do the following:

- Develop a sensitivity map for paleontological resources and require screening for all projects against potential for the project to impact vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils.
- Allocate through plan amendment if appropriate, all lands within the planning areas as Paleontological Sensitivity Class One, Two, Three, or Four as described in Table 2-6.
- Evaluate newly found vertebrate localities to determine their importance and the potential threat of loss to determine an adequate monitoring program.

Classification	Definition
Class 1 (Low sensitivity)	Igneous and metamorphic geologic units and sedimentary geologic units where vertebrate fossils or uncommon invertebrate fossils are unlikely to occur.
Class 2 (Moderate sensitivity)	Sedimentary geologic units that are known to contain or have unknown potential to contain fossils that vary in significance, abundance, and predictable occurrence.
Class 3 (Moderate sensitivity)	Areas where geologic units are known to contain fossils but have little or no risk of human-caused adverse impacts or low risk of natural degradation.
Class 4 (High sensitivity)	Areas where geologic units regularly and predictably contain vertebrate fossils or uncommon invertebrate fossils and are at risk of natural degradation or human-caused adverse impacts.

2.7.1.8 Visual Resources

Land Use Allocations

Visual Resource Management Areas

Desired Future Conditions

As defined in BLM's Handbook H-8410-1, Visual Resource Inventory, (Section B, one through four) objectives for the four VRM classes are described below:

VRM Class I Objective: The objective of this landscape. This class provides for natural ecological changes, but it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

VRM Class II Objective: The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low.

Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

VRM Class III Objective: The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

VRM Class IV Objectives: The objective of this class is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer's attention. Every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Management Actions

Project proposals that could result in surface disturbance or may contain visible components would be analyzed using procedures outlined in BLM Handbook H-8431-1, Visual Contrast Rating, to determine their conformance with the VRM allocation of the project area. If necessary, modifications would be made to the project, including design changes or a change of location, for the project to meet the VRM Class objective. In any case, regardless of VRM Class, an effort will be made to make any project proposal with a visible component as visually compatible with its surroundings as practical.

2.7.1.9 Rangeland Management

The following actions would apply to Alternatives in which grazing is permitted.

They would also apply to grazing management in the interim period from when grazing is prohibited to the final removal of livestock:

BLM has implemented the application of Standards for Rangeland Health and Guidelines for Grazing Administration (Land Health Standards). Allotment evaluations to determine if grazing practices are achieving the desired standards are conducted before the grazing permit or lease is renewed. Changes in grazing practices needed to achieve the standards are then incorporated in the stipulations of the reissued permit or lease. Rest-rotation, deferred-rotation, seasonal or short-duration use, or other management systems may be implemented where needs are identified through monitoring. Monitoring will be used to assess the effectiveness of changes brought about by the new management practices.

Exceptions to Standard 1 and 2 of the Arizona Standards for Rangeland Health may occur on ecological sites or stream reaches where a change in existing vegetation is physically, biologically, or economically impractical.

Public Lands without a grazing permit or lease authorization would remain unauthorized for livestock grazing.

Where livestock grazing is permitted, range improvements needed for proper management of the grazing program would be determined and completed, including repair and/or installation of fences, cattle guards, water developments, and vehicle routes needed to access improvement sites. These improvements would be conducted using a variety of mechanical equipment.

Vehicular access to repair range improvements by the grazing permittee or lessee would be considered administrative access. Use of vehicle routes closed to public use but limited to administrative uses would be allowed to maintain or repair range improvements. Off-route vehicular use would require prior authorization unless the needed access is to

resolve an immediate risk to human health, safety, or property.

One-time travel off designated routes to access or retrieve; sick or injured livestock would be authorized as an administrative use for transporting the animal to obtain medical help. Retiring livestock grazing from an allotment would be considered when those lands are devoted to a public purpose that precludes continued livestock grazing.

Arizona Standards for Rangeland Health - Guidelines for Grazing Administration

The Arizona Standards for Rangeland Health and Guidelines for Grazing Administration are a series of management practices used to ensure that grazing meets the standards for rangeland health, which are referred to in this plan as Land Health Standards. The following guidelines apply to all areas where grazing occurs.

Guidelines for Standard One

1-1. Management activities will maintain or promote ground cover that will provide for infiltration, permeability, soil moisture storage, and soil stability appropriate for the ecological sites within MUs. The ground cover should maintain soil organisms, plants, and animals; to support the hydrologic and nutrient cycles and energy flow. Ground cover and signs of erosion are surrogate measures for hydrologic and nutrient cycles, and energy flow.

1-2. When grazing practices alone are not likely to restore areas of low infiltration or permeability, land management treatments may be designed and implemented to attain improvement.

Guidelines for Standard Two

2-1. Management practices maintain or promote sufficient vegetation to maintain, improve or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge, and stream bank stability, thus promoting stream channel morphology (e.g.

gradient, width/depth ratio, channel roughness, and sinuosity), and functions suitable to climate and landform.

2-2. New facilities are located away from riparian-wetland areas if they conflict with achieving or maintaining riparian-wetland function. Existing facilities are used in a way that does not conflict with riparian-wetland functions or are relocated or modified when incompatible with these functions.

2-3. The development of springs, seeps, or other projects affecting water, and associated resources will be designed to protect ecological functions and processes.

Guidelines for Standard Three

3-1. The use and perpetuation of native species will be emphasized. When restoring or rehabilitating disturbed or degraded rangelands, nonintrusive, non-native plant species are suitable for use where native species (a) are not available, (b) are not economically feasible, (c) cannot achieve ecological objectives as well as non-native species, and/or (d) cannot compete with already established non-native species.

3-2. Conservation of Federal threatened or endangered, proposed, candidate, and other special status species is promoted by maintaining or restoring their habitats.

3-3. Management practices maintain, restore, or enhance water quality in conformance with State or Federal standards.

3-4. Intensity, season and frequency of use, and distribution of grazing use should provide for growth and reproduction of plant species needed to reach DPC (Desired Plant Community) objectives.

3-5. Grazing on designated ephemeral (annual and perennial) rangeland may be authorized if the following conditions are met:

- Ephemeral vegetation is present in draws, washes, and under shrubs, and

has grown to useable levels at the time grazing begins; as well as sufficient surface and subsurface soil moisture exists for continued plant growth.

- Serviceable waters can provide for proper grazing distribution.
- Sufficient annual vegetation will remain on site to satisfy other resource concerns (e.g. watershed, wildlife, wild horses, and burros).
- Monitoring is conducted during grazing to determine if objectives are being met.

3-6. Management practices will target populations of noxious weeds that can be controlled or eliminated by approved methods.

3-7. Management practices to achieve DPCs will consider protecting and conserving known cultural resources, including historical sites, prehistoric sites, and plants of significance to Native American people.

DPC objectives would be quantified for each allotment through the rangeland monitoring and evaluation process. Ecological site descriptions available through the Natural Resources Conservation Service (NRCS), and other data will be used as a guide for addressing site capabilities and potentials for change over time. These DPC objectives are vegetation values that BLM is managing over the long term. Once established, DPC objectives would be updated and monitored by the use of indicators for Land Health Standard Three.

Apply management actions outlined in the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (Land Health Standards) to recognize and correct potential erosion problems that could degrade other resources, with prioritized emphasis on sites that might directly affect species that have been listed as threatened, endangered, or candidate by the USFWS.

2.7.1.10 Fire Management

Desired Future Conditions

- Fire is recognized as a natural process in fire-adapted ecosystems and is used to achieve objectives for other resources.
- Fuels in the Wildland Urban Interface (WUI) are maintained at non-hazardous levels to provide for public and firefighter safety.
- Prescribed fire complies with Federal and State air quality regulations.
- Each vegetation community is maintained within its natural range of variation in plant composition, structure, and function, and fuel loads are maintained below levels that are considered to be hazardous (See Table 2-7 and Appendix J for more information on each vegetation community).
- DFCs will be coordinated with the rangeland standard and guidelines allotment evaluations.

Land Use Allocation

BLM-administered public lands will be assigned to one of the following two land use allocations for fire management (Table 2-7).

Allocation One - Wildland Fire Use:

Areas suitable for wildland fire use for resource management benefit.

Where wildland fire is desired, few or no constraints exist on its use, and conditions are suitable, unplanned and planned wildfire may be used to achieve desired objectives such as the following:

- to improve vegetation, wildlife habitat, or watershed conditions,
- to maintain non-hazardous levels of fuels,
- to reduce the hazardous effects of unplanned wildland fires, and
- to meet resource objectives.

Where fuel loading is high but conditions are not initially suitable for wildland fire, fuel loads are reduced by mechanical, chemical, or biological means to reduce hazardous fuel levels and meet resource objectives (includes WUI areas).

Management Actions

Use suitable tools for reducing hazardous fuels, including prescribed burning, wildland fire use, and mechanical methods. Methods can include the following:

- chainsaws,
- motorized equipment for crushing brush,
- tractor and hand piling,
- thinning and pruning, and
- treatments selected on a site-specific case that are ecologically suitable and cost effective.

Land Use Allocation

Allocation Two - Non Wildland Fire Use:

Areas not suitable for wildland fire use for resource benefit.

This allocation includes areas such as the following where mitigation and suppression are required to prevent direct threats to life or property:

- areas where fire historically never played a large role in developing and maintaining the ecosystem,
- areas where intervals between fires were very long, and
- areas (including some WUI areas) where an unplanned ignition could harm the ecosystem unless some form of mitigation is applied.

Mitigation may include mechanical, biological, chemical, or prescribed fire means to maintain non-hazardous levels of fuels, reduce the hazardous effects of unplanned wildland fires, and meet resource objectives.

The allocation of lands is based on the DFC of vegetation communities, ecological conditions, and ecological risks. The allocation of lands is determined by contrasting current and historical conditions and ecological risks of any changes (Map 2-93 Fire Land Use Allocation). The condition class concept helps describe changes in key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. BLM fire management plans will include the two allocations and identify areas for including fire use and mechanical, biological, or chemical means to

- maintain non-hazardous levels of fuels,
- reduce the hazardous effects of unplanned wildland fires, and
- meet resource objectives.

Fire management plans will also determine which areas will be excluded from fire (through fire suppression) and which will receive chemical, mechanical, or biological treatments.

Management Actions

In areas not suitable for fire, BLM would implement programs to reduce unwanted ignitions and emphasize prevention, detection, and rapid suppression response.

In areas not suitable for fire where fuel loading is high, BLM would use biological, mechanical, or chemical treatments and some prescribed fire to maintain non-hazardous levels of fuels and meet resource objectives.

In areas suitable for fire where fuel loading is high and current conditions constrain fire use, BLM would emphasize prevention and mitigation programs to reduce unwanted fire ignitions and use mechanical, biological, or chemical treatments to mitigate the fuel loadings and meet resource objectives.

In areas suitable for fire where conditions allow, BLM would do the following:

- allow naturally ignited wildland fire,
- use prescribed fire and a combination of biological, mechanical, and chemical treatments to maintain nonhazardous levels of fuels,
- reduce the hazardous effects of unplanned wildland fires, and
- meet resource objectives.

In areas suitable for fire, BLM would monitor existing air quality levels and weather conditions to determine which prescribed fires can be ignited and which, if any, must be delayed to ensure that air quality meets Federal and State standards. If air quality approaches unhealthy levels, BLM would delay igniting prescribed fires.

In addition to both allocations, to reduce human-caused fires, BLM would undertake education, enforcement, and administrative fire prevention mitigation measures. Education measures would include the following:

- provide media information, including a signing program,
- give the public information on the natural role of fire within local ecosystems, and
- participate in fairs, parades, and public contacts.

Enforcement would train employees interested in determining the cause of fires. Administration would include expanded prevention and education programs with cooperator agencies.

For all fire management activities (wildfire suppression; appropriately managed wildfire use; prescribed fire; and mechanical, chemical, and biological vegetation treatments), conservation measures would be implemented as part of the proposed action to provide statewide consistency in reducing the effects of fire management on federally protected (threatened, endangered, proposed, and candidate) species (see Appendix P).

Use suitable tools for reducing hazardous fuels, including prescribed burning, wildland fires,

and mechanical methods. Methods can include chainsaws, motorized equipment for crushing brush, tractors and hand piling, thinning and pruning, and treatments that are selected on a site-specific basis and are ecologically suitable and cost effective.

Conservation measures noted as “recommended” are discretionary for implementation but are recommended to help minimize effects to federally protected species. Incorporated here by reference are procedures within the Interagency Standards for Fire and Fire Aviation Operations (Task Group 2004), including future updates, relevant to fire operations that may affect federally protected species or their habitat.

Firefighter and public safety are the first priority in every fire management activity. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources must be based on the following:

- values to be protected,
- human health and safety, and
- costs of protection (BLM 2001b).

Implementing, to the extent possible, the following conservation measures during fire suppression and during proposed fire management activities, as required, would minimize or eliminate the effects to federally protected species and habitats.

During fire suppression resource advisors may be designated to coordinate concerns on federally protected species and to serve as liaison between the field office manager and the incident commander and the incident management team. Resource advisors will also serve as field contact representatives responsible for coordinating with the USFWS. Resource advisors will have the needed information on federally protected species and habitats in the area and the available conservation measures for the species. They will be briefed on the intended suppression actions for the fire and will provide input on which conservation measures

are suitable within the standard constraints of safety and operational procedures. The incident commander has the final decision making authority on implementation of conservation measures during fire suppression.

Conflicts may occur in attempting to implement all conservation measures for every species potentially affected by a particular activity, because of the number of species within the action area for the proposed statewide land use plan amendment (Dynamac Corporation 2004); and the variety of fire suppression and proposed fire management activities. Implementing these conservation measures would depend on:

- the number of federally protected species and
- their individual life histories or habitat requirements within a particular location that is being affected by either fire suppression or a proposed fire management activity.

Conflicts could particularly arise from timing restrictions on fuel treatment if the ranges of several species with differing restrictions overlap. It could; therefore, be impossible to effectively implement the activity. Resource advisors (in coordination with USFWS), fire management officers, incident commanders, and other resource specialists would need to coordinate to determine which conservation measures would be implemented during a particular activity. If conservation measures for a species cannot be implemented, BLM would be required to initiate Section 7 consultation with USFWS for that activity.

BLM will update local fire management plans to include site-specific actions for managing wildfire and fuels in accordance with the new Federal fire policies, based on guidance provided in the decision records for this statewide land use plan amendment (Dynamac Corporation 2004). These plans will be coordinated with USFWS and the AGFD to address site-specific concerns for federally protected species. These plans will incorporate

the conservation measures included in this statewide land use plan amendment for federally protected species occurring within each fire management zone. BLM will consult with USFWS on these project-level plans, as needed.

Categories A, B, C, and D, polygons are referenced in the 1998 Fire Management Plan (FMP). The FMP was updated in 2007 and has fire management units containing polygons based on the following:

- vegetation communities,
- fire regime condition classes, and
- closeness to urban interface areas.

As a fuels management tool, BLM uses prescribed fire and mechanical treatment to maintain semi-desert grasslands in Agua Fria National Monument. BLM has designated 24 burn units, encompassing 50,000 acres, to receive treatment on a 5- to 10-year rotation. Prescribed fire in this area is coordinated closely with similar projects conducted by Prescott and Tonto National Forests to provide an ecosystem-wide effort to maintain the Agua Fria grasslands.

Resource objectives under the current fire management plan include the following:

- reducing woody species,
- increasing ground cover,
- increasing perennial grass cover and production,
- increasing annual grass and forb production, and
- improving pronghorn antelope habitat.

Prescribed fire is used in the Weaver Mountains within the Bradshaw-Harquahala Planning Area. The Weaver Mountain Hazard Fuels Reduction Project was developed to treat hazard fuel accumulations, which are located on 14,000 acres of BLM, State, and private lands in chaparral vegetation 17 miles north of Wickenburg. Project objectives are (1) to reduce the risk of large, catastrophic wildfire and (2) to maximize benefits to wildlife and livestock by reducing dense chaparral cover by

30 percent to 80 percent. During prescribed burning about 1,000 acres of chaparral will be treated annually over the next 5 to 10 years to create mosaic patterns in the mixed age class chaparral community throughout the 14,000 acre project area.

Special Area Designations

Fire management activities in Agua Fria National Monument would ensure that no adverse effects occur to the resources listed in the proclamation (Appendix A) as the reasons for establishing the area.

In wilderness areas, when suppression actions are required, minimum impact suppression tactics (MIST, Interagency Standards for Fire and Fire Aviation Operations [Task Group 2004]) would be applied and coordinated with wilderness area management objectives and guidelines.

Fire management efforts along river segments recommended as suitable for designation under the WSR Act would use measures that avoid degrading the outstandingly remarkable values that qualify the rivers for designation.

ACECs are established in land use plans. BLM would consider the desired conditions and management prescriptions for these Special Area Designations in implementing fire management activities.

Wildfires resulting from natural fire starts (lightning) from an adjoining ownership may be allowed to cross jurisdictional boundaries if the fire meets predetermined, prescription criteria, and the ownerships have an agreement.

2.7.1.11 Recreation

Standards for Recreation Settings referred to in this document are as follows:

Recreation Settings - Settings described in the recreation opportunity spectrum (ROS)

inventory method. Descriptions of the settings follow:

Primitive:

Remoteness: An area designated by a line generally three miles from all open roads, railroads, and motorized trails

Evidence of Humans: Setting is essentially an unmodified natural environment. Evidence of humans would be unnoticed by an observer wandering through the area.

Evidence of trails is acceptable but should not exceed standard to carry expected use.

Structures are extremely rare.

Social: Usually less than six parties per day encountered on trails and less than three parties visible at campsites.

Managerial: Onsite regimentation is low with controls primarily offsite.

Semi-primitive Non-motorized:

Remoteness: An area designated by a line generally 1/2 mile from any road, railroad, or trail open to public motorized use. (The guideline for applying the 1/2 mile criterion is to use 1/2 mile except where topographic or physical features closer than 1/2 miles adequately screen out the sights and sounds of humans and make access more difficult and slower. For example, if a ridge is 1/4 mile from the road, use the ridge instead of the 1/2 mile.)

Any roads, railroads, or trails within the semi-primitive non-motorized areas will have the following characteristics:

Closed to public motorized use, and

Are reclaimed, or in the process of reclaiming (when reclaiming will harmonize with the natural appearing environment). Some examples are old logging roads, old railroad beds, old

access routes to abandoned campsites, temporary roads, and gated roads that are used for occasional administrative access.

Evidence of Humans: Natural setting may have subtle modifications that would be noticed but not draw the attention of an observer wandering through the area.

Little or no evidence of primitive roads and the motorized use of trails and primitive roads.

Structures are rare and isolated.

Social: Usually 6-15 parties per day encountered on trails and six or fewer parties visible from campsite.

Managerial: Onsite regimentation and controls present but subtle.

Semi-Primitive Motorized:

Remoteness: An area designed by a line generally 1/2 mile from open better than primitive roads. (The guideline for applying the 1/2 mile criterion is to consistently use 1/2 mile where topographic or physical features closer than 1/2 mile adequately screen out the sights and sounds of humans, e.g. a ridge 1/4 mile from the road).

Contains open primitive roads that are not maintained for the use of standard passenger-type vehicles, normally OHVs and high-clearance vehicles, e.g. an old pickup with high clearance. These open roads are generally tracks, ruts, or rocky-rough surface and ungraded and not drained. The roadbeds and cuts are mostly vegetated with grass or native material unless they are too rocky for vegetation. The roads harmonize with the natural environment. Examples include old logging roads from before specified road years, old revegetated railroad beds, old access roads to abandoned home-sites, temporary logging roads that are revegetated, and low standard administrative roads (normally used for access to wildlife openings).

Evidence of Humans: Natural setting may have moderately dominant alterations but would not draw the attention of motorized observers on trails and primitive roads within the area. Any closed improved roads must be managed to revegetate and harmonize with the natural environment.

Strong evidence of primitive roads and the motorized use of trails and primitive roads.

Structures are rare and isolated.

Social: Low to moderate contact frequency.

Managerial: Onsite regimentation and controls present but subtle.

Roaded Natural:

Remoteness: No criteria

Evidence of Humans: Natural setting may have modifications, which range from being easily noticed to strongly dominant to observers within the area. But from sensitive travel routes and use areas these alterations would remain unnoticed or visually subordinate.

There is strong evidence of designed roads, highways, or both.

Structures are generally scattered, remaining visually subordinate or unnoticed to the sensitive travel route observer. Structures may include utility corridors or microwave installations.

Social: Frequency of contact is - Moderate to high on roads; Low to Moderate on trails and away from roads.

Managerial: Onsite regimentation and controls are noticeable but harmonize with the natural environment.

Rural:

Remoteness: No criteria

Evidence of Humans: Natural setting is culturally modified to the point that it is dominant to the sensitive travel route observer. This setting may include pastoral, agricultural, intensively managed wildland resource landscapes, or utility corridors. Pedestrian or other slow-moving observers are constantly within view of culturally changed landscape.

There is strong evidence of designed roads, highways, or both.

Structures are readily apparent and may range from scattered to small dominant clusters, including utility corridors, farm buildings, microwave installations, and recreation sites.

Social: Frequency of contact is - Moderate to High developed sites, on roads and trails, and water surfaces; Moderate away from developed sites.

Managerial: Regimentation and controls obvious and numerous, largely in harmony with the human-made environment.

Urban:

Remoteness: No criteria

Evidence of Humans: Setting is strongly structure dominated. Natural or natural appearing elements may play an important role but be visually subordinate. Pedestrian and other slow moving observers are constantly within view of artificial enclosure of spaces.

There is strong evidence of designed roads and/or highways and streets.

Structures and structure complexes are dominant.

Social: Large numbers of users onsite and in nearby areas.

Managerial: Regimentation and controls obvious and numerous

Implementation: Projects requiring environmental analysis as a part of an authorization process will include an analysis to determine compatibility or consistency with the settings as described above. This analysis will be conducted consistent with current accepted practice and documented in the project record.

2.7.1.12 Travel Management

All motorized and mechanized travel is limited to existing roads and trails, according to the current inventory of routes, until final route designations are made.

The boundaries of Travel Management Areas correspond to Management Unit boundaries. Travel management plans (TMPs) will be created for each Travel Management Area (TMA) as route designations are completed. The TMP will address issues such as:

- Creating a catalog for each individual route's Travel Management Objective (TMO) sheets;
- Risk management
- Coordination with adjoining jurisdictions
- Procedures for making additions and deletions from the route system;
- Signing plans and sign inventories;
- Facility development (engineering);
- Education and enforcement;
- System monitoring and compliance;
- Coordination with BLM's Facility and Asset Management System (FAMS);
- Dust management plans;
- Other topics as necessary to manage travel.

The following considerations will guide decisions on travel management.

- a. Designated wilderness areas are managed according to the existing decisions described in this plan.
- b. All areas outside of designated wilderness are limited vehicle use areas where vehicles are

limited to routes designated as open or available for vehicle use as follows:

- Non-motorized, mechanized vehicle use (e.g., bicycles, hang gliders, other devices for conveyance and stock drawn carts/wagons) is restricted to routes or sites designated as available, or open for such use. Non-motorized, hand-powered wheeled game carriers are permitted as described below.
 - Decisions regarding motorized vehicles are according to the prescriptions in the Travel Management sections of this plan.
- c. Non-mechanized travel (i.e., foot and equestrian use) is allowed off designated routes, except where otherwise prohibited. The creation of routes caused by repetitive use is discouraged. Routes not meeting land health standards or plan objectives may be closed.
 - d. All caves, mines, wells, abandoned structures, or other confined spaces are closed to public entry unless an individual site is signed open for such entry or entry is authorized under special use permit.
 - e. The use of aircraft, motorized and non-motorized, must conform to Federal Aviation Administration (FAA) standards including the use of backcountry landing strips. There are no backcountry airstrips designated for public use on BLM land within the planning area. Use of public lands for launching or landing aircraft other than airplanes (balloons, hang gliders, etc.) may be permitted on a case-by-case basis through the appropriate permit process. The Yarnell Hang Gliding launch area is discussed in other sections of this plan.
 - f. Area closures to access and travel methods may be enacted where travel is determined to be inconsistent with the recreation management zone, harming resources, or failing to achieve the objectives of the plan.
 - g. Touring routes and trail systems, both motorized and non-motorized, are a priority and will be addressed through activity (implementation) level planning. Proposed actions that may effect proposed touring routes and trail systems will be evaluated and adjusted when possible to avoid impacts. Examples of priority routes and trail systems include the Maricopa County Regional Trail

- System and long distance vehicle touring routes with local and regional significance.
- h. Administrative and other authorized use will be approved on a case-by-case basis (see decision of administrative and emergency access below).
 - i. Temporary access and use restrictions may be enacted when needed to protect resources or public health and safety.

PM₁₀ Non-attainment Area Administrative TMA:

- a. All General TMA prescriptions apply.
- b. The areas described in 40 CFR 81.303 or subsequent regulation or policy as PM₁₀ air quality non-attainment areas will be managed for compliance with EPA and County standards and other applicable standards to maintain air quality. Dust mitigation measures may be implemented including, but not limited to, speed limits, adding dust reducing agents to disturbed areas, seasonal closure, or year round closure.

2.7.2 Management Common to Agua Fria National Monument

2.7.2.1 Management Units

The size and complexity of Agua Fria National Monument does not require subdivision into MUs. The monument is a MU in and of itself.

2.7.2.2 Special Area Designations

Management Actions

Continue to manage the suitable WSR proposals for non-impairment of free-flowing conditions and identified outstandingly remarkable values (Map 2-2).

Remove the designations of Larry Canyon and Perry Mesa ACECs because the Monument Proclamation (Appendix A) provides for a

higher level of protection and management across a more extensive landscape, rendering these designations unnecessary.

2.7.2.3 Lands and Realty

In accordance with the FLPMA and the National Monument Proclamation (Appendix A), no lands within the monument may be disposed of or exchanged. Acquiring non-Federal lands within the monument will be considered if they become available from a willing seller. Upon acquisition, these lands would automatically become a part of the monument. Acquiring adjacent non-Federal lands (from a willing seller) will be considered if they could be managed to enhance monument values.

Land Use Allocations

Utility and Transportation Corridors and Communication Sites

Management Actions

New utility corridors, whether interstate, intrastate, or local, would not conform to the provisions of the National Monument Proclamation. Therefore, such corridors within the monument will not be considered.

New transportation corridors, whether interstate, intrastate, or local, would not conform to the proclamation. Therefore, such corridors within the monument would not be considered.

New BLM communication site areas designated in advance of demand would not conform to the proclamation. Therefore, new communication site areas within the monument would not be considered.

Access to existing utilities on existing vehicle routes is considered an administrative use and is allowed. Continued maintenance of authorized facilities is also allowed with suitable mitigation to minimize affects to monument resources. Design maintenance of vehicle routes for access to correct hazardous or unsafe conditions,

but keep them to the smallest size and condition necessary to provide access.

2.7.2.4 Soil, Air, and Water Resources

Management Actions

Maintain and protect water quantity and quality in springs and streams.

Prohibit surface water diversions and groundwater pumping that removes water from the monument or adversely affects the monument's values.

Collaborate with State and local entities to protect surface and subsurface water in the monument.

Administrative Actions

Develop and implement a water quality/quantity monitoring program to establish baseline data needed to quantify the Federal reserved water right for the monument. Monitoring may include the following:

- periodic measurements of spring and stream flows,
- periodic measurements of water levels in selected wells, and
- regular sampling and water quality analysis of surface water throughout the monument.

2.7.2.5 Biological Resources

Management Actions

Fuels reduction projects may include provisions for permitting firewood collection on a case-by-case basis.

Written authorization from the monument manager is needed for collecting plant materials for scientific purposes.

Prohibit all other vegetation collection or removal.

2.7.2.6 Cultural Resources

Land Use Allocations

The following sites would be allocated to the category of “conservation for future use”:

- Rattlesnake Pueblo and other prehistoric masonry structures in the back country region south of Perry Tank Canyon,
- all rock art sites larger than a single, isolated boulder, and
- the historic stone features at Arizona N:16:70 (MNA).

For more information on this use category and associated actions, see Appendix E.

Allocate to scientific use sites that would allow for study under approved research plans.

The use category of “discharged from management” would be applied in a limited manner, consistent with the protection of monument resources and the cultural landscape of the Perry Mesa National Register District. The allocation of "discharged from management" would be applied mainly to properties that have lost their heritage values through the following:

- damage or destruction by natural processes,
- unauthorized activities, and
- actions conducted before the monument was established (2000).

Selected sites would be allocated to public use for long-term preservation and public visitation. See Appendix E for more information on this use category.

Management Actions

At sites allocated to conservation for future use, scientific studies would normally be limited to

surveys, mapping, and other noninvasive documentation methods. The BLM would preserve the integrity of these sites and their settings through use restrictions and protective measures. Following BLM's Manual 8110, the BLM could specify provisions that would allow for scientific excavations, under limited circumstances. The permit applicant would need to justify why this work would be a critical component of an approved research design, and why the needed information could not be obtained elsewhere in the monument.

Scientific use allocations would allow for the following:

- detailed documentation through such techniques as mapping, photography, photogrammetry, and remote sensing,
- sample collections of artifacts,
- collections of samples for radiocarbon, archaeomagnetic, pollen, and flotation analyses, and
- limited excavations.

Studies may be conducted for the following purposes:

- to obtain critical data relevant to research objectives,
- to assess site protection and stabilization needs, and
- to support interpretive planning for properties also allocated to public use.

Research plans would ensure that most architectural features and cultural deposits remain intact at habitation sites with multiple rooms. Protection would remain a priority for sites that have been allocated to scientific uses.

Assign a high priority for detailed documentation to the following sites:

- Pueblo la Plata, Fort Silver, Baby Canyon Pueblo, and Pueblo Pato.

- Rock art sites on Black Mesa and along Baby Canyon and Perry Tank Canyon on Perry Mesa.
- The remnants of the historic Richinbar Mine water delivery system in the Agua Fria River Canyon.

Allocate specific sites to public use within Special Cultural Resource Management Areas. The degrees of interpretive development within these areas would be consistent with relatively High or Moderate levels of use. Sites would not be allocated to public use within areas set aside for low use. Actions that could be implemented at or near selected sites in each level of use area are described as follows.

Potential Management Actions for Special Cultural Resource Management Areas

High Public Use

- Building visitor facilities, which may include gravel parking areas, restrooms, picnic tables, trash receptacles, and benches.
- Improving routes with signs installed along vehicle routes to direct visitors to interpreted sites and visitor facilities. Routes would not be paved.
- Closing routes within 1/4 to 1/2 mile of sites, with single- and two-track routes converted to non-motorized use to improve visitor flow and site protection.
- Establishing hardened walking trails.
- Installing interpretive signs and visitor register boxes.
- Conducting limited excavations, backfilling pueblo rooms, or stabilizing walls to protect or display portions of sites.
- Establishing interpretive loop trails connecting archaeological sites and natural features. Non-motorized or motorized trail systems could be linked to sites in Tonto National Forest.
- Preparing brochures and other educational materials or programs focused on sites.

- Showing site locations on maps, monument brochures, and BLM's websites.
- Authorizing commercial and other group tours, conducted in accordance with special SRPs.

Moderate Public Use

- Installing interpretive signs and visitor register boxes.
- Establishing non-motorized trails, including hardened walking trails.
- Closing existing trails within 1/4 to 1/2 mile from sites to vehicles and converting to non-motorized use to improve site protection.
- Producing fact sheets or brochures.
- Providing limited publicity and limited access for commercial tours.
- Placing emphasis on conveying an experience of discovery.

Low Public Use

- Allocating no sites to public use for interpretive development.
- Installing no interpretive signs or facilities.
- Building no trails.
- Developing no fact sheets or interpretive media about specific sites.
- Issuing no special recreation permits for commercial tours.
- Publicizing and showing no sites on maps and brochures.
- Allowing hikers and other visitors to experience a sense of discovery by encountering and observing undeveloped sites in pristine settings.

Administrative Actions

Conduct field inventories to identify significant resources in the geographic "data gap" north of Perry Mesa.

Conduct a Class III survey of 500 acres at the north end of Black Mesa to complete a 100

percent level of inventory coverage of the mesa, which north of Sunset Canyon.

Conduct Class III surveys of corridors at least 200-foot wide along 20 miles of Bloody Basin Road, Forest Road 14, and other regularly used routes on Perry Mesa.

Conduct Class III surveys of corridors at least 1/4 mile wide totaling 12 miles along the Agua Fria River, Silver Creek, Sycamore Creek, Indian Creek, and Ash Creek.

Conduct Class III surveys of at least 2,000 acres surrounding Pueblo la Plata, Baby Canyon Pueblo, and Pueblo Pato.

Continue to monitor at least 15 pueblo villages and rock art sites that are at greatest risk from vandalism, with help from partners who may include the Civil Air Patrol and volunteers from the Arizona Site Steward Program. Develop and implement systematic monitoring protocols for selected sites.

Focus monitoring on rock art sites and habitation sites with 20 or more rooms, particularly sites within 1/2 mile of travel routes. This strategy conforms to the results of a vandalism study by BLM and Tonto National Forest (Ahlstrom and others 1992).

Develop and maintain an active program of public education on the nature and values of the monument's cultural resources and the need to preserve them. Assist BLM's National Heritage Education Program and its partner organizations in pursuing and implementing grants to produce educational materials.

Actively pursue partnerships with professional and avocational organizations, academic institutions, tribal governments, and other entities for an orderly process of cultural research, recordation, and education. Coordinate with tribes and Tonto National Forest to prepare an ethno-historical study of the history of Native American uses and heritage values in the Perry Mesa National Register District.

2.7.2.7 Recreation Resources

Commercial permits are issued to qualified applicants on a first-come, first-served basis based on monument values and how they meet resource and public health and safety concerns.

Competitive and organized group and event activity permits are issued on a case-by-case basis based on monument values and how they meet resource and public health and safety concerns.

Permit allocations for commercial and organized groups and events could be adjusted based on monitoring of areas to be used, to accurately accommodate level of use, to sustain monument objects and resources while maintaining desired social and managerial settings.

Recreation within the monument boundaries would focus on activities or experiences that depend on the monument's resources and cannot readily be obtained elsewhere. Recreation uses that do not depend on the lands within the monument would be encouraged to move to other BLM-managed lands. Emphasis would be placed on maintaining ecological resources by monitoring and managing recreation uses.

It is highly desirable that the public understand its role in sustaining the monument's archaeological, historical, and biological resources. Partnerships with adjacent communities would play a vital role in realizing the monument's DFC. Through these partnerships, members of these communities could explore ways to benefit socially and economically from public lands by offering needed services while still protecting monument values.

The emphasis of recreation management on monument lands would be guided under provisions presented for a Special Recreation Management Area containing three Recreation Management Zones (RMZs). The RMZ allocations are as follows: Front Country, Back Country, and Passage.

Land Use Allocation

Front Country Recreation Management Zone

Desired Future Condition

This zone will be the focal point for both motorized and non-motorized visitation, concentrating public access, recreation activities, development along major travel routes, and more intensively visited use areas. The Front Country RMZ will contain more developed opportunities, such as interpretive opportunities at popular sites, and supporting recreation facilities where intensive management is needed. Management will place an emphasis on maintaining public access to the Front Country RMZ for public use, while maintaining the integrity of monument resources and values. Some areas may be designated as day use to promote visitor safety, and for resource protection.

Desired recreation opportunity experiences, and settings within the Front Country RMZ will range between rural, roaded-natural, and semi-primitive motorized. Both day use and overnight recreation uses will be acceptable unless otherwise specified in the land-use plan allocations. Day-use areas with more intensive use will be evaluated and sited within the Front Country.

Visual Resource Management DFCs related to Recreation can be found in Section 2.7.2.8.

Management Actions

Provide interpretive sites, trails, overlooks and other amenities, visitor services where appropriate to protect monument resources, or enhance public use and enjoyment. Selected cultural sites allocated to public-use levels High and Moderate would be interpreted for public visitation/education. Access to improvements may include development of non-motorized trails of dirt, pavement, or other hard surfaces in order to assist visitor travel and minimize disturbance to cultural and natural resources.

Management Actions related to motorized and non-motorized recreation routes are described in the Travel Management Section 2.7.2.10.

Land Use Allocation

Back Country Recreation Management Zone

Desired Future Condition

This zone will provide an undeveloped, primitive, and self-directed visitor experience and landscape setting without provisions for motorized or mechanical access. The management emphasis will be to preserve natural, undeveloped landscapes. Back Country will be managed to maintain a natural landscape character. The Back Country RMZ will provide opportunities for adventure, challenge, solitude, and discovery. Facilities will be minimal: provided only where vital for resource protection or public safety, or for approved administrative purposes. Facilities will generally be limited to trails, signs and other amenities, which are essential to the protection of monument resources. Maintaining the integrity of the monument values and resources is integral to any activity.

The desired recreation settings and associated experiences within this zone are mainly semi-primitive and non-motorized. The Back Country RMZ will offer non-motorized access and recreation opportunities within primitive settings, where self-reliant and properly equipped visitors can experience solitude. Encounters with other users will be lower than in the Front Country RMZ. Recreation experiences will be primitive, with hunting, hiking, backpacking, wildlife observation, cultural study, photography, and camping as the main activities. Trail and cross-country foot or horseback travel may be permitted.

Visual Resource Management DFCs related to Recreation can be found in Section 2.7.2.8.

Management Actions

Management Actions related to motorized and non-motorized recreation routes are described in the Travel Management Section 2.7.2.10.

Land Use Allocation

Passage Recreation Management Zone

Desired Future Condition

The Passage RMZ includes secondary travel routes and associated areas where visitor use will not be directed or encouraged but will be accommodated. Rudimentary facilities, such as the following could be provided or available where needed for resource protection or public safety:

- toilets,
- designated or dispersed primitive campsites,
- scenic turnouts,
- kiosks,
- interpretive sites,
- signs,
- parking and staging areas, and
- trailheads.

This zone will center on the designated motorized travel and transportation network within the Back Country RMZ. The Passage RMZ will be 200 feet-wide, 100 feet on each side of the centerline of designated vehicle routes.

Desired recreation opportunities, experiences, and settings within the Passage RMZ will range from roaded-natural to semi-primitive motorized. Both day use and overnight recreation use will be acceptable, unless otherwise specified in the land use plan allocations. Archaeological sites allocated to Moderate public use could be interpreted within this zone.

Visual Resource Management DFCs related to Recreation can be found in Section 2.7.2.8.

Management Actions

Management Actions related to motorized and non-motorized recreation routes are described in the Travel Management Section 2.7.2.10.

General Recreation Management***Management Actions***

Paintball activities would be prohibited within the monument.

Geocaching would be prohibited in areas managed for primitive or semi-primitive non-motorized settings. Caches would not be allowed within archaeological sites.

Equestrian use would be monitored and managed to meet Arizona Land Health Standards (Land Health Standards).

Horses or other stock animals would be prohibited at signed archaeological sites.

The use of weed-free feed would be encouraged to prevent introducing noxious, invasive weeds.

Camping and Parking:

Camping would be limited to 14 days within the monument unless authorized by the manager.

Visitors wishing to camp and park along designated roads and primitive routes will be strongly encouraged through visitor information, education, and signing to select and use sites with clear evidence of prior use. Such evidence is indicated by easy vehicle access to the site, lack of vegetation, bare and compacted soils and other evidence of prior use like fire rings. If such areas are to be closed to camping and rehabilitated, signs will be posted to that effect.

Collection of Natural Resources:

Collecting all natural organic and natural inorganic materials (except for fish and wildlife taken in accordance with state law and trash and

litter) within the monument would be prohibited except for scientific, research and other pre-approved purposes by obtaining written approval from the field office manager or the monument's manager. (See the Biological Resources discussion in the Management Common to Agua Fria National Monument section of this chapter.)

Adaptive Management:

Adopt limits of acceptable change indicators and standards.

New forms of recreation opportunities and technological advances affecting the monument's values would be managed to protect the monument's resources. If use is perceived as inconsistent with or deleterious to the monument, this activity would be suspended until data is collected and analyzed and the monument's manager makes a final recommendation based on research findings.

Establish criteria through external collaboration to determine when monument's values are at risk and to adjust on-the-ground management strategies and actions.

The current authority for collection of recreation user fees would not allow for collection of such fees on the Agua Fria National Monument. Under the Federal Lands Recreation Enhancement Act of 2004, P.L.108-447, fees may be charged at a site that has:

- clearly defined access points and area boundaries,
- substantial expenditure in operations and maintenance costs,
- significant investment in facilities (including roads and trails), and
- contains all of the following amenities:
 - a designated and developed parking area,
 - permanent toilet,
 - permanent trash receptacle,
 - kiosks,
 - picnic tables, and
 - security services commensurate with use levels.

Should the above criteria be met in the future, a study would be initiated to determine the need and feasibility of charging a recreation use fee.

Special Recreation Permits:

Issuing of SRPs is at the discretion of BLM. BLM's evaluation of permit applications would be based on applicable laws and regulations and would conform to the Monument Proclamation (Appendix A). The decision to authorize a proposed use would depend on the following:

- potential resource impacts,
- conflicts with other users,
- health and safety concerns,
- past or present performance with BLM or other agencies,
- BLM's ability to timely process the application and effectively administer the permit, and
- the number of permits issued during the 365 days (one year) prior to permit application.

Leases and Land Use Permits:

Recreation concession leases, long-term authorizations for the use of public lands, are authorized under 43 CFR 2920. BLM would evaluate concession leases on a case-by-case basis to determine whether they conform to the monument values. The proposed concession would need to conform to the managerial and social settings as described in the document such as recreation settings, VRM, and other special use area prescriptions.

Apiary permits would be prohibited within 1/4 mile of identified high-use areas, such as facilities, trailheads, and areas subject to SRP events, or at active scientific and research areas.

Commercial filming or still photography requiring a permit in accordance with Public Law 106-206 would be issued under the SRP guidelines when associated with permitted recreation activities. BLM would evaluate applications on a case-by-case basis to determine whether they are consistent with

monument values. The fee schedule would be used as outlined in 43 CFR 2920 commercial filming regulations. Non-recreation related commercial filming will be managed by the appropriate 2920 guidelines.

Administrative Actions

Develop partnerships and identify sustaining recreation and tourism-based economic opportunities with communities.

Support collaborative efforts with the public on monument issues and efforts.

Post a toll-free phone number for the BLM's dispatch office on kiosks, maps, brochures, permits, and other public outreach conveyances to keep the public involved in reporting emergencies and criminal activities, including damage to the monument's resources.

SRP applicants would be strongly encouraged to have a working knowledge of Leave No Trace or Tread Lightly principles. Additionally, applicants would be asked to incorporate Leave No Trace and Tread Lightly principles into their tour, program, or event activities.

To the greatest extent possible, all new construction and modifications for recreation facilities, outdoor developed areas, and any related programs and activities will be accessible to people with disabilities in accordance with the Architectural Barriers Act of 1968 and Section 504 of the Rehabilitation Act of 1973, with later amendments. Guidance, requirements, and standards applicable to conform to the above legislation may be found in the following:

- Uniform Federal Accessibility Standards.
- Americans with Disabilities Act Accessibility Guidelines.
- ADA-ABA Accessibility Guidelines (use whichever guidance is most stringent).
- Proposed Outdoor Developed Areas Guidelines -U.S. Access Board found at www.access-board.gov and 43 CFR Part

17, Subpart E found at
<http://www.gpoaccess.gov/cfr/index.htm>

Interpretation and Environmental Education

Pursue interpretation and environmental educational opportunities, outreach development, and implementation of on-site and off-site programs for adults and children.

Establish repository of photographs and images that will illustrate BLM's mission, including digital photographs and slides for program design.

Apply learning modalities and incorporate various learning styles in program design and delivery.

Encourage the use of multiple intelligence or other theories for program presentations.

Develop school curricula focusing on the BLM's mission with willing staff from schools, school districts, and other learning institutions.

Support existing educational and interpretive programs and initiatives such as Project Archaeology; Leave No Trace; Tread Lightly; Project Learning Tree; and other proven national, State, regional, and local programs.

Develop websites, brochures, maps, access guides, and information sheets to publicize OHV rules and regulations, with an emphasis on Leave No Trace and Tread Lightly practices.

2.7.2.8 Visual Resources

Desired Future Conditions related to achieving Recreation related DFCs by Recreation Management Zone

Front Country

Visual resource objectives would emphasize retaining the current natural vistas while allowing visually sensitive visitor-related development.

Back Country

Visual resource objectives in this zone will emphasize retaining the current visual landscapes and vistas.

Passage

VRM objectives would emphasize retaining the current natural vistas while allowing visually sensitive visitor-related development.

Management Actions

Manage the visual landscape to minimize visual impacts of authorized activities. As much as possible, maintain night skies free of light pollution. Work with surrounding communities and other agencies to minimize the impact of lighting.

2.7.2.9 Mineral Resource Management

Management Actions

All Federal minerals in Agua Fria National Monument would remain withdrawn or closed from all forms of location, sale, or leasing, including withdrawn from location, entry, and patent under the mining laws. Federal minerals are also withdrawn from disposition under all laws relating to mineral and geothermal leasing and from disposal under the Mineral Materials Act. Mineral interests may be exchanged if such exchange furthers the protective purposes of the monument. Any mineral interests acquired by the United States within the monument are reserved as part of the monument and are subject to the aforementioned withdrawals.

For lands encumbered by mining claims, no activity beyond casual use, as defined in the 43 CFR 3809 regulations, is allowed without determination of valid existing rights. A mining plan of operations is required for any activities beyond casual use.

2.7.2.10 Travel Management

Land Use Allocations

Motorized and mechanized uses on all monument lands will be Limited to Designated Routes only.

Limited to Designated Routes = 70,900 acres

Desired Future Conditions

Define, designate, implement, and monitor a comprehensive travel management network affording a range of high-quality and diverse motorized and non-motorized recreation opportunities. The network would consist of a system of roads, primitive roads, and trails. The designated travel management network and associated recreation opportunities would be consistent with all monument resource management objectives, recreation settings, and preservation of monument objects.

Management Actions

All motorized vehicles and mechanized equipment would be limited to designated routes, except in emergency situations. Motorized use shall keep within the designated route with reasonable use of the shoulder and immediate roadside, allowing for vehicle passage, emergency stopping, or parking unless otherwise posted.

Vehicle access on designated routes may be temporarily closed when weather creates muddy conditions. When conditions are such that travel by vehicle cannot be accomplished without damaging the existing roadway, departing the roadway and traveling across cross-country, the route is closed until the roadway can once again support a vehicle without damage.

All vehicles would be limited to designated routes. Cross-country motorized vehicle or mechanized equipment travel would be prohibited except in response to emergencies, or for BLM- or interagency-authorized tasks.

Mechanized or motorized vehicles would not be used off designated routes to retrieve game. Non-motorized wheeled game-carriers would be permitted to travel cross-country.

All uses of routes, whether motorized or non-motorized would be mitigated where it is determined to be inconsistent with established monument management objectives or such use is harming monument resources. Possible mitigation measures may include the following:

- closing routes,
- limiting seasonal use,
- limiting vehicle types, speeds, and noise,
- rerouting offending route segments, and
- modifying routes to reduce or eliminate conflicts.

Vehicle routes would receive the least amount of maintenance needed to provide desired access. Many routes would be retained in a primitive condition to discourage excessive speeds so as to protect monument values and promote public safety.

Currently, the AFNM is outside the PM₁₀ Serious Non-attainment area around Phoenix. In the future, if included in this area, routes would be managed to comply with PM₁₀ rules. Managing dust would be part of the monument's ongoing monitoring effort. Proposed mitigation actions (closure, seasonal restrictions, speed limits, change in use, surfacing, surface and dust abatement treatments) would be addressed as part of the adaptive management for Travel Management. Routes with unacceptable or noncompliant use and associated air quality impacts would be closed to travel until route conditions change or are corrected.

Interconnecting routes could be developed where feasible and consistent with resource management goals and monument values. Vehicle routes may be developed if needed for protection of monument resources, visitor education and appreciation, and visitor safety.

All vehicle route construction must be consistent with other resource objectives, desired social and managerial settings, and VRM objectives.

Management Actions Specific to Recreation Management Zones

Front Country

Maintaining, enhancing, or developing routes for non-motorized and motorized visitor travel may be done within the Front Country RMZ if such actions further protect monument resources, ensure public safety, or to achieve land-use plan objectives. All closed vehicle routes may be considered for redevelopment as hiking, equestrian and/or mechanized vehicle trails.

Back Country

Non-motorized access may include development of some trails, or simply marking foot routes with fiberglass posts with minimal ground disturbance. Installation of trails may be considered where needed to protect monument resources, ensure public safety, or to further public education and interpretation objectives. Non-motorized trails may be evaluated for their potential to link areas of interest and provide a network of connecting trails. Such areas may include the following:

- Bull Tank and Baby Canyon,
- Badger Springs/Agua Fria Confluence and Pueblo Pato, and
- the Black Canyon City area into the southern part of Black Mesa.
- Motor vehicle travel routes entering or traversing the Back County RMZ will be managed under the Passage RMZ provisions. All vehicles are restricted to passage zones.

Passage

Designated routes would be maintained at their current condition except where resource degradation or user conflicts occur. No routes will be upgraded, but routes would be minimally

maintained to current standards. Routes would be maintained for the following reasons:

- to ensure access by authorized users such as BLM's permittees and lessees,
- to allow access for wildlife enhancement and maintenance projects,
- to ensure public safety by correcting hazardous conditions,
- to protect monument values, and
- to mitigate resource damage.

No new motorized routes would be built except for the following reasons:

- to protect monument values,
- to mitigate resource conflicts or damage,
- to correct hazardous travel conditions, and
- to meet other resource management objectives.

Any rerouting or building of vehicle routes must be consistent with protecting the monument resources and must meet management objectives.

2.7.3 Management Common to the Bradshaw-Harquahala Planning Area

2.7.3.1 Special Area Designations

Designated Wilderness Areas

Management Actions

Within wilderness areas and in the absence of group size limitations in existing wilderness or activity plans, group size for casual use activities will be limited to 25 people. BLM would evaluate requests for groups of more than 25 people on a case-by-case basis to ensure that resources are protected. Groups exceeding 25 people would require prior written authorization from the authorized officer. A

SRP would be required for groups over 50 people.

Commercial recreation and vending operations would not be allowed in the Harquahala Mountains, Hummingbird Springs, and Big Horn Mountains Wilderness Areas, (including, but not limited to, such activities as guided horse rides or guided hikes) except for guided hunt and outfitter services. Organized would be allowed on a case-by-case basis when consistent with wilderness management objectives. Commercial recreation operations may be allowed in the Hassayampa River Canyon and Hells Canyon Wilderness Areas when such activities conform to wilderness management plans, resource protection, and wilderness management objectives, and may be performed to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.

Wilderness areas are allocated as closed to motorized vehicles. Exceptions to this closure could be allowed for such wildlife management activities when approved by the BLM's manager, and when such motorized and mechanized equipment is determined to be the minimum tool needed to do the job.

Motorized activities will be evaluated on a case-by-case basis as the need arises in the Big Horn Mountains, Hummingbird Springs, and Harquahala Mountains Wilderness Areas. Existing wilderness management plans will guide wildlife management within Hells Canyon and Hassayampa River Canyon Wilderness Areas.

Develop and adopt measurement standards for limits of acceptable change for trail conditions, visitor-to-visitor encounters, vegetation changes, Arizona Land Health Standards (Land Health Standards), and approved motorized/mechanized activities. Exceeding the limits of acceptable change could result in implementing actions such as the following:

- developing and distributing Leave-No-Trace or other educational information,
- initiating a permit system,
- closing damaged areas or trails to camping to allow natural restoration,
- realigning trails,
- reclaiming damaged areas,
- installing alternative access points,
- monitoring or removing non-native or invasive plants or animals, and
- mitigating the evidence (sights and sounds) of any authorized mechanized/mechanical uses.

Harquahala Mountain Summit Back Country Byway

Management Actions

Maintain the Harquahala Mountain Summit Back Country Byway and facilities to current standards and conditions. Management is currently conducted under an activity plan and portions of that plan not superseded by this Resource Management Plan will continue as valid guidance for management of the Back Country Byway.

2.7.3.2 Lands and Realty

Land Tenure Decisions

Management Actions

Lands are to be considered for potential acquisition under all Alternatives. Some of the criteria for selecting such lands (willing seller) are specific to each Alternative's resource program objectives. Other criteria are identified under the Lands and Realty discussion of the Management Common to Both Planning Areas section of this chapter. No land disposal management prescriptions are common to all Action Alternatives.

BLM would initiate a withdrawal, which would close to mineral location, mineral leasing, and mineral sales and prohibit all land use authorizations on 20 acres of public land in Lot 21, eastern half of the southwest quarter of

Section 6, Township 8N, Range 5W, for the BLM-Wickenburg fire station.

Land Use Allocation

Utility and Transportation Corridors

Management Actions

The existing corridors contain many major transportation facilities and are major multiple-use corridors. They also house utilities at or above the threshold levels cited in the Lands and Realty discussion under Management Common to Both Planning Areas section of this chapter. Certain State routes, U.S. routes, or interstate highways would be designated as transportation corridors rather than multiple-purpose corridors. This designation would result because no current or projected demand exists for other utilities that would meet the threshold levels within these corridors.

All major utilities would be routed through designated corridors.

Land Use Allocation

Communication Sites

Management Actions

In accordance with the Telecommunications Act of 1996, BLM planning for communication infrastructure must help facilitate the implementing of wireless telephone systems by making Federal lands and facilities available for communication sites.

BLM will retain the designated White Tank Mountains, Lone Mountain, Burnt Mountain, Harquahala Mountain, Valencia, and Black Canyon City communication sites.

Other Land Use Authorizations

Land Use Permits for non-recreation related commercial filming will be authorized in conformance with 43 CFR 2920 guidelines.

Administrative Actions

BLM would, as appropriate, coordinate communication-related planning efforts with the FCC.

2.7.3.3 Soil, Air, and Water Resources

Administrative Actions

Initiate steps with the Arizona Department of Environmental Quality (ADEQ) and Maricopa County Environmental Services Department to install and operate air pollution monitors near Lake Pleasant, or an alternate location that is experiencing high emission rates of particulate matter (PM₁₀).

Maintain and enhance stream flows in special management areas.

2.7.3.4 Biological Resources

Management Actions

Limit firewood collection to campfire use only.

Allow collection of dead, down, and detached material for campfire firewood.

Include in fuel reduction projects provisions for permitting firewood collection on a case-by-case basis.

Limit collecting of cacti skeletons, ironwood, and mesquite for personal use to 100 pounds per person per year.

Prohibit collecting cacti skeletons, ironwood, mesquite, and any other plant or plant product for commercial purposes.

Allow collecting of plant materials for scientific purposes with prior authorization.

Prohibit removal of all other vegetation material not specifically authorized by permit.

Coordinate vegetation salvage with the State of Arizona, and to the extent practicable, open it to the public.

2.7.3.5 Cultural Resources

Focus proactive (Section 110) inventories on areas defined as Special Cultural Resource Management Areas. Complete at least 200 acres of proactive survey, distributed among one or more of these areas during each fiscal year (See Appendix F for a description of these areas).

Retain in public ownership BLM-managed lands within Special Cultural Resource Management Areas. Conduct Class III surveys on 10 percent of zones above 3,500 feet in elevation, which are the target areas for prescribed burns and other fuel treatment projects. Focus surveys on areas that are most likely to contain flammable historic structures, as identified by documentary research, to develop measures to protect these sites during fuel treatment projects.

Continue to monitor at least 25 sites, which are at greatest risk from vandalism or disturbance, with help from such partners as Arizona Site Steward Program Volunteers.

Allocate properties from the following classes of prehistoric sites to scientific use:

- pueblos and other residential sites,
- hilltop "forts" and masonry structures,
- pit house villages,
- rock art localities,
- caves and rock shelters,
- agricultural features,
- wells and water control features; and
- roasting pits,
- trails and camps,
- resource processing sites,
- rock features and alignments,
- intaglios ("ground figures"),
- lithic quarries,
- grinding implement production sites ,
- artifact scatters that can yield important information and meet the Arizona State Museum definition of a "site" as opposed to an isolated occurrence.

Allocate properties from the following classes of historic sites to scientific use:

- mines, mills, and associated features,
- settlements and camps,
- rock walls and features,
- ranches, homesteads, and associated features ,
- livestock driveways, roads, and trails,
- other public works,
- facilities used in commerce,
- sites of military activities ,
- agricultural features,
- wells and water control features, and
- artifact scatters that can yield important information and meet the Arizona State Museum (ASM) definition of a "site" as opposed to an isolated occurrence.

Allocations and Management Actions: Special Cultural Resource Management Areas

Eight areas are regarded as Special Cultural Resource Management Areas, common to all plan Alternatives. These areas contain significant resources that, in many cases, are at risk of damage (Appendix F). Management actions within priority areas will be incorporated into annual work planning for the PD's Cultural Heritage Program. As described below, selected sites are allocated to the categories of conservation for future use, scientific use, and public use. For further information on these use categories and associated actions, refer to Appendix E.

Black Mesa/Bumble Bee

Protect significant prehistoric and historic archaeological sites, which are allocated to conservation and scientific uses. Ongoing scientific studies of occupation and use during multiple time periods, particularly the highly significant period from A.D. 900-1250, before the Perry Mesa Tradition in nearby Agua Fria National Monument.

Prepare and submit the required documentation to nominate a "Black Mesa Rim" archaeological

district to the National Register of Historic Places.

Conduct cultural resource inventories (surveys) to obtain critical information needed to identify significant sites, allocate these sites to use categories, and integrate survey results into protective strategies and research designs.

Identify survey areas in reference to geographic gaps in previous coverage and the likelihood of finding significant sites at risk, including sites next to travel routes.

Continue to patrol at least three major sites with the help of volunteer site stewards.

Allocate the Running Deer site (NA 5856) and Archaic site AZ N:16:224 (ASM) to scientific use for study by qualified researchers.

Install protective signs at the Running Deer site and associated sites.

Install fences or barriers to exclude livestock from the Running Deer site.

Close or reroute transportation routes that lead directly to significant sites.

Galena Gulch

Conduct cultural resource inventories (surveys) to obtain critical information needed to identify significant sites, allocate them to use categories, and integrate survey results into protective strategies and research designs. Identify survey areas in reference to geographic gaps in previous coverage and the likelihood of finding significant sites at risk, including sites next to travel routes.

Patrol at least three major sites with the help of volunteer site stewards.

Allocate the historic McCabe Cemetery to "conservation for future use" to ensure long-term preservation.

Allocate the Humboldt Ruin (NA 4637) to scientific use.

Install signs and other suitable protection measures at the Humboldt Ruin and selected sites.

Maintain the barbed wire fence and erosion control features at the McCabe Cemetery.

Black Canyon Corridor

Conduct cultural resource inventories (surveys) to obtain critical information needed to identify significant sites, allocate them to use categories, and integrate survey results into protective strategies and research designs. Identify survey areas in reference to geographic gaps in previous coverage and the likelihood of finding significant sites at risk, including sites next to travel routes.

Continue to patrol at least five major sites with the help of volunteer site stewards.

Complete site documentation projects at the DeNoyelles site (AZ N:12:60 (ASM)) and Spring Pueblo prehistoric habitation sites that have been damaged by vandalism. Use the information to assess and implement measures to reduce further architectural deterioration.

Allocate the Euler Site, the Spanish Hill Fort, the DeNoyelles site, and Spring Pueblo to scientific use for study by qualified researchers.

Maintain or install signs at AZ N:12:60 (ASM), Spring Pueblo, Spanish Hill Fort, and other sites.

Close or reroute transportation routes that lead directly to significant sites.

Preserve the remaining historical signs and features of the historic Black Canyon Livestock Driveway and allocate them to public use to interpret the stock driveway's history.

Allocate to public use selected sites that are accessible from the Black Canyon Hiking and Equestrian Trail. Local site types suitable for

public use include hilltop structures, rock art, historic mining camps and ranching facilities, and historic trails. This allocation will be applied to selected sites that

- have aboveground features amenable to interpretive development,
- can be stabilized to withstand public visitation, and
- would be of interest as exhibits-in-place.

Associated actions may include interpretive signs, trails, brochures, and authorizing commercial tours.

Lake Pleasant/Agua Fria

Conduct cultural resource inventories (surveys) to obtain critical information needed to identify significant sites, allocate them to use categories, and integrate survey results into protective strategies and research designs. Identify survey areas in reference to geographic gaps in previous coverage and the likelihood of finding significant sites at risk, including sites next to travel routes.

Acquire the portions of the historic Gillette site that are outside federally administered lands.

Continue to patrol at least six major sites with the help of volunteer site stewards.

Complete site documentation projects with scientific use allocations at the Agua Fria Fort, Fort Tule, and AZ T:4:1 (PC), a hilltop site near Lake Pleasant. *Alternatives B, C, and E* allocate these sites to public use for long-term preservation and interpretation.

Maintain protective fences at Gillette, and sites associated with the Agua Fria Fort.

Maintain or install protective signs on at least five sites.

Coordinate with the Bureau of Reclamation (BOR) and Lake Pleasant Regional Park staff in resource protection and public education.

Cooperate in nominating the historic Humbug hydraulic mining complex to the National Register of Historic Places. Under all Alternatives except *Alternative D* allocate the Humbug site to public use for long-term preservation and interpretation.

Wickenburg/Vulture

Conduct cultural resource inventories (surveys) to obtain critical information needed to identify significant sites, allocate them to use categories, and integrate survey results into protective strategies and research designs. Identify survey areas in reference to geographic gaps in previous coverage and the likelihood of finding significant sites at risk, including sites next to travel routes.

Patrol at least three major sites with the help of volunteer site stewards.

Allocate the Vulture City Cemetery and historic engineering features along Constellation Road to "conservation for future use" to ensure long-term preservation. Ensure that road maintenance activities are implemented, to the extent possible, to preserve and stabilize the historic structural features of Constellation Road.

Allocate the unique San Domingo Mill site to scientific use, and complete a detailed documentation of the site.

Maintain the protective fence around the Vulture City Cemetery.

Under all Alternatives except *Alternative D*, allocate the Vulture City Cemetery, Constellation Road, and Monte Cristo Mine to public use for tours, interpretive development, or both.

Weaver/Octave

Continue to patrol at least two major sites with the help of volunteer site stewards.

Allocate the historic Weaver Cemetery to "conservation for future use."

Maintain the fence installed around the Weaver Cemetery.

Assess the condition of the rock cabin and other historic structures at Weaver and the feasibility of stabilization and allocation to public use.

Allocate historic mining sites and settlements to scientific use.

Under *Alternatives B* and *E*, allocate the historic Weaver Cemetery to public use. Install one or more interpretive signs outside the fence.

Harcuvar Mountains

Conduct cultural resource inventories (surveys) to obtain critical information needed to identify significant sites, allocate them to use categories, and integrate survey results into protective strategies and research designs. Identify survey areas in reference to geographic gaps in previous coverage and the likelihood of finding significant sites at risk, including sites next to travel routes.

Allocate pictograph sites (i.e. painted rock art) to “conservation for future use” for long-term preservation.

Patrol at least one site with the help of volunteer site stewards.

Coordinate with the Lake Havasu Field Office in developing strategies to manage cultural resources in the Harcuvar Mountains.

Harquahala Mountains

Acquire parcels with significant sites around Eagle Eye Peak, which is south of Aguila.

Conduct cultural resource inventories (surveys) to obtain critical information needed to identify significant sites, allocate them to use categories, and integrate survey results into protective strategies and research designs. Identify survey areas in reference to geographic gaps in previous coverage and the likelihood of finding

significant sites at risk, including sites next to travel routes.

Continue to patrol at least two major sites with the help of volunteer site stewards. Add sites in selected canyons to the monitoring program.

Allocate the Harquahala Peak Smithsonian Observatory to “conservation for future use” and public use. Continue to maintain the condition of the building to ensure its long-term integrity. Continue to maintain the associated interpretive signs and visitor facilities. Allocate the historic Harquahala Peak Pack Trail to public use.

Allocate sites associated with the observatory and prehistoric sites in selected canyons to scientific use. Complete recording and documentation of site concentrations in selected canyons and near springs.

2.7.3.6 Recreation Resources

The Desired Future Condition and management actions that follow will apply to all public lands, including those within MUs in the Bradshaw-Harquahala Planning Area, unless superseded by management actions for SRMAs, RMZs, or other land use allocations. Where management actions in SRMAs, RMZs, or other land use allocations are silent on the subjects listed below, the actions listed below will apply.

Land Use Allocation

The designated Wilderness areas will all be allocated as Special Recreation Management Areas. Wilderness Areas included in this planning area are:

- Harquahala Mountains Wilderness,
- Hummingbird Springs Wilderness,
- Big Horn Mountains Wilderness,
- Hassayampa River Wilderness, and
- Hells Canyon Wilderness.

Desired Future Conditions

Wilderness areas will be managed for primitive settings to preserve their outstanding opportunities for solitude, primitive and unconfined recreation, and naturalness.

Land Use Allocation

Extensive Recreation Management Areas

Management Actions

General Recreation

All recreation actions such as facilities, projects, programs, amenities, and trails, as described in the sections below, would conform to land use plans, activity plans, and resource management objectives. The proposed actions need to conform to the managerial and social settings described in the document, such as recreation settings, VRM, SRMA, RMZ, lands allocated to maintain wilderness characteristics, and other management prescriptions.

Camping

Dispersed camping would be permitted on all planning area lands unless otherwise specifically designated as closed or restricted for resource protection or public safety purposes.

The current 14-day length of stay camping limit would continue to be policy for all public lands in the planning area, unless otherwise specifically designated or modified by management actions in this plan. The 14-day limit may be reached by continuously occupying one site or by occupying more than one site within a 25-mile radius within a 90-day period. Following the 14-day period, the party may not relocate to a campsite within a distance of 25 miles that was previously occupied, nor may they return to any sites previously occupied. After 14 days, the party may also choose to move to a designated camping area or move off public land. Extensions beyond the 14-day length of stay may be permitted on a case-by-

case basis where needed for resource protection and land use management provisions.

Designated camping locations and camping length of stay limits (long- and short-term) would be developed as needed for the following purposes:

- protecting resources,
- ensuring visitor safety,
- resolving social conflicts,
- improving recreation experiences, and
- increasing recreation opportunities.

All campsite construction or designation would be compatible with social and managerial recreation settings and VRM objectives. Communities, user groups, or agency staff can bring camping site proposals forward for management attention.

Self-contained or vehicle-based camping would be permitted within 100 feet of the centerline of designated routes. Visitors camping and parking along roads and routes will be strongly encouraged through visitor information, education and signing to select and use camp and parking sites with clear evidence of prior use. Such evidence is indicated or evidenced by vehicle access to the site, lack of vegetation, bare mineral soils and other dispersed campsite amenities such as fire rings.

Campsites would be designated and developed at mining sites and prospecting areas when needed for resource protection due to trail proliferation, loss of soil and vegetation cover, public health and safety concerns, or user conflicts.

Any trailhead or staging area could be closed to overnight camping upon written authorization of the authorized officer.

It is unlawful for a person to camp within 1/4 mile of a natural water hole containing water or man-made watering facility containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available

water (Arizona Revised Statute 17-308, Unlawful Camping).

Group Use (Non-commercial)

Existing vehicle parking and camping sites must be large enough to accommodate the group size without increasing the footprint of the disturbance area. Large group activities and events with 75 or more people would require a special recreation permit unless otherwise specified in special management areas or designated sites where carrying capacities are established in subsequent implementation level plans, or when special management and monitoring are determined to be needed.

Group Use in Wilderness (Non-commercial)

Large group activities in wilderness areas would be managed consistent with the provisions in Section 2.7.3.1 under the discussion of Designated Wilderness Areas.

Equestrian Activities

Monitor and manage equestrian use according to the Arizona Land Health Standards (Land Health Standards).

Encourage the use of weed-free animal feed to prevent the introduction of noxious, invasive weeds.

Geocaches

The placement of geocaches would be prohibited in archaeological and raptor nesting sites. Virtual caches may be allowed within archaeological sites with prior written authorization from the authorized officer.

Other sites may be prohibited if it is determined that the placement of these caches creates unacceptable resource impacts, conflicts with other users or health and safety concerns.

Paintball Activities

Paintball activities would not be allowed in wilderness areas and ACECs. Such activities would be allowed elsewhere in the planning area, if suitable to other resource management objectives and special management allocations. The following stipulations would apply:

- Require nontoxic, biodegradable and water soluble paintball capsules.
- Allow temporary obstacles or structures to be used but require that they be removed at the end of the visit to the public lands. Allow no mechanized or motorized cross-country travel to set up or remove structures. Authorize no permanent structures.
- Require goggles and masks protecting the ears, face, and throat.
- Prohibit shooting paintballs at wildlife and saguaro cacti. Prohibit the use of natural features, such as boulders and vegetation, as paintball targets.
- Require participants to pick up and remove from the area all items related to paintball activities, including capsules and any other trash.
- Require SRPs for paintball activities with more than 15 participants, unless otherwise specified in special management areas.
- Prohibit paintball activities within 1/4 mile of
 - high-use recreation areas such as campgrounds, trailheads, and staging areas
 - designated non-motorized trails
 - areas with permitted recreation activities
 - active scientific and research areas

Rock Collecting

Allow the collecting of rocks, minerals, semi-precious gemstones, invertebrate fossils, and petrified wood in reasonable amounts. In BLM Arizona, reasonable limits for personal use are

defined as up to 25 pounds per day, plus one piece, with a total of 250 pounds per person per year.

Special Recreation Permits

General

No permit or event limits would be established at this time for the planning area. Allow permit and/or event limits to be established later in response to monitoring of resources, users, or social conflicts.

SRPs would be authorized on a case-by-case basis for all recreation activities meeting the requirements in 43 CFR 2930 and applicable manuals, policies, and guidance. SRPs would be required for all commercial or competitive use recreation activities. SRPs may also be required for the following:

- noncommercial, noncompetitive organized group activities and events
- vending operations;
- individual noncommercial recreation use in Special Area Designations
- academic, educational, scientific or research uses

The criteria for when permits are required for these uses may be found in BLM Manual H-2930-1, Recreation Permit Administration Manual and Handbook. Definitions of the types of uses may be found in the Glossary.

Issuance of SRPs is at BLM's discretion. BLM would evaluate permit applications on the basis of applicable laws and regulations and conformance with existing land use plans, including consistency with recreation and other resource objectives. The decision to authorize a proposed use would depend on the following:

- potential resource impacts,
- conflicts with other users,
- health and safety concerns,
- past or present performance with BLM or other agencies, and

- BLM's ability to timely process the application and effectively administer the permit.

Permits would be authorized, ensuring compliance with Federal, State, county, and local air quality and noise regulations.

Permits are authorized based on the inclusion and compliance of standard and activity specific stipulations regarding the proposed activities. These stipulations for SRPs have been developed to protect natural resources, reduce user conflicts, and minimize health and safety risks. The stipulations must be adhered to keep the permit in good standing. Failure to comply with the stipulations can result in loss of permit privileges and/or lead to penalties prescribed in 43 CFR 2933.33. An example of these stipulations may be found in Appendix K.

Vending

SRPs may be issued for vending operations at a recreation site, or in conjunction with a permitted activity or event. The SRP for the activity or event may include vending operations if the operations are directly related to the permitted activity or event, and the permittee is responsible for the vending operations. If the permittee is not responsible for the vending operations, a separate SRP for the vending would be required.

Vending may be considered at recreation sites if the service or goods for sale:

- directly enhances the recreation experience and
- cannot be readily provided by the closest local community.

Permanent structures would not be authorized under a vending permit.

Competitive Races

All motorized competitive races would need to comply with the desert tortoise policy in the Biological Resources discussion of the

Management Common to All Action Alternatives section of this chapter.

Motorized competitive speed races would be authorized only in SRMAs or RMZs where an allocation for such use has been made.

Leases and Land Use Permits

Concession Leases

Recreation concession leases, long-term authorizations for the use of public lands, are authorized under 43 CFR 2920. BLM would evaluate concession leases on a case-by-case basis to determine if they conform to land use plans, activity plans, and resource management objectives. The proposed lease would need to conform to the managerial and social settings such as recreation settings, VRM objectives, and other special use area prescriptions. A strong public demand must also be demonstrated for the proposed products or services to be considered. Leases would be awarded on a competitive bid basis and evaluated by the following traits of the concessionaire:

- experience,
- ability to provide quality services,
- financial stability and integrity, and
- past or present performance and financial offer.

Apiary Permits

Apiary (bee keeping) permits will be prohibited within 1/4 mile of the following:

- high-use recreation areas such as campgrounds, trailheads, and staging areas,
- designated non-motorized trails,
- areas or routes with permitted recreation activities, and
- active scientific and research areas.

Commercial Filming Permits

Permits for commercial filming or still photography, in accordance with Public Law

106-206, would be issued under the SRP guidelines when associated with permitted recreation activities. The fee schedule would be used as outlined in 43 CFR 2920 commercial filming regulations. Proposals would be evaluated on a case-by-case basis to determine if they conform to land use plans, activity plans, and resource management objectives. Proposed activities would need to conform to the managerial and social settings as described in the document such as recreation settings, VRM objectives, and other special use area prescriptions. Land Use Permits for non-recreation related commercial filming will be authorized in conformance with 43 CFR 2920 guidelines.

Recreation Opportunity Spectrum

Maintain current inventoried recreation settings within ERMAs. ROS inventory is portrayed on the Recreation Opportunity Spectrum on Map 3-11. Since the areas allocated as ERMA and SRMA change by Alternative, actual desired settings also change by Alternative.

Facilities

Recreation management facilities would be planned and installed where needed for:

- protecting resources,
- providing for visitor safety,
- resolving social conflicts,
- improving the quality of recreation experiences, and
- increasing recreation opportunities.

Facilities can include water sources, toilets, scenic turnouts, cultural interpretive sites, kiosks, signs, parking areas, staging areas, and trailheads. Installed facilities must be compatible with recreation management objectives and desired settings and VRM standards. Communities, user groups, or agency staff can bring facility proposals forward for management attention.

Recreational Target Shooting

Recreational target shooting has increased in popularity on BLM-managed lands as the population in Central Arizona has increased and availability of land to shoot on has decreased. BLM land is, for the most part, open to recreational target shooting. Public lands are shared by many users. It is imperative the target shooter select a shooting site that is both safe to other public land users and considerate of natural resources. The following discussion includes criteria for selection of safe and considerate shooting sites.

It is the ultimate responsibility of the recreational target shooter to ensure the projectiles they fire are contained within the shooting site they select. While shooting is allowed in most public land areas, the shooter should make no concession concerning safety. Consideration of other people using public lands is not only considerate, *Arizona Revised Statutes Title 13-1201* says:

(A). A person commits endangerment by recklessly endangering another person with a substantial risk of imminent death or physical injury.

(B). Endangerment involving a substantial risk of imminent death is a class six felony. In all other cases, it is a class one misdemeanor.

Therefore, it is paramount that shooters continually evaluate their shooting activities and the requirements necessary to ensure those activities can be conducted with projectile/bullet containment as a primary goal.

General considerations for selecting a suitable shooting site include the following:

- Make sure you have a safe backstop. That means you can see where the bullets are hitting behind the target. A hill or pushed-up berm of dirt is perfect. Remember that bullets can ricochet off flat surfaces—that includes rocks, dirt and water. Put your targets right in front

of the backstop to ensure your bullets stop in the dirt. (Detailed guidelines for backstops and side berms can be found below.)

- Select a site that doesn't put others at risk. Do not shoot towards or across areas where other people congregate such as hiking trails, vehicle parking and staging areas, and trail heads. It is a violation of Arizona State law (*A.R.S. 17-301B*) to shoot across a maintained road. Though this law only pertains to maintained roads, there are many routes in the desert that are used by motorcycles, quads, and four-wheel drive vehicles that are not as apparent as a maintained road. Shooting in the direction, or across them, though not a violation of the reference law, could be just as dangerous to people using them. Choose a site that avoids shooting across or towards motorcycle, quad, or four-wheel-drive routes as well.
- In addition to motorized routes, there are many popular hiking, bicycling and equestrian trails. Select a site that doesn't cross or shoot in the direction of a trail that could put people at risk.
- Selection of a safe shooting site would include staying more than ¼ mile from any residence or occupied structure. When selecting a site, assume any structure is occupied. It is a violation of Arizona State Law to knowingly discharge a firearm at a structure. The statute (*A.R.S 13-1211A and B*) says:

(A). A person who knowingly discharges a firearm at a residential structure is guilty of a class two felony.

(B). A person who knowingly discharges a firearm at a nonresidential structure is guilty of a class three felony.

- Selection of a site should include avoiding such improvements as wildlife or livestock water facilities, livestock control facilities such as corrals and fences, signs or kiosks installed to

provide information, barns or other rural developments, or any other improvement that was not specifically designed to be shot at.

- It is a violation of Arizona State law (*A.R.S. 13-1603A 1*) if a person "Throws, places, drops or permits to be dropped on public property or property of another which is not a lawful dump any litter, destructive or injurious material which he does not immediately remove." This includes not only trash, but also brass or shells (including shotgun shells) from spent ammunition and items used as targets. Shooters are required to remove any targets, items on which targets are mounted, and brass from spent ammunition. BLM Phoenix District policy is to only use targets that do not produce litter, and to remove them when you are finished shooting.
- Under the Code of Federal Regulations (*43 CFR 8365.2-5(a)*) no person shall "Discharge or use firearms..." on a developed recreation site. *43 CFR 8360.0-5(c)* defines "Developed Recreation Sites and Areas" as "...sites and areas that contain structures or capital improvements primarily used by the public for recreation purposes. Such sites or areas may include such features as: delineated spaces for parking, camping or boat launching; sanitary facilities; potable water; grills or fire rings; or controlled access."

Selecting sites with side berms and backstops is optional where the shooter can be assured of safe shooting 1.5 miles downrange for pistol or 3.5 miles downrange for high powered rifles, with appropriate left and right ricochet safety zones. With the popularity of public lands for recreation and other uses, this scenario is the exception rather than the rule. Therefore, the primary purpose for selection of backstops and side berms is to protect against the injury of people, the damage of property or both.

The type of firearms being fired and the shooting activity being conducted will dictate

the extent of the backstops, side berms and safety fans required to achieve that goal.

A downrange safety fan is an area beyond the backstop and side berms that is free of people or property that can be injured or damaged by errant bullets. It is important to remember that, depending on the suitability of the backstop and side berms, a safety fan downrange will be required to assure a safe shooting area. Below are ideal specifications for both backstops and side berms. Sites with less than ideal backstops and side berms must have increasingly longer downrange safety fans, approaching the distances described above of 1.5 miles for pistols and 3.5 miles for high power rifles. Even with an ideal backstop and side berms, site selection should still consider downrange safety and a downrange safety fan.

The characteristics of safe backstops and berms recognized as needed for safe shooting practices are as follows:

- **Height.** Preferred backstops include naturally occurring hills or mountainsides, or steep-sided wash banks. Backstops of soft dirt are preferred over hard surfaces, and rocky slopes should be avoided as they create a high ricochet hazard. A minimum height of 15 feet is acceptable but 20 to 25 feet is recommended. Remember that bullet ricochet can happen even on the best backstop. Site selection should consider ricochet possibilities and backstops that exceed 20 to 25 feet should be chosen where possible to reduce ricochet away from the shooting area.
- **Width/Length.** The width of the backstop should be at least as wide as it is high. Targets should be placed directly in front of or on the backstop with sufficient backstop on either side to catch bullets. Ideally, side berms should be the same height and the full length of the shooting area from the backstop to even with the firing line.

- Slope. The range side slope (side facing the shooter) must be as steep as possible, but not less than a 45-degree slope (a ratio of one-to-one). Side berm slopes should have the same dimensions.

Remember, even with the perfect backstop and side berms, finding a suitable shooting area must include a safety fan beyond the backstop.

The bottom line is to select a shooting site in harmony with adjacent properties and other public land users. The site should prevent adjacent properties and other public land users from experiencing any risk from the shooters activities. The overall responsibility of the shooter is to stop fired bullets before they exit the selected shooting area. It is the intention of the BLM to provide a safe and pleasant experience for any public land user. If shooting areas emerge that are contrary to the above criteria they will be clearly construed as putting other public land users at risk and they may be closed to shooting by the authorized officer, either temporarily or permanently.

As the demand for recreation shooting grows along with the demand for other recreation opportunities, the need may arise to identify and designate areas as shooting ranges. Many locations within the planning area would be suitable for this use and could provide a safe and enjoyable shooting experience. Identification and future management would be defined through further site specific planning and analysis.

Adaptive Management

Public lands are experiencing intensive use from motorized and non-motorized recreation. Impacts to natural resources are worsened by rapidly increasing urbanization and population growth next to the public lands. Other land uses are also contributing to the social conflicts and resource impacts on these lands. Some recreation use areas do not conform to other resource management objectives, such as Arizona Land Health Standards (Land Health Standards).

Therefore, within two years of plan approval BLM will form a collaborative partnership with universities, external agencies, and interested communities and citizens to list and prioritize these areas of concern. The effort will then focus on developing a Limits of Acceptable Change (LAC) framework to determine suitable and acceptable use levels for recreation uses, considering natural resource, socio-political, and managerial factors. This process would consist of four major components:

1. specifying acceptable and achievable resource and social conditions, defined by a series of measurable indicators,
2. analyzing the relationship between existing conditions and those judged acceptable,
3. selecting management actions to best achieve these desired conditions, and
4. implementing a monitoring and evaluation process to determine if management goals and objectives are being met.

During this process, inventories, surveys, and studies of existing resource and social conditions would be conducted to obtain and establish baseline data from which standards can be set and measured. Indicators would include both resource and social impacts such as the following:

- campsite proliferation or expansion,
- social trailing,
- soil compaction and erosion, and
- the number of social encounters.

Management Actions may include the following:

- providing public information and education,
- setting use and party-size limits,
- increasing visitor contacts and enforcement, and
- closing areas seasonally or shifting use to other areas.

Monitoring strategies may include measurements, rapid site assessments, photography, or other suitable techniques.

This process will be a dynamic approach in which adaptive management practices will be applied to facilitate learning and improve effectiveness. Efforts to coordinate with other resource disciplines will also be an integral part of this process.

Thresholds may be adjusted as needed to ensure resource protection, manage recreation use, minimize user conflicts, or react to new information or research, if warranted, due to changing circumstances or changes in management objectives.

The current authority for collection of recreation user fees would not allow for collection of such fees within the Bradshaw-Harquahala planning area. Under the Federal Lands Recreation Enhancement Act of 2004, P.L.108-447, fees may be charged at a site that has:

- clearly defined access points and area boundaries,
- substantial expenditure in operations and maintenance costs,
- significant investment in facilities (including roads and trails), and
- contains all of the following amenities:
 - a designated and developed parking area
 - permanent toilet
 - permanent trash receptacle
 - kiosks
 - picnic tables
 - security services commensurate with use levels

Should the above criteria be met in the future, a study would be initiated to determine the need and feasibility of charging a recreation use fee.

Administrative Actions

Develop partnerships and determine sustaining recreation and tourism-based economic opportunities with communities.

Interpretation and Environmental Education

Pursue multicultural interpretation and environmental education opportunities, outreach, development, and implementation of programs for adults and children. Apply learning modalities and incorporate various learning styles in program design and delivery. Encourage the use of multiple intelligence or other theories for program presentations.

Develop school curricula focusing on the BLM's mission with staffs from schools, school districts, and other learning institutions.

Allow cultural and natural resource interpretation signs and facilities where needed for visitor enjoyment or resource protection. Interpretive developments must be compatible with recreation management objectives, desired recreation settings, and VRM standards.

Develop websites and distribute brochures, maps, access guides, and information sheets to publicize the following:

- off-highway and specialized recreation opportunities,
- OHV rules,
- camping and non-motorized trails information,
- shooting policies, regulations and safe shooting practices, and
- applying Tread Lightly and Leave No Trace practices.

Accessibility

To the highest extent possible, all new construction and modifications for recreation facilities, outdoor developed areas, and any related programs and activities will be accessible to people with disabilities in accordance with the Architectural Barriers Act of 1968 and Section 504 of the Rehabilitation Act of 1973, with later amendments. Guidance, requirements and standards for conforming to the above legislation may be found in the following:

- Uniform Federal Accessibility Standards.
- Americans with Disabilities Act Accessibility Guidelines, and the ADA-ABA Accessibility Guidelines (use whichever guidance is most stringent).
- Proposed Outdoor Developed Areas Guidelines (U.S. Access Board found at www.access-board.gov and 43 CFR Part 17, Subpart E found at <http://www.gpoaccess.gov/cfr/index.html>).

2.7.3.7 Travel Management

Motorized and Mechanized Travel and Public Access

Land Use Allocations

All designated wilderness areas are closed to motorized and mechanized vehicle uses. Motorized and mechanized uses on all other BLM's lands will be Limited to Designated Routes. Until routes are designated, motorized vehicle access is limited to currently inventoried vehicle routes.

Closed = 96,820 acres

Limited to Designated Routes = 799,820 acres

Desired Future Condition

Define, designate, implement, and monitor a designated and comprehensive travel management network affording a range of high-quality and diverse motorized and non-motorized recreation opportunities. The network would consist of a system of areas, roads, primitive roads and/or trails. The travel management network and associated recreation opportunities would be consistent with other resource management objectives and recreation settings for the area.

Motorized routes connect neighboring communities, local jurisdictions, and lands administered by county, State, and Federal

agencies to allow for multiple-day OHV experiences.

A regional network of motorized routes and access exists for long-distance OHV back country touring. Looping, regional routes connect the Black Canyon, Bradshaw Foothills, Wickenburg/Vulture, and Harquahala-Big Horn areas, and continue north to the Wagoner and Skull Valley area to connect to Prescott National Forest and the Great Western Trail. Economic development of local communities to the south, east, and west of Phoenix is synergistic with providing outstanding motorized recreation.

Management Actions

All motorized vehicles and mechanized human conveyances (such as bicycles) would be limited to designated routes. All routes would be designated within five years of plan approval. Until route-specific designations are made, all motorized/mechanized vehicle travel and access would be limited to currently inventoried vehicle routes. Where inventories are not complete, use will be limited to existing routes. Inventoried routes will be updated with input from BLM, partnerships, user groups, and citizens. For these purposes, livestock and game trails are not considered existing routes or trails. Cross-country travel off designated routes would be prohibited, except for the following reasons:

- public health, safety, and law enforcement emergencies;
- administrative uses; or
- BLM-authorized tasks approved by the authorized officer.

Vehicle access on designated routes may be temporarily closed when weather creates muddy conditions. When conditions are such that travel by vehicle cannot be accomplished without damaging the existing roadway or departing the roadway and traveling cross-country, the route is closed until the roadway can once again support a vehicle without damage.

BLM recommends a standard evaluation process, supported by software and database and that is compatible with GIS functionality. A structured evaluation process would be applied to develop a designated travel and transportation system for all routes within the Bradshaw-Harquahala Planning Area. A description of the current BLM Arizona standard process used to evaluate and designate routes can be found in Appendix D (should be a link in e-Planning). These designations would apply to motorized vehicles and mechanized equipment designed to provide a mechanical advantage and intended for human conveyance, including automobiles, trucks, ATVs, motorcycles, mountain bikes, and other conveyances with one, two, three, four, or more wheels or tracks.

Once route designations are complete, changing conditions and demand may suggest a need for new routes to be added to the route network. The process for adding new routes to the designated route network, motorized or non-motorized, would include a structured analysis approach. All proposed additions to the designated route network would be processed as follows:

1. Route locations will be mapped or located using accepted Global Positioning System devices and presented to the BLM office for consideration. Locations for route proposals off of designated motorized routes must be located and mapped using non-motorized methods.
2. The route proposal submitted to BLM will include a description of the route including its proposed width, its proposed use(s), and a rationale for its need.
3. The route location will be staked and flagged for on-the-ground review by resource specialists.
4. The route location will be analyzed for potential conflicts such as, (but not limited to): wildlife habitats, cultural resources, visual resources, other recreation uses, mining claims or leases, grazing facilities, rights-of-way, and proximity to other jurisdictions (such as private land.) A structured process, such as that described in

Appendix D would be used to evaluate and document the potential route conditions.

5. The conflict assessment would lead to possible mitigation actions or alternative locations or design.
6. An environmental analysis (EA) would be conducted to determine the environmental affects of the proposed route and any Alternatives and mitigation suggested.
7. A decision would be issued by the authorized officer based on Land Use Plan compliance, resource objectives, and environmental impacts.
8. The Travel Management Plan would be updated accordingly.

Single or multiple-use OHV and technical vehicle loops, routes, specialized sport sites and management strategies would be designed and developed through interdisciplinary plans, with community and user input. Routes and areas would be developed as needed for the following purposes:

- protecting resources,
- ensuring visitor safety,
- satisfying local community needs, and
- improving recreation experiences or increasing recreation opportunities, such as for rock crawling and motorcycle trials.

Limits of acceptable change indicators and standards would be developed in site-specific planning to reduce user and resource conflicts. All motorized vehicle route construction would be compatible with social and managerial recreation settings and VRM standards. Communities, user groups, or agency staff can bring motorized vehicle route proposals forward for management attention.

Existing routes would be selected and designated for inclusion into a regional route network.

General long-distance travel corridors for OHV travel between field offices and other adjoining lands will be designated.

Loop route opportunities would be recognized and spur trails connected to augment the existing route network where no resource conflicts preclude the actions.

Easements or rights-of-way across key private and State-administered lands would be acquired to ensure long-term network viability and public access. Easements or rights-of-way actions will be undertaken when:

- route system effectiveness is or would be adversely effected by outside actions;
- opportunity becomes available and the action is consistent with recreation settings and goals;
- recreation and resource disciplines need public and/or administrative access to sites;
- portal access is desired to support resource objectives of safety and sustainability.

Where (1) a route creates a conflict between route users and natural or cultural resources, or (2) an OHV or special vehicle use conflicts with recreation management objectives, the following or other mitigation could be applied:

- closing routes;
- limiting season of use and vehicle types, speeds, and noise;
- rerouting offending route segments; or
- modifying routes to reduce or eliminate conflicts.

Motorized vehicles may not be used off designated vehicle routes to retrieve game. The cross-country use of wheeled game carriers is permitted, except in wilderness areas. Permittees, including livestock operators may not use motorized vehicles off designated routes without express permission from the Field Manager.

Recreation and Special Use permits would be authorized ensuring compliance with Federal, State, county, and local regulations for air quality and noise.

Use of transportation routes has the potential of contributing fugitive dust to the PM₁₀ non-attainment area in Maricopa County. Use of routes in PM₁₀ non-attainment areas and routes with fugitive dust issues will be part of the planning area's ongoing monitoring program. Proposed mitigation actions (closure, seasonal restrictions, speed limits, change in use, surfacing, surface and dust abatement treatments) will be addressed as part of the adaptive management for Travel and Transportation Management. Routes causing or contribution to unacceptable or noncompliant air quality impacts will be closed to travel until route conditions change or are corrected.

Administrative Actions

Develop Travel Management Plans to implement route designations, technical vehicle sites and other activities associated with travel management.

To comply with Maricopa County, State of Arizona and the Environmental Protection Agency's management of airborne particulates, it is BLM's responsibility to develop site specific planning to conform to those rules. BLM will manage and conduct activities on BLM land in a manner as to not contribute to fugitive pollutants that exceed thresholds. Upon completion of this planning effort, an air quality conformance plan will be developed for activities within the Maricopa County non-attainments areas which will focus on any potential dust producing activities, especially motorized recreation.

Coordinate route designation with adjoining field offices and land management agencies.

Establish relationships and enter into agreements with local interest groups and the business community for long-term route maintenance and community support for the ongoing management of the route system and its funding.

Prior to OHV route designations, citations may be issued and other enforcement actions taken for illegal or unauthorized vehicle travel

documented by BLM and Law Enforcement personnel. BLM's completed OHV route inventory for any subject area will constitute routes open and available for vehicle travel prior to a completed route evaluation and designation. Vehicle use in areas or on "routes" not included as part of the inventoried route network will be considered illegal and unauthorized off-road or cross-country travel. Signing may or may not be present. For illegal or unauthorized vehicle travel, citations may be issued at the discretion of the Law Enforcement officer. Citations will be issued for vehicle travel on inventoried and pre-existing motorized routes when the routes are signed as closed to motorized travel. In accordance with BLM Instructional Memorandum 2005-07, vehicles may not pull off a designated route more than 100 feet.

Motorized Technical Vehicle Activities

Desired Future Condition

Provide designated, managed sites for specialized vehicle use, considering the unique natural terrain required for such activities. Certain types of motorized activities, such as rock crawling and motorcycle observed trails, require extreme terrain features and are not conducive to general use by traditional stock 4-WD vehicles. These sites would not be evaluated and established during motorized route designation; however, access to these sites would be evaluated during route designation.

Management Actions

Technical vehicle sites would be evaluated and established on a case-by-case basis. Sites would be established if they result in no net loss of quality or quantity of sensitive resources such as cultural sites, wildlife habitat for priority species, sensitive soil resources, and other resources sensitive to motorized activities.

Limitations to assure the safe and intended use of these sites will be established as necessary. BLM, working with user groups and enthusiasts, would define the limitations in order to provide

and maintain challenging opportunities for specialized sport activities. In accordance with BLM Instructional Memorandum 2005-007, difficulty ratings will not be published. Motorized users would be informed of the required equipment and skills necessary to utilize these sites through signing, information sheets, and outreach programs.

Administrative Actions

Develop Travel Management Plans to implement route designations, technical vehicle sites and other activities associated with travel management.

Evaluate and establish technical vehicle sites on a case-by-case basis, with community and user input. Sites will be developed as needed for the following purposes:

- ensuring visitor safety,
- meeting enthusiast needs,
- improving recreation experiences,
- increasing recreation opportunities

Site plans will establish limits of acceptable change indicators and standards. All sites must be compatible with social and managerial recreation settings and VRM standards; satisfy biological and ecological land health standards; protect or mitigate cultural resources; and achieve water quality standards for influenced drainages and watersheds.

Non-motorized Trail Networks

Desired Future Condition

Provide a local and regional network of designated non-motorized trails for short and long-distance travel by foot, horseback, and human-powered conveyances (e.g. mountain bikes). Connect communities and Sonoran Desert landscapes by linking regional areas and communities through trail planning and implementing as coordinated by a State of Arizona trails plan. Develop trails that connect Black Canyon City with the Black Canyon Trail and Agua Fria National Monument. Also, use

long-distance trails to link communities and areas such as (but not limited to) the following:

- Prescott Valley,
- Mayer,
- Black Canyon,
- Bradshaw Foothills,
- Wickenburg area,
- Vulture Mountains, and
- Harquahala Mountains.

Assist tourism and economic development of communities by providing non-motorized outdoor recreation experiences.

Management Actions

Equestrian and mountain biking activities that require SRPs could be limited to existing trails, which for these purposes do not include livestock and game trails. These limitations would be included in permit stipulations designed to protect resources and address safety concerns. Casual hiking and equestrian activities are not restricted to trails unless prescribed in the management actions of a special area designation or allocation. The authorized officer may close areas to casual hiking or equestrian use, or require these activities to be limited to trails, to mitigate resource damage.

Administrative Actions

Develop comprehensive Travel Management Plans for the management units. These plans would implement the route designations for the area.

Plan, designate, and develop new hiking, equestrian, or mountain bike trails through interdisciplinary plans with community and user input. Trails will be developed as needed for the following purposes:

- protecting resources,
- ensuring visitor safety,
- meeting community needs,
- improving recreation experiences, or
- increasing recreation opportunities.

Trails project plans will establish limits of acceptable change indicators and standards. All trail building must be compatible with social and managerial recreation settings and VRM standards. Recreation settings are established in the Recreation sections of this plan. VRM standards are established in the Visual Resources sections of this plan. Communities, user groups, or agency staff can bring trail proposals forward for management attention.

An evaluation process, similar to one described in Appendix D, will be used to establish a designated public access and route system within the Bradshaw-Harquahala area public lands, consistent with the land use plan resource management objectives.

Travel Management Plans

Travel management plans (TMPs) will be created for management units after route designation is completed. The TMP will address issues such as:

- A map depicting the final decision for route designations, including all modes of travel and primary uses.
- Guidance for seeking active public involvement throughout the route designation process and follow on management decisions.
- Guidance for using an interdisciplinary approach to identifying and mitigating resource impacts.
- Definitions and additional limitations for specific roads and trails (defined in 43 CFR 83400-5(g)).
- Creating a catalog for each individual route's Travel Management Objective (TMO) sheets;
- Indications of changes in status of existing routes and areas.
- Risk management
- Coordination with adjoining jurisdictions
- Identify long distance route corridors for connectivity with adjoining jurisdictions and general long distance touring.

- Identification of Special Recreation Management Zones where Technical Four Wheel Drive activities are authorized.
- Criteria and procedures for making additions and deletions from the route system;
- Signing plans and sign inventories;
- Facility development (engineering);
- Guidelines for education and enforcement;
- Guidelines for system monitoring and compliance;
- Coordination with BLM's Facility and Asset Management System(FAMS);
- Dust management plans;
- Indicators to guide future plan maintenance, amendments or revisions related to the travel management network.
- Needed improvements, signing, trailheads and staging areas.
- Needed maintenance intensity and easements or rights-of-way to maintain the existing or proposed road and trail network providing public land access.
- Guidelines for periodic review of the travel management plan and triggers for making updates and/or maintenance.
- Identification of existing roads, primitive roads, trails and related facilities (baseline inventory data)
- Other topics as necessary to manage travel.

General Travel Management Area boundaries correspond to Management Unit boundaries. The following considerations will guide decisions on travel management:

- a. Designated wilderness areas are managed according to the existing decisions described in this plan.
- b. All areas outside of designated wilderness are limited vehicle use areas where vehicles are limited to routes designated as open or available for vehicle use as follows:
 - Non-motorized, mechanized vehicle use (e.g., bicycles, hang gliders, other devices for conveyance and stock drawn carts/wagons) is restricted to routes or sites designated as available, or open for such use. Non-motorized, hand-powered wheeled game carriers are permitted as described below.
 - Decisions regarding motorized vehicles are according to the prescriptions in the Travel Management sections of this plan.
- c. Non-mechanized travel (i.e., foot and equestrian use) is allowed off designated routes, except where otherwise prohibited. The creation of routes caused by repetitive use is discouraged. Routes not meeting land health standards or plan objectives may be closed.
- d. All caves, mines, wells, abandoned structures, or other confined spaces are closed to public entry unless an individual site is signed open for such entry or entry is authorized under special use permit.
- e. The use of aircraft, motorized and non-motorized, must conform to Federal Aviation Administration (FAA) standards including the use of backcountry landing strips. There are no backcountry airstrips designated for public use on BLM land within the planning area. Use of public lands for launching or landing aircraft other than airplanes (balloons, hang gliders, etc.) may be permitted on a case-by-case basis through the appropriate permit process. The Yarnell Hang Gliding launch area is discussed in other sections of this plan.
- f. Area closures to access and travel methods may be enacted where travel is determine to be inconsistent with the recreation management zone, harming resources, or failing to achieve the objectives of the plan.
- g. Touring routes and trail systems, both motorized and non-motorized, are a priority and will be addressed through activity (implementation) level planning. Proposed actions that may effect proposed touring routes and trail systems will be evaluated and adjusted when possible to avoid impacts. Examples of priority routes and trail systems include the Maricopa County Regional Trail System and long distance vehicle touring routes with local and regional significance.
- h. Administrative and other authorized use will be approved on a case-by-case basis (see

decision of administrative and emergency access below).

- i. Temporary access and use restrictions may be enacted when needed to protect resources or public health and safety.

PM₁₀ Non-attainment Area Administrative TMA:

- a. All General TMA prescriptions apply.
- b. The areas described in 40 CFR 81.303 or subsequent regulation or policy as PM₁₀ air quality non-attainment areas will be managed for compliance with EPA and County standards and other applicable standards to maintain air quality. Dust mitigation measures may be implemented including, but not limited to, speed limits, adding dust reducing agents to disturbed areas, seasonal closure, or year round closure.
- c. Management units affected in part or whole are: Castle Hot Springs, Hassayampa.

2.7.3.8 Visual Resource Management

Manage visual resources to minimize the visual intrusion of any authorized activity. Apply VRM class standards consistent with other resource objectives.

If possible, avoid utilizing strobes or other lights that will affect the quality of night skies.

2.7.3.9 Rangeland Management

Implement ephemeral range designation, where suitable, for managing vegetation and ecological processes as determined through the Arizona Land Health Standards (Land Health Standards) allotment evaluation process.

BLM may designate those areas for ephemeral grazing by applying criteria established in the Special Ephemeral Rule. In applying the rule, all the following criteria must be met at the same time:

1. The area is within the hot desert biome.

2. Annual precipitation is less than 8 inches.
3. The land produces less than 25 pounds/acres of desirable perennial forage.
4. The land contains less than five percent composition of desirable perennial forage plants.
5. The area is below 3,500 feet in elevation.
6. Total forage production is highly unpredictable, and forage is usually available only for a short time.
7. The growth depends upon abundant moisture and other favorable climatic conditions.
8. The area lacks potential to improve the current ecological conditions and produce a dependable supply of forage by applying intensive rangeland management.

2.7.3.10 Mineral Resource Management

If mineral estate under lands now closed to mineral entry are opened to mineral entry, manage those lands, including mineral estate, will be managed consistent with the Decisions made in this plan.

Deny mineral material disposal applications if the disposal would result in a net loss of desert tortoise habitat.

On split estate lands:

- If BLM manages the Federal mineral estate but the surface is not in Federal ownership, BLM will manage the lands as public lands under FLPMA.
- Unless it is determined to be detrimental to the public interest, BLM will not normally allow mineral material disposal without the surface owner's consent.
- Where the private surface has been developed for non-mineral use, BLM will limit or forgo mineral materials sales.

- On split estate lands, BLM will not normally manage for solid mineral development without surface owner consent, unless it is determined to be detrimental to the public interest.

2.7.3.11 Wild Burro Management

Management decisions from the previous RMP concerning the Lake Pleasant Herd Management Area (HMA) will be carried forward.

Management of burros within the Lake Pleasant HMA will continue in accordance with the provisions of the Lake Pleasant Herd Management Plan and managed to achieve the Appropriate Management Level (AML) set in that plan. Burros would be removed from the Lake Pleasant HMA when the population exceeds the AML or if burros are determined to be nuisance animals as defined by the Wild Horse and Burro act of 1972.

A manageability analysis of the Harquahala HA is included in Appendix G. This analysis is the basis for future burro management within the Harquahala Herd Area. In response to the manageability analysis, the Harquahala HA will not be managed as a HMA. Burros will be removed from the herd area as funding is available with the target of reaching a population of zero.

BLM will coordinate with the AGFD and other affected interests during its evaluation of any proposals for burro management.

2.8 Alternatives Considered But Not Analyzed in Detail

This section briefly describes management options that were suggested either during scoping or public workshops. BLM determined these management options should not be included in any Alternative. The elements are described below, along with the reasoning for excluding them from further consideration.

Designate Shooting Areas within Agua Fria National Monument or the Bradshaw-Harquahala Planning Area

Designated shooting areas were not established because of safety concerns for areas where shooting would concentrate; therefore, would not be managed as shooting ranges. In addition, the potential concentrations of lead in such areas would require compliance with EPA regulations for site cleanup and monitoring. BLM and the AGFD can issue citations for the unsafe discharge of firearms. However, maintenance of safe conditions is considered achievable under current regulations, at current enforcement levels, and with the direction written in section 2.7.3.7 under the discussion of Recreational Target Shooting.

Restrict Shooting in Utility Corridors

Designating corridors as off-limits to shooting would be difficult to enforce because corridors are not physically marked on public lands. It is difficult for recreationists to know if they are in a corridor because many utilities do not include aboveground facilities. We feel enforcement of safe and proper recreational shooting is achievable with the direction written in section 2.7.3.7 regarding Recreational Target Shooting.

Establish Open OHV Areas

Designating areas open to cross-country OHV use was not proposed because a complete designated route system will be prepared after the RMP is approved. The Bradshaw-Harquahala Planning Area vehicle routes are being inventoried, but the comprehensive inventory is not complete. The route evaluation/decision tree process used for the national monument will be applied to develop a transportation plan for rest of the planning area. Most areas with existing heavy OHV use are located within desert tortoise habitat, and more degradation of habitat would not be permitted.

Reclassify Some Areas of Desert Tortoise Habitat from Category II to Category I

The classification process evaluates several characteristics, including habitat quality and manageability. If habitat areas had met the criteria for Category I during the evaluation process that produced the existing classifications, these areas would be reflected as such in the current category mapping.

Establish User Fees for Agua Fria National Monument

The expected level of improvements and visitor facilities should not require extensive additional staffing or maintenance. Furthermore, fee collection on the monument under current conditions would be inconsistent with the Federal Lands Recreation Enhancement Act of 2004, P.L.108-447.

Establish Permit Program and User Fees in the Bradshaw-Harquahala Planning Area

The collaborative planning process used for this effort has resulted in multiple contacts with local community groups that BLM will continue to work with throughout the implementing of the plan. The increased community contact should result in a higher level of awareness of the value of public lands and assist in long-term management through volunteer programs and site stewardship. Therefore, BLM believes that adequate management can be maintained without imposing user fees and adding staff. Furthermore, fee collection under current conditions would be inconsistent with the Federal Lands Recreation Enhancement Act of 2004, P.L.108-447.

Identify Locations and Manage for Recreational Prospecting

All forms of mining, including casual use (sometimes referred to as recreational prospecting), are managed under existing mining laws and regulations. Managing prospecting as a recreation activity would require changes to the mining laws and regulations that are beyond the purview of the RMP process.

2.9 Typical Management Actions and Standard Operating Procedures

2.9.1 Typical Management Actions

2.9.1.1 Vegetation Treatment

Several treatment methods and standard operating procedures will be used in a vegetation treatment program. BLM's policies and guidance for public land treatments will be followed in implementing all treatment methods. Guidelines are provided in the following documents:

- Manual Section 1740, BLM Arizona Standards for Rangeland Health (Land Health Standards).
- Programmatic documents such as BLM's Environmental Impact Statement for Vegetation Treatments, Watersheds and Wildlife Habitats on Public Lands Administered by the BLM in the Western United States, including Alaska (BLM 1991).
- Other general and specific program policy, procedures, and standards for implementing renewable resource improvements.

The following manual, chemical, mechanical, biological, and fire treatment methods would be used under all Alternatives.

Manual Vegetation Treatment

Hand-operated power tools and hand tools are used in manual vegetation treatment to cut, clear, or prune herbaceous and woody plants. In manual treatments workers do the following:

- cut plants above ground level,
- pull, grub, or dig out plant root systems to prevent later sprouting and regrowth,
- scalp at ground level or remove competing plants around desired vegetation, and
- place mulch around desired vegetation to limit the growth of competing vegetation.

Hand tools such as the handsaw, axe, shovel, rake, machete, grubbing hoe, mattock (combination of axe and grubbing hoe), brush hook, and hand clippers are used in manual treatments. Axes, shovels, grubbing hoes, and mattocks can dig up and cut below the surface to remove the main roots of plants such as prickly pear and mesquite that have roots that can quickly resprout in response to surface cutting or clearing. Workers also may use power tools such as chainsaws and power brush saws.

Although manual vegetation treatment is labor intensive and costly, compared to prescribed burning or herbicide application, it can be extremely species selective and can be used in areas of sensitive habitats or areas that are inaccessible to ground vehicles. Manual treatment of undesired plants would be used on sites designated as categories a, b or c, where fire (prescribed or naturally ignited) is undesirable or where significant constraints prevent widespread use of fire as a management tool. These sites comprise a range of vegetation communities or habitat types. They include areas where there may be wildlife concerns, yet it is deemed beneficial to remove trees, shrubs, or other fuel-loading vegetation. Manual vegetation treatments cause less ground disturbance and generally remove less vegetation than prescribed fire or mechanical treatments.

Mechanical Vegetation Treatment

Mechanical vegetation treatments employ several different types of equipment to suppress, inhibit, or control herbaceous and woody vegetation. The goal of mechanical treatments is to kill or reduce the cover of undesirable

vegetation and thus encourage the growth of desirable plants. BLM uses wheeled tractors, crawler-type tractors, mowers, or specially designed vehicles with attached implements for mechanical vegetation treatments. Mechanical equipment is used to reduce fuel hazards in accordance with BLM established procedures. Re-seeding after mechanical treatments is important to help ensure that desirable plants and not weedy species will become established on the site. Mechanical treatment and reseeding should occur at a time to best control the undesirable vegetation and encourage the establishing of desirable vegetation. The best mechanical method for treating undesired plants in a particular location depends on the following factors:

- characteristics of the undesired species present, such as plant density stem size, woodiness, brittleness, and resprouting ability,
- need for seedbed preparation, revegetation, and improved water infiltration rates;
- topography and terrain,
- soil characteristics such as type, depth, amount and size of rocks, erosion potential, and susceptibility to compaction,
- climatic and seasonal conditions, and
- potential cost of improvement as compared to expected results.

Bulldozing consists of a wheeled or crawler tractor with a heavy hydraulic controlled blade. Bulldozers push over and uproot vegetation and leave it in windrows or piles. Bulldozing is best adapted to removing scattered stands of large brush or trees. Several different kinds of blades can be used, depending of the type of vegetation and goals of the project. The disadvantage of bulldozing is that it disturbs soil and may damage non-target plants.

Disk plowing in its various forms can be used for removing shallow-rooted herbaceous and woody plants. Disk plows should only be used where all of the vegetation is intended to be killed. Several different kinds of root plows are

specific for certain types of vegetation. In addition to killing vegetation, disk plowing loosens the soil surface to prepare it for seeding and to improve the rate of water infiltration. The disadvantage of disk plowing is that it may be expensive and usually kills all species. Also, plowing is usually not practicable on steep slopes (> 35-45 percent slope) or rocky soil. Plant species that sprout from roots may survive.

Vegetation is chained and cabled by dragging heavy anchor chains or steel cables hooked to tractors in a U-shape, half circle, or J-shaped manner. Effective on rocky soils and steep slopes, chaining and cabling are best used to control non-sprouting woody vegetation such as small trees and shrubs. Desirable shrubs may be damaged in the process. This control method normally does not injure herbaceous vegetation. It is cost effective because it can readily treat large areas. The chains or cables also scarify the soil surface in anticipation of seeding desirable species. The disadvantage is that weedy herbaceous vegetation can survive this treatment.

Various tractor attachments are used for mowing, beating, crushing, chopping, or shredding vegetation, depending on the nature of the plant stand and goals of the project. The advantage in using this type of equipment is that selective plants may be targeted to achieve specific goals. For example, mowing is effective in reducing plant height to a desirable condition, and mowing usually does not kill vegetation. Mowing is more effective on herbaceous than woody vegetation. On the other hand, a rolling cutter leaves herbaceous vegetation but can kill woody nonsprouting vegetation by breaking stems at ground level. Mowing, beating, crushing, chopping, or shredding usually do not disturb soil. Rocky soil and steep slopes may limit the use of this equipment.

Debris management after a mechanical treatment is critical in fuels reduction projects. Vegetation material that is left on a site will dry and may become more hazardous than before the treatment. Herbaceous material is usually not a

problem because it will decompose relatively fast, depending on soil moisture and ambient humidity and temperature. Woody vegetation should be piled and burned under acceptable fire management practices.

Biological Vegetation Treatment

Biological methods of vegetation treatment employ living organisms to selectively suppress, inhibit, or control herbaceous and woody vegetation. This method is viewed as one of the more natural processes because it requires the proper management and plant-eating organisms and precludes the use of mechanical devices, chemical treatments, or burning.

The use of biological control agents will be conducted in accordance with procedures in BLM Manual 9014, Use of Biological Control Agents of Pests on Public Lands (BLM 1990b). Insects, pathogens, and grazing by cattle, sheep, or goats would be used as biological control methods under all Alternatives, but these methods can control only a few plant species. Insects are the main natural enemies now being used. Other natural enemies include mites, nematodes, and pathogens. This treatment method will not eradicate the target plant species but merely reduces the target plant densities to more tolerable levels. This method also reduces competition with the desired plant species for space, water, and nutrients. This treatment method will be used on larger sites where the target plant has become established and is strongly competitive.

Gradually, biological methods using cattle, sheep, or goats would avoid erosion hazard areas, areas of compactable soils, riparian areas susceptible to bank damage, and steep erodible slopes.

Biological control using cattle, sheep, or goats would be applied to treatment areas for short periods. In using grazing animals as effective biological control measures, several factors will be considered:

- target plant species present,

- size of the infestation of target plant species,
- other plant species present,
- stage of growth of both target and other plant species,
- palatability of all plant species present,
- selectivity of all plant species present by the grazing animal being considered for use,
- availability of that grazing animal within the treatment site area,
- type of management program that is logical and realistic for the treatment site, and
- potential impacts to native wildlife and their habitat.

These factors will be some of the options taken when developing the treatment for a site.

Cattle, sheep, and goats can be used to control the top growth of certain noxious weeds. The following are some advantages of using livestock, mainly sheep or goats, for noxious weed control.

- They use weeds as a food source.
- After a brief adjustment period, they sometimes consume as much as 50% of their daily diet of certain noxious weed species.
- Average daily gains of offspring grazing certain weed-infested pastures can sometimes be significantly higher than average daily gains of offspring grazing grass pastures.
- Sheep or goats can be used in combination with herbicides.

Following are some of the disadvantages of using livestock:

- They also use non-target plants as food sources;
- The use of domestic animals, like sheep or goats, may require a herder or temporary fencing;
- The animals may be killed by predators such as coyotes;

- Heavy grazing of some weed species, such as leafy spurge, tends to loosen the stool of grazing animals;
- Most weed species are less palatable than desirable vegetation, and overgrazing would result;
- Livestock may accelerate movement of non-native plants by ingesting and excreting seeds.
- Livestock may transmit parasites or pathogens to resident native wildlife species.

Particular insects, pathogens, or combinations of these biological control agents may also be introduced into an area of competing or undesired vegetation to selectively feed upon or infect target plants and eventually reduce their density within that area. Only on rare occasions will one biological control agent reduce the target plant density to the desired level of control. Therefore, a complex of biological control agents is most often needed to reduce the target plant density to a desirable level. Even with a complex of biological control agents, often 15 to 20 years are needed to bring about an economic control level, especially on creeping perennials. In most circumstances, biological control agents are not performing control. They are only creating stresses on weeds, which is not the same as control.

Some advantages of using natural enemies to control weeds are as follows:

- They are self-perpetuating.
- They can be comparatively economical once studied and established.
- They can be highly selective.
- They offer a high degree of environmental safety.
- They do not require fossil fuel energy.

Biological control does have the following imitations:

- It is a slow process.
- It does not achieve eradication but merely reduces weed densities to more tolerable levels.

- It is highly selective, attacking one weed existing among a complex of other weeds.
- It cannot be used against weeds that are valued in some situations because insects or pathogens do not recognize boundaries.
- It cannot be used against weeds that are closely related to beneficial plants because the insects or pathogens may be unable to discriminate between related plant species.
- It cannot be used against weeds when the biological control agent requires an alternate host that may be a beneficial plant.

To develop a biological weed control program, the following steps must be taken:

1. Identify weed species and determine origin.
2. Determine if any natural enemies occur at the point of origin.
3. If possible, collect natural enemies.
4. Hold preliminary screening trials on the natural enemies of the weed in the United States.
5. Hold further screening trials in the United States.
6. Raise biological control agents before the first release.
7. Release biological control agents for the first time onto selected sites.
8. If biological control agents survive and increase in numbers, collect agents and release onto other sites of weed infestation.

Usually a complex of at least three to five different biological agents, such as insects, must be used to attack a weed infestation site. Even with a complex of biological agents, often 15 to 20 years are needed to bring about an economic control level, especially on creeping perennial plants.

Chemical

Chemical treatment would be used to control unwanted vegetation, and in some instances would be followed by a prescribed burn. Treatments would be conducted in accordance with BLM procedures and would meet or exceed individual State label standards. The chemicals can be applied by many different methods, and the selected technique depends on several variables, including the following:

- treatment objective (removal or reduction),
- accessibility, topography, and size of the treatment area,
- characteristics of the target species and the desired vegetation,
- the location of sensitive areas in the immediate vicinity (potential environmental impacts),
- expected costs and equipment limitations; and
- meteorological and vegetation conditions of the treatment area at the time of treatment.

Herbicide applications are scheduled and designed to minimize potential impacts on nontarget plants and animals, while remaining consistent with the objective of the vegetation treatment program. The rates of application depend on the target species, presence and condition of nontarget vegetation, soil type, depth to the water table, presence of other water sources, and the requirements of the label.

In many circumstances the herbicide chosen, time of treatment, and rate of application of the herbicide differs from the most ideal herbicide application for maximum control of the target plant species to minimize damage to the nontarget plant species, and to ensure minimum risk to human health and safety.

The chemicals would be applied aurally with helicopters or fixed-wing aircraft or on the ground using vehicles or manual application devices. Helicopters are more expensive to use than fixed-wing aircraft. They are more

maneuverable and effective in areas with irregular terrain and in treating specific target vegetation in areas with many vegetation types. Manual applications are used only for treating small areas or areas inaccessible by vehicle.

The typical and maximum application rates of each chemical would vary, depending on the program area being treated.

Prescribed Burning

Prescribed burning is the planned application of fire to wildland fuels in their natural or modified state, under specific conditions of fuels, weather, and other variables, to allow the fire to remain in a predetermined area and to achieve site-specific fire and resource management objectives.

Management objectives of prescribed burning include the following:

- controlling of certain species,
- enhancing growth, reproduction, or vigor of certain species,
- managing fuel loads, and
- maintaining vegetation community types that best meet multiple use management objectives.

Treatments would be implemented in accordance with BLM's procedures in Prescribed Fire Management (BLM 2000c)

Before conducting a prescribed burn, a written plan must be prepared. The plan must:

- consider existing conditions (amount of fuel, fuel moisture, temperatures, terrain, weather forecasts) and
- name the people responsible for overseeing the fire.

Also, natural fire that is allowed to burn needs to be carefully monitored to ensure that it will not threaten communities, ecosystems, and other values to be protected. This monitoring may require special expertise such as fire-use management teams that support the overall fire management program. Planning and

implementation for a specific prescribed fire project entails the following four phases:

Phase One: Information/assessment includes the following:

- determining the area to be treated,
- inventorying and assessing site-specific conditions (live and dead vegetation densities, dead and down woody fuel loadings, soil types),
- analyzing historic and present fire management,
- identifying resource objectives from land use plans, and
- conducting NEPA analysis and compliance.

Phase Two: Prescribed fire plan development includes the following:

- developing the site-specific prescribed fire plan to BLM's standards,
- reviewing the plan, and
- obtaining plan approval from local BLM's field office administrators.

Phase Three: Implementation includes the following:

- preparing the prescribed fire boundary to ensure that the fire remains within prescribed boundaries,
- preparing the site, which may include building firelines and improving vehicle routes and wildlife and stock trails by limbing trees and clearing debris, and
- igniting the fire according to the plan's prescribed parameters.

Phase Four: Monitoring and evaluation includes assessment and long-term monitoring of the fire treatment to ensure that the prescribed fire has met the objectives of the approved prescribed fire plan.

2.9.2 Appropriate Management Response

2.9.2.1 Fire Management

The appropriate management response concept represents a range of available management responses to wildland fires. Responses range from full fire suppression to managing fires for resource benefits (fire use). Management responses applied to a fire will be listed in the fire management plan by the following:

- relative risk to resources, the public, and fire fighters,
- potential complexity, and
- the ability to defend management boundaries.

Any wildland fire can be aggressively suppressed, and any fire in an area designated for fire use can be managed for resource benefits if it meets the prescribed criteria from an approved fire management plan.

Fire Suppression Actions

The following constraints to fire suppression actions are common to all Alternatives:

- Use suppression tactics that limit damage or disturbance to the habitat and landscape. Use no heavy equipment (such as dozers) unless approved.
- Use fire retardants or chemicals next to waterways in accordance with the Environmental Guidelines for Delivery of Retardant or Foam near Waterways (Interagency Standards for Fire and Aviation Operations Task Group 2004).
- Protect all known cultural resources from disturbance.
- In wilderness areas when suppression is required, use MIST and coordinate with wilderness area management objectives and resource advisors.
- Implement general and species-specific conservation measures to the extent

possible to minimize harm to federally listed, proposed, or candidate species within the action area.

2.9.3 Standard Operating Procedures (SOPs)

Standard Operating Policies and Procedures

BLM operates under a number of policies and procedures separate from the management decisions that are required to be analyzed in this planning process. The policies and procedures either already exist, or have been identified through the collaborative planning process and will be used to guide the implementation of the management decisions. The following section summarizes the policies and procedures for both the monument and the Bradshaw-Harquahala Planning Area, for those resource categories that have identified such policies and procedures.

General Standard Operating Procedures

All activities planned or conducted on BLM's land are subject to environmental analysis in compliance with the National Environmental Policy Act (NEPA). The process to comply with NEPA first involves making a determination whether the proposed action is in conformance with the RMPs. Next, a determination of NEPA adequacy is conducted to determine if existing environmental analysis is adequate to address the proposal. And finally, if additional analysis is required, an environmental analysis (EA) is written to address site specific environmental impacts that might occur. Some projects, because of where they occur or for other reasons, may have adequate NEPA compliance through Categorical Exclusion. In any case, all projects require clearance for cultural resources and sensitive wildlife habitats. If it is determined there may be an effect to significant cultural resources, mitigation(s) is/are recommended and consultation with the State Historic Preservation Officer is initiated. If it is determined there may be an effect to Threatened or Endangered species or their habitat,

consultation with the Fish and Wildlife Service is initiated.

SOPs for Agua Fria National Monument

Special Recreation Permits

Non-Motorized Trail Construction

Trails are designed to minimize surface disturbance.

Linear areas of interest would be marked with fiberglass posts or rock cairns to establish the footpath.

Consider alternative types of transportation to link areas of interest within the monument.

Develop partnerships with local clubs and organizations to help maintain and monitor trails.

Motorized Trail Construction

Minimize surface disturbance by, where possible, using existing roads for motorized recreation.

Develop partnerships with local clubs and organizations to help maintain and monitor trails.

Lands and Realty

Obtain reasonable public and administrative access to BLM's managed lands within the monument in the following way:

- Require reciprocal access easements to meet specific program needs.
- Consider and manage the use of public lands for rights-of-way, right-of-way reservations, easements, permits, leases, licenses, agreements, etc, except for those areas identified as exclusion areas.
- Secure access easements as needed to prevent closing of access to public lands.

- Consider and evaluate acquisitions that would reduce conflicts between BLM and non-Federal landowner objectives, especially when conflicts are adversely affecting BLM's ability to meet resource goals.
- Consider acquiring lands where lands to achieve BLM resource management objectives. Evaluate the following:
 - key wildlife habitat, fisheries management areas and habitat for threatened, endangered, or sensitive species; lands with water frontage, such as lakes, streams, flood plains, wetlands, and associated riparian ecosystems Land with important value for outdoor recreation purposes
 - land needed for visual resource protection
 - lands needed to bring existing BLM's managed land into consolidated geographical units.
 - partial interest acquisitions, such as access, minerals, water rights or conservation easements to benefit public land management within the monument
 - consider public/private land management and stewardship opportunities to assist in the management of BLM's lands within the Agua Fria National Monument

Communication Sites

Any future communication sites will be designated only within the boundaries of designated utility corridors.

BRADSHAW-HARQUAHALA PLANNING AREA

Travel and Transportation Planning

Plan, designate, and develop single or multiple use off-highway and special recreation vehicle

areas, loops, routes, and management strategies through interdisciplinary plans, with community and user input. Plans shall adopt limits of acceptable change indicators and standards and reduce user conflicts.

Evaluate roads, routes, and trails, on a case-by-case basis, for permitted events. Determine their suitability or if they will require action such as, closure, re-routing, rehabilitation, upgrading or authorization as an approved permitted course.

Enact road, trail, or area closures or mitigation where off-highway or special vehicle use is determined to be inconsistent with established recreation management objectives, and/or such use is causing harm to resources.

Permit motorized cross-country use only when specifically authorized for completing a BLM authorized task.

Develop brochures, maps, access guides, and information sheets and disseminate off-highway and vehicle information to the public.

Develop a specific AFNM Transportation Management Plan if necessary to implement route designations and guide associated activities. Otherwise route management is guided by this plan and other applicable laws, regulation and guidance.

Recreation

Parking, Staging Areas, and Facilities

Parking and staging areas will be allowed for visitors' needs to enhance recreation opportunities, to protect natural resources, to satisfy local community needs, or for public safety purposes.

Conduct site-specific planning, on a case-by-case basis.

Authorize facilities where needed for resource protection, visitor safety, improving the recreation experience or increasing recreation opportunities.

In non-designated areas, establish designated camping locations, off-highway and special recreation vehicle use areas and sites as needed for resource protection, visitor safety, improving the recreation experience or increasing recreation opportunities.

Evaluate, as needed, planning and installation of improvements for long-and short term camping areas, commercial and competitive off-highway and special recreation vehicle use areas, water, toilets, scenic turnouts, cultural interpretive sites, kiosks, hiking, equestrian or mountain bike trails, road and portal signage and road maintenance as needed and identified by communities, user groups, or agency staff.

Recreation Sites

Develop brochure guides for developed sites.

Allow cultural and natural resource interpretation where needed for visitor enjoyment or resource protection.

Camping

Close trailhead facilities to overnight camping upon authorization of the Field Manager.

Recreation Management in SRMAs/RMZs

Allow for increased recreation use in appropriate areas, while protecting natural and cultural resources through limitations in sensitive areas. Preserving a healthy, properly functioning, and natural appearing landscape is essential.

Engage a diverse group of stakeholders in a collective effort to conserve the ecological, cultural, open space and recreation values of the area so that it remains a place where people want to live, work and recreate.

Initiate acquisition of lands, easements, or establish conservation agreements through:

- exchange of private lands,
- conservation agreements for high value cultural, biological, or recreation lands,

- purchase of access agreements or rights-of-way.

Assist local community efforts to work with the Arizona State Land Department for recreation easements across State land.

Form citizen, agency, and Government working groups to identify non-public (private and State) lands with high-value biological, cultural, scenic, open space, access or recreation resources that should be protected. Deliver recommendations and objectives on land, access and open space conservation to BLM or the appropriate entity early enough so objectives can be met.

Maintain scenic and natural landscape settings while offering visitors a diverse array of recreation opportunities, including both human-powered and motorized-based activities. Emphasis would be placed on maintaining rural and natural settings, and protecting visual resources. Enter into Recreation and Public Purposes Act leases or patents with qualified entities when appropriate to achieve resource objectives.

Avoid vehicle and recreation uses/access to areas with known listed, sensitive, threatened, and/or endangered species (plant and wildlife).

Minimize recreation use and vehicular traffic when the soils are wet or during high-fire threat conditions.

Form partnership with communities and user groups to prevent and restore areas impacted by litter/dumping.

Complete comprehensive trails strategy and planning to select and develop new single-use and multi-use, hiking, equestrian, and OHV trails where appropriate to meet resource objectives. Then, implement that plan.

Work with private property owners to reduce conflicts between private owners and recreational activities.

Manage the lands within SRMAs/RMZs for multiple uses, including livestock grazing and OHV uses.

Complete a comprehensive inventory and description of all existing and potentially mechanized and non-mechanized trails and routes on public land.

Evaluate roads, routes, and trails, on a case-by-case basis for permitted events and determine suitability for closure, re-routing, rehabilitation, upgrading or authorization as an approved permitted course.

Develop brochures, maps, access guides, and information sheets and disseminate off-highway and special recreation vehicle information to the public.

Plan, designate and develop single- or multiple use off-highway and special recreation vehicle areas, loops, tours, routes and management strategies through interdisciplinary plans, with community and user input. Emphasis will be placed on all-terrain vehicle opportunities and trail linkages with the Black Canyon, New River, Anthem, Wickenburg, Cordes Lakes, and other communities. Planning shall adopt limits of acceptable change indicators and standards and emphasize reducing user conflicts.

Mineral Resources

Unless otherwise restricted, all Federal mineral estates administered by BLM within the Planning Area are available for orderly and efficient development of mineral resources. Mineral exploration and development is generally encouraged on public land in keeping with BLM's multiple resource concepts. Overall guidance on the management of mineral resources appears in the *Mining and Minerals Policy Act of 1970*, Sec. 102(a)(12) of FLPMA, *National Materials and Minerals Policy, Research and Development Act of 1980* and BLM's *Mineral Resources Policy of May 29, 1984*.

Exploration and development of all mineral resources will be conducted in accordance with all applicable laws and regulations.

Acquired lands will be opened to mineral entry unless critical resource values (threatened and endangered species, riparian habitat, scenic values, etc.) or public health and safety require closure. Upon approval of proposed regulations at 43 CFR 2201.8-2(b), newly acquired lands would automatically be open to operation of the public lands and mineral laws within a specified timeframe after acceptance of title unless critical resource values such as those listed above require closure.

Issuing rights-of-way where there are active mining claims is routine and covered by legislation and regulation. The right-of-way purchaser or permittee is informed of the rights of the mining claimant. Mining might intermittently or temporarily obstruct the right-of-way.

Locatable Minerals

The 43 CFR 3715 and 3809 regulations provide for the management of surface disturbance associated with mineral exploration and development including mining claim use and occupancy. The BLM reviews mining notices and plans in the time allotted as identified in the regulations. For notice level operations, if time permits, a site visit would be conducted for lands identified in a mining notice by the geologist and an archeologist and biologist if they are available. A site visit would always be conducted by BLM during the processing of a plan of operations.

Mining plans and notice level operations when mining claim occupancy is proposed are required to have the proper NEPA documentation prepared. BLM will work with operators to ensure that notices and plans are processed efficiently and in a timely manner. Reclamation plans and bonds are required for each notice and plan per regulation. The amount of such bonds is for the full amount required to complete 100% of the required

reclamation as if BLM were required to hire independent contractors to do the work.

In addition to the requirements of 43 CFR 3715 and 43 CFR 3809, State and Federal law provides for numerous other permits including, but not limited to: an Aquifer Protection Permit and a NPDES permit both issued by the Arizona Department of Environmental Quality, a Section 404 permit issued by the Army Corps of Engineers and a flood control permit issued by the county. Also, Arizona State law requires mining claimants to keep mining property in a safe condition. The State Mine Inspector's Office is responsible for enforcing this law. BLM will cooperate all interested agencies to ensure that operations conducted on BLM-administered lands are in full compliance with all Federal, State and local health, safety and environmental laws as required by 43 CFR 3715.5.

All occupancy of mining claims must meet the requirements of 43 CFR 3715 and must meet the specific requirements of 43 CFR 3715.2. At a minimum, all occupancies will meet the requirements and standard stipulations for occupancy contained in the BLM Arizona Programmatic EA for Mining Claim Use and Occupancy.

Surface disturbing activities at a level greater than casual use in wilderness areas, national monuments, areas of critical environmental concern and other areas identified in 43 CFR 3809.11 will require a plan of operations before mining can begin. Operations proposed for lands that are withdrawn from mineral entry will cause BLM to initiate a validity examination and will be allowed only on claims with a valid discovery and location existing before designation. Before BLM can approve mining plans of operation submitted for work in areas withdrawn from mineral entry, a BLM mineral examiner must verify that a valid claim exists. The mineral examination and mineral report must confirm that minerals have been found and the evidence is of such character that a person of ordinary prudence would be justified in the further expenditure of his labor and means with

a reasonable prospect of success in developing a valuable mine.

Leasable Minerals

Lease applications will be considered on a case-by-case basis. Leases will be issued with needed restrictions to protect resources. Stipulations to protect important surface values will be based on interdisciplinary review of individual proposals and environmental analysis.

Wild Horses and Burros

Continue to monitor burro numbers and habitat conditions in the Lake Pleasant Herd Management Area.

During times of high water levels in Lake Pleasant, relocate burros trapped on temporary islands if they are in danger, or if there is insufficient habitat for survival.

Burros will be removed from the herd area as funding is available with the target of reaching a population of zero.

Lands and Realty

Land Tenure Adjustments

Consolidate land ownership to achieve management efficiency and reduced costs:

- Consider and evaluate the overall combination of all resource values and factors including wildlife habitat, riparian areas, wetlands, cultural resources, recreation opportunities, scenic value, watershed protection, timber and mining resources, rangelands, public access and a broad array of recreation uses.
- Consider the use of patent reservations and habitat management plans when conveying lands from Federal ownership
- Consider and evaluate making public land available for disposal to local

governments and non-profits under the Recreation & Public Purposes Act.

- Obtain reasonable public and administrative access to BLM-managed lands in the following ways:
- Require reciprocal access easements to meet specific program needs.
- Consider and manage the use of public lands for rights-of-way, right-of-way reservations, easement, permits, leases, licenses, agreements, etc, except for those areas identified exclusion areas.
- Secure access easements as needed to prevent closing of access to public lands.
- Consider and evaluate in land adjustment actions (including disposal, acquisition, sale, donation) the following:
 - Reduction of BLM administrative costs and improvement of management efficiency.
 - Identify for disposal relatively small, isolated, inaccessible tracts of BLM that do not meet resource management needs.
 - Consider and evaluate conveyances or acquisitions that would reduce conflicts between BLM and non-Federal landowner objectives, especially when conflicts are adversely affecting BLM management.

Consider opportunities to acquire non-Federal lands by purchase or exchange (willing seller) where lands are valuable for achieving BLM resource management objectives. Evaluate the following:

- key wildlife habitat, fisheries management areas and habitat for threatened, endangered, or sensitive species
- designated wilderness and other special management areas
- lands with historical or important heritage resources, outstanding scenic values, or critical ecosystems when these resources are threatened by change

- of use, or when management may be enhanced by public ownership
- lands with water frontage, such as lakes, streams, flood plains, wetlands, and associated riparian ecosystems
- land with important value for outdoor recreation purposes
- land needed for visual resource protection
- lands needed to bring existing BLM land into consolidated geographical units.
- lands that will maintain or stabilize the economies of local government
- lands where BLM programs will provide the best insurance against existing or potential uses that are incompatible with effective watershed management.
- consider partial interest acquisitions, such as access, minerals, water rights or conservation easements to benefit public land management.
- consider public/private land management and stewardship opportunities to assist in the management of BLM-managed lands
- consider disposal of Federal subsurface estate under non-Federal surface estate on a case-by-case basis. Seek opportunities to consolidate surface and mineral ownership.

Utility and Transportation Corridors and Communication Sites

Corridors to be designated in the Resource Management Plans (RMPs) and EIS should be considered on the basis of their suitability to accommodate right-of-way for facilities of particular threshold sizes or volumes. A corridor is defined only if it contains or is planned for one or more of the following major facilities:

- natural gas and other pipelines are at least 10 inches in diameter,
- electric transmission facilities have a capacity of 115 kV lines or greater voltage,

- significant canals are those which provide delivery of water to urban areas, and
- transportation facilities are those formally defined as Current or Proposed Roads of regional Significance or Current or Proposed Major Arterials (functional class) identified by a local government jurisdiction as regionally significant and projected to carry 20,000 or more vehicles per day by the year 2015.

Utilities, whether interstate, intrastate, or local, should be co-located in designated corridors to the maximum degree possible to minimize impacts to BLM-administered lands.

Transportation routes, whether interstate, intrastate, or local, should be co-located with utilities in designated corridors to the maximum degree possible to minimize impacts to BLM-administered lands.

BLM will strive to coordinate applicable transportation-related planning efforts for the Bradshaw-Harquahala Planning Area with the Arizona Department of Transportation (ADOT), the Maricopa County Department of Transportation (MCDOT), and the Maricopa Association of Governments (MAG), and Yavapai County.

Smaller utility lines needed for local service in the vicinity of the corridors should be collocated within a corridor unless doing so would limit the opportunity to collocate additional major utility lines in the corridor.

Avoidance of sensitive or special resources is a primary consideration in future planning and designation of utility corridors.

BLM's planning should promote, whenever possible, optimal energy transfer efficiency and support alternative energy sources such as use of photovoltaic cells (solar energy) and wind power.

In February 2003, the Department of Homeland Security (DHS) issued the National Strategy for the Physical Protection of Critical Infrastructures and Key Assets (DHS 2003) which summarized the initial assessment of, and planning to protect against, vulnerabilities to the terrorist threat. As DHS continues to carry out its mandate, the designation of utility and transportation corridor location and the planning and maintenance of utilities, railroads, and Federal, State, and interstate highways that cross BLM-administered lands, will be consistent with any directives, policies, and procedures that DHS may institute to minimize vulnerabilities to the energy grid.

Whenever possible, utility transmission lines will be designed and/or routed so as to minimize adverse visual impacts to the surrounding lands and vistas.

BLM's utility corridor designations must be consistent with authority granted under FLPMA Title V, Sections 501–511 (43 USC 1761–1771), the Mineral Leasing Act of 1928 (CFR 2880) and the BLM Right-of-Way Manual, Sections 2801.11 and 2801.12.

In accordance with Executive Order No. 13212, the Energy Project Streamlining process (signed May 18, 2001), Federal energy-related planning must serve to expedite the production, transmission, or conservation of energy.

BLM will continue to cooperate as a full partner (with U.S. Forest Service, APS, and SRP, in AZ) in the Western Utility Group, whose mission is to facilitate an exchange of information and coordinate planning efforts between Federal agencies and utility providers throughout the western U.S.

BLM will, as appropriate, coordinate communication-related planning efforts with the Federal Communications Commission (FCC).

BLM's planning related to telecommunication infrastructure must, in accordance with the Telecommunications Act of 1996, help facilitate implementation of wireless telephone systems,

in compliance with existing law, by making Federal lands and facilities available for communication sites.

Land Uses Requiring Permits

The common land uses requiring permits are commercial photography, apiaries, geological and hydrological testing, and some military activities. The recipients of R&PP leases or patents are State and local governments and qualified nonprofit organizations.

ENTIRE PLANNING AREA

Fire Management

Fire suppression will be carried out in a manner consistent with Interagency Standards for Fire and Aviation Operations, which is updated on an annual basis by the National Interagency Fire Center. Logistical support, operation and coordination, and policies and procedures for mobilization of fire fighting resources are outlined in the Southwest Area Mobilization Guide. This guide provides direction for Federal and State agencies Arizona, New Mexico and Texas.

BLM consulted with the State Historic Preservation Officer (SHPO) in 1993 on the effects of fire management in the Perry Mesa National Register District, in what is now Agua Fria National Monument. The two agencies agreed that emphasis will be placed on avoiding direct disturbances to archaeological sites from fire initiation, management, and suppression. This approach is applicable to the entire planning area, within and beyond the monument. In the past decade, efforts have been undertaken to fulfill this objective in order to protect known sites in the national monument as well as in other areas.

Fire management will continue to avoid the physical disturbance of known archaeological sites or sites found during fire management activities. Fires will not be intentionally started at known sites. Archaeologists will serve as resource advisors for fire management and help

develop and implement fire and fuels management plans, which would address effects on cultural resources. Fire crews will be educated about the need to protect cultural resources.

Public Health and Safety

Minimize releases of hazardous materials through compliance with current regulations. When hazardous materials are released into the environment, assess their impacts on each resource and determine the appropriate response, removal, and remedial actions to take.

Evaluate all actions (including land use authorizations and disposals, mining and milling activities, and unauthorized land uses) for hazardous materials, waste minimization, and pollution prevention. Identify appropriate mitigation for surface-disturbing and disruptive activities associated with all types of hazardous materials and waste management and all types of fire management.

Complete site-specific inventories when lands are being disposed or acquired. It is departmental policy to minimize potential liability of the Department and its bureaus by acquiring property that is not contaminated unless directed by Congress, court mandate, or as determined by the Secretary.

Inspect mining and milling sites to determine appropriate management for hazardous materials.

Identify parties responsible for contamination who will be liable for cleanup and resource damage costs, as prescribed by law.

Cultural Resources

Reviews of proposed land use authorizations and surface disturbing activities will include records searches and field inventories, at the appropriate levels of intensity defined in BLM's Manual 8110, *Identifying and Evaluating Cultural Resources*.

Land use authorizations will include stipulations requiring users/operators to cease work and notify the BLM in the event of a discovery of cultural resources.

The BLM will develop Cultural Resource Project Plans for protection or interpretation projects that require precise descriptions of implementation procedures, workforce, scheduling, equipment, and supplies. Project planning will be implemented following guidance in BLM's Manual 8130, *Planning for Uses of Cultural Resources*.

Paleontological Resources

For all authorized surface disturbing activities.

- Inventories will be conducted on a case-by-case basis, as deemed necessary by the authorized officer, for each proposed surface-disturbing activity to ensure maintenance or integrity of paleontological values.
- User/operators shall be responsible for informing all persons associated with a project that they shall be subject to prosecution for damaging, altering, excavating, or removing any vertebrate or noteworthy occurrences of invertebrate or plant fossils on site.
- If vertebrate or noteworthy occurrences of invertebrate or plant fossils are discovered, the user/operator shall suspend all operations that further disturb such materials and immediately contact the authorized officer.
- User/operators shall not resume until written authorization to proceed is issued by the authorized officer.
- Within five working days, the authorized officer will evaluate the discovery and inform the operator of actions that will be necessary to prevent loss of significant scientific values.
- The user/operator shall be responsible for the cost of any mitigation required by the authorized officer.
- Upon verification from the authorized officer that the required mitigation has

been completed, the operator shall be allowed to resume operations.

Grazing

Rest rotation, deferred rotation, seasonal or short duration use, or other grazing management systems may be implemented where the need has been identified through monitoring. Also, monitoring will be used to assess the effectiveness of changes brought about by new management practices.

Intensity, season and frequency, and distribution of grazing use should provide for growth and reproduction of the plant species needed to reach desired plant community objectives.

Consider deferment of livestock where possible in cooperation with lease and permit holders. This deferment may allow for the use of prescribed fire or other vegetative treatments, or the use of the area as a grass bank to allow for rest in other grazing allotments.

Administrative vehicular access to repair range improvements by the grazing lessee is assured through issuance of the grazing permit.

One time travel to access sick or injured livestock away from designated routes is authorized to transport the animal to a medical facility.

Any compensation for a loss of range improvements within these pastures will be made in accordance with 43 CFR 4120.3-6.

Livestock management changes may be made when sufficient assessment, inventory, or monitoring data are available.

Fence construction and maintenance will follow guidance provided in BLM handbook on Fencing No. 1741-1

Threatened or Endangered Species

The Endangered Species Act (ESA) of 1973, as amended, provides for the protection of

threatened, endangered and proposed threatened or endangered species of plants and animals.

The following requirements are prescribed in the BLM's Manual 6840:

1. The BLM shall conserve T/E species and the ecosystems upon which they depend and shall use existing authority in furtherance of the purposes of the ESA. Specifically the BLM shall:

a. Determine, to the extent practical, the occurrence and distribution of all T/E species on lands administered by BLM, and evaluate the significance of lands administered by BLM in the conservation of those species.

b. Identify land administered by BLM that is essential habitat and designated Critical Habitat of T/E species, and prescribe management for the conservation of these habitats in land use plans.

c. Develop and implement management plans that will ensure the conservation of T/E species and their habitats.

d. Evaluate ongoing management activities to ensure T/E species conservation objectives are being met.

e. Ensure that all activities affecting the populations and habitats of T/E species are designed to be consistent with recovery needs and objectives.

2. The BLM shall ensure that all actions authorized, funded, or carried out by the BLM are in compliance with the ESA. To accomplish this, the BLM shall:

a. Screen all proposed actions to determine if T/E species or their habitat may be affected. Normally the environmental analysis process is used.

b. Initiate consultation with the FWS/NMFS, as appropriate, for those actions that may affect T/E species or their habitats.

c. Not carry out any actions that would cause any irreversible or irretrievable commitment of resources or reduce the future management options for the species involved until the consultation proceedings are completed and a final decision has been reached.

d. Ensure that no BLM action will adversely affect the likelihood of recovery of any T/E species.

3. The BLM shall cooperate with the FWS/NMFS in planning and providing for the recovery of T/E species. To accomplish this BLM shall:

a. Participate on recovery teams and in recovery plan preparation, as well as State or regional working teams responsible for T/E species recovery.

b. Review technical and agency review drafts of recovery plans for species affected by BLM management to ensure that proposed actions assigned to BLM are technically and administratively feasible and consistent with BLM's mission and authority.

c. Ensure that the decisions, terms, and conditions of Resource Management Plans, and more detailed site-specific plans, prepared for lands covered by previously approved recovery plans are consistent with meeting recovery plan objectives.

4. The BLM shall retain in Federal ownership all habitats essential for the survival or recovery of any T/E species, including habitat used historically by these species.

5. Species proposed for listing as T/E and proposed Critical Habitat shall be managed with

the same level of protection provided for T/E species except that formal consultations are not required. The BLM shall confer with the FWS/NMFS on any action that will adversely affect a proposed species or proposed critical habitat.

6. Candidate species will be managed so as not to contribute to the need for them to become listed as threatened or endangered.

2.10 Implementation and Monitoring

2.10.1 Implementation

Many land use plan decisions are implemented or become effective upon approval of the RMP. Examples of such decisions include the following:

- land health standards and the DFC,
- land use allocations, and
- all Special Area Designations such as ACECs.

Management actions that require more site-specific project planning as funding becomes available will require further environmental analysis. Decisions to implement site-specific projects are subject to administrative review when such decisions are made.

BLM will continue to involve and collaborate with the public while implementing this plan. Opportunities to become involved in the plan implementation and monitoring will include development of partnerships and community-based citizen working groups. BLM and citizens can collaboratively develop site-specific implementation plans that mutually benefit public land resources, local communities, and the people who live, work, or play on the public lands.

2.10.2 Monitoring

Monitoring of management actions and their outcomes is a critical component adaptive management. Measuring changes resulting from management actions is necessary for determining success or the need for a different management approach.

BLM monitors many activities and events. For example, grazing utilization and vegetation trends are measured to support decisions on allotment Standards and Guidelines evaluations. OHV events are monitored to determine that permit stipulations are followed and necessary site rehabilitation is undertaken.

Effective monitoring is the process of collecting data and information in order to determine whether or not desired outcomes (expressed as goals and objectives in the land use plan) are being met (or progress is being made toward meeting them) as the allowable uses and management actions are being implemented. The design of monitoring protocols, sampling methods, and timing, is a site specific effort for many activities and management decisions in this document. For those activities, monitoring strategies will be developed as part of the implementation process. Strategy will identify indicators of change, acceptable thresholds, methodologies, protocols, and timeframes that will be used to evaluate and determine whether or not desired outcomes are being achieved.

Monitoring processes will be designed to collect information in the most cost-effective manner and may involve sampling or remote sensing. Some monitoring may be conducted by other agencies or by citizens. It is not necessary or desirable to monitor every management action or direction. Unnecessary detail and unacceptable costs are avoided by focusing on key monitoring questions and proper sampling methods.

Much of the monitoring conducted by BLM follows standardized methods and protocols. These standardized methodologies are usually described in program manuals or handbooks.

Monitoring methodologies conducted for grazing management can be found in:

- Indicators of Rangeland Health, Technical Reference 1734-6 Rangeland Monitoring and Evaluation
- TR - 4401 Planning for Monitoring
- TR - 4403 Utilization Studies
- TR - 4404 Sampling Vegetation Attributes
- TR - 4409 Rangeland Inventory and Monitoring

Monitoring methodologies for various wildlife studies can be found in the following.

- For monitoring stream proper functioning condition:
- PFC Monitoring is done using Process for Assessing Proper Functioning Condition, Technical Reference TR 1737-9 (1993), and
- A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lotic Areas, TR 1737-15 (1998).
- For monitoring vegetation changes, rangeland monitoring techniques as described above may be used.
- In addition, guidance may be found in *Sampling Vegetation Attributes, Interagency Technical Reference* (1996)
- Riparian Bank Alteration monitoring is conducted according to Phoenix District protocols as document on the Riparian Woody Species Utilization Monitoring form.

Monitoring for many activities is designed as the need arises. Monitoring of many permitted activities involve determination of compliance with standards, stipulations, or restrictions in the permit. These are permit or authorization specific and would require periodic site inspections.

Other monitoring activities are designed on site. For example, monitoring for the effects of a

permitted recreation event may involve photo points to document changes caused by the event, measurements of route widths may be made at selected locations before and after the event, soil compaction may be measured before and after the event using a soil penetrometer. Each of these is designed for a particular purpose and may be of short duration.

Monitoring of recreation uses over longer durations would be designed to fit the need to measure management success. For instance, the effects of human use of the Agua Fria National Monument may include measurements of barren areas used for recreation purposes and re-measuring over time to detect changes. Vegetation character may be measured in places that have a potential to change and would be re-measured periodically to detect if change is occurring. The level and intensity of monitoring will vary, depending on the sensitivity of the resource or area and the scope of the proposed management activity.

Upon RMP implementation, recreation staff, in conjunction with interested public, will determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions, settings, outcomes and standards,
- establish monitoring plans to manage camping and other recreation uses, and
- determine and establish route maintenance standards, and document the current status of each route.

For some recreation resources, such as OHV routes, we have completed a detailed, comprehensive, site-specific inventory of all motorized (OHV) routes and non-motorized trails and associated impacts on public lands within the planning area. Changes in route location, route extension, cross-country motorized travel or vehicle use in closed areas will be detected by law enforcement, staff, park

ranger and volunteer monitoring and field patrols. Furthermore, BLM and the BLM's Resource Advisory Committee are developing OHV-based Land Health Standards and Guidelines for OHV Management that will establish thresholds for continued motorized recreation use while maintaining the health of the land. Monitoring of motorized recreation will be based on these Land Health Standards when they are developed and future adjustments to motorized recreation will be conducted consistent with the Guidelines when they are approved.

2.11 Administrative Actions

Although BLM's intent and commitment to accomplish administrative actions are generally addressed in RMP/EIS-level documents, such activities are neither land-use-plan-level decisions nor implementation-level management-action decisions. Administrative actions are day-to-day activities conducted by BLM, often required by FLPMA but not requiring a NEPA analysis or a decision by a responsible official to be accomplished. Examples of administrative actions include mapping, surveying, inventorying, monitoring, collecting needed information such as research and studies, and completing project-specific or implementation-level plans.

2.12 Requirements for Further Environmental Analysis

The proposed RMP/EIS is a programmatic statement describing the impacts of implementing the proposed land use plan decisions and management actions described for the planning areas.

Land use plan decisions that are implemented upon approval of the RMP do not require any further environmental analysis or documentation. Whenever implementation-level plans (e.g. ACEC management plans) are prepared, more environmental analysis and documentation would be required. Individual management actions or projects requiring more site-specific project planning also require more environmental analysis.

Site-specific environmental analysis and documentation (including the use of categorical exclusions and determinations of NEPA adequacy where suitable) may be prepared for one or more individual projects, in accordance with management objectives and decisions established in the approved land use plan. BLM will ensure that the environmental review process which includes evaluation of all critical elements, including historic properties, traditional cultural properties, and threatened and endangered species. In the course of these reviews, the BLM will carry out any required Section 7 consultations with the USFWS and will coordinate with the State Historic Preservation Officer (SHPO) to ensure compliance with the NHPA, in accordance with the BLM National Programmatic Agreement and Arizona's BLM-SHPO Protocol.

Interdisciplinary impact analysis will be based on this and other applicable EISs. If the analysis prepared for site-specific projects finds potential for significant impacts not already described in an existing EIS, another EIS or a supplement to an existing EIS may be warranted.

Upon providing public notice of a decision, supporting environmental documentation will be sent to all affected interests and made available to other publics on request. Decisions to implement site-specific projects are subject to administrative review when such decisions are made.

2.13 Interrelationships

BLM conducts many activities that require coordination between State, or other Federal agencies. Coordination has been ongoing throughout this planning effort. Coordination is conducted as a matter of course when implementing land use plan decisions through project development and site-specific activities.

As a part of this planning effort and in implementing on-the-ground activities, BLM has requested formal consultation with the USFWS on potential impacts to federally listed, proposed, and candidate species and designated or proposed critical habitat. In April 2003, the BLM and USFWS finalized a Consultation Agreement to establish an effective and cooperative ESA Section 7 consultation process. The Agreement defines the process, products, actions, schedule, and expectations of the BLM and USFWS regarding project consultation. The Agreement also considers effects to, and management for, candidate species. A biological assessment (BA) was prepared and submitted to determine the effect of the Proposed Plan on all relevant listed, proposed, and candidate species, and associated critical habitat. All anticipated environmental effects, conservation actions, mitigation, and monitoring were disclosed in the BA, including analysis of all direct, indirect, and cumulative effects of the Proposed Plan analyzed in this FEIS.

The Proposed Plan/FEIS will also be provided to the Arizona SHPO to comply with Sections 106 and 110 of the NHPA. BLM actions will also comply with other Federal environmental legislation and land use plans, such as the Clean Air Act, and the Clean Water Act, and with applicable State and local government regulations, such as the Sikes Act (16 U.S. Code. 670 et seq., as amended; see Section 1.4 and Appendix 1.D: Relevant Laws, Executive Orders, and Memorandums). The Sikes Act authorizes the Department of the Interior, in cooperation with State agencies responsible for administering fish and game laws, to plan,

develop, maintain, and coordinate programs for conserving and rehabilitating wildlife, fish, and game on public lands within its jurisdiction. These habitat management plans (HMPs) must conform to overall land use and other management plans for the lands involved. The HMPs could include habitat improvement projects and related activities, and adequate protection for species of fish, wildlife, and plants considered endangered or threatened. BLM must also coordinate with the appropriate State agencies in managing State-listed plant and animal species when the State has formally made such designations. BLM has two habitat HMPs for lands within the planning areas. These documents have satisfied the Sikes Act requirements in the past and will be reviewed in the context of these new Agua Rria National Monument and Bradshaw Harquahala plans shortly after the records of decision are signed.

The BLM and AGFD work cooperatively to manage resources within the Agua Fria National Monument and the Bradshaw-Harquahala planning area. The BLM is responsible for managing wildlife habitat on BLM land and AGFD, through the authority of the Arizona Game and Fish Commission, has public trust responsibility to manage fish and wildlife. Throughout the Proposed Plan/FEIS, the close, cooperative nature of the relationship is cited. The BLM has a Master Memorandum of Understanding (MOU) with the AGFD which establishes protocols that direct the cooperative working relationship between the agencies. The MOU provides context to better enable both agencies to work in partnership and to make decisions in a consistent manner across the state. The guidelines established in the MOU apply to implementation of this RMP. In addition, a MOU has been signed giving AGFD cooperating agency status on BLM planning efforts in Arizona.

Any permit system or restriction of use or access would include coordination with other state and federal entities that issue use permits on federal lands to assure that authorized permittees have fair and reasonable access to their permitted activity. For example, should a permit system be implemented, the BLM will coordinate with

AGFD to enable coordination of access for hunters with valid hunting licenses and permits for the affected hunting unit. Coordination with AGFD during development of management plans and enhancement of wildlife habitat, species diversity, riparian health, and other activities to achieve the optimum health of wildlife species and populations will continue. Administrative access may be allowed for AGFD staff for law enforcement, natural resource management, and other purposes. AGFD's use of motorized and mechanized equipment off designated routes is considered an administrative use and will be allowed in suitable locations (as agreed to by AGFD and the BLM) for such purposes including, but not limited to the following: law enforcement activities, wildlife water supplementation (i.e. water hauling and maintenance, repair, building, or rebuilding of wildlife waters), collar retrieval, capture and release of wildlife, habitat manipulation (forage enhancement, burning, vegetation clearing, planting, etc.), fence construction (enclosures/exclosures), and research activities.

On BLM-managed lands, the Animal and Plant Health Inspection Service – Wildlife Services (APHIS-WS) and the AGFD manage animal damage control, predator management, control of exotic wildlife species, and feral, non-permitted livestock on BLM-managed lands. A 1995 MOU recognizes the legal authority of APHIS-WS to conduct wildlife damage management on BLM-managed lands. The BLM acknowledges that authority and will continue close coordination with APHIS-WS and AGFD, as well as the State Land Department, State Brand Inspector, and other affected agencies on animal damage control efforts within the Planning Areas. AGFD predator management would continue under AGFD strategic plans as well as species management plans.

The Bureau of Reclamation (BOR) holds many withdrawals of BLM-managed land for many purposes. Coordination between BLM and the BOR occurs regularly regarding these lands. In some cases, other entities conduct further management of these lands, such as in the case

of the Lake Pleasant Regional Park. The park is managed by Maricopa County Parks and Recreation, but the property is held by the Bureau of Reclamation as fee simple or withdrawn land for the water storage facility. BLM, BOR, and Maricopa County coordinate closely on actions in and around the Lake Pleasant area.

Regional transportation planning and construction of roadways and highways is generally conducted by State or regional agencies, such as Arizona Department of Transportation, county departments of transportation, and city transportation departments. When these agencies plan and develop roadways that cross public lands, BLM is involved in their design and contributes to the environmental impact analysis. ADOT-managed transportation corridors within or adjacent to the planning area include: I-17, US 60, SR 74, SR71, SR 89, SR 69, SR 169, L303, and L101. Continued urban growth in the region will necessitate future modifications of transportation systems within ADOT rights-of-way.

A Memorandum of Understanding (MOU No. AZ-931-0309 AMENDMENT #2 signed March 21, 2006) defines the roles and responsibilities, as well as working relationships between BLM, ADOT, and the Federal Highway Administration (FHWA.) The MOU “outlines policies and procedures for the Arizona Department of Transportation (ADOT), Arizona Division of Federal Highway Administration (FHWA), and Arizona Bureau of Land Management (BLM) to establish and improve cooperative working relationships for implementing the BLM/FHWA Interagency Agreement Number AA-851-IA2-40 of July 27, 1982 (attached as Appendix A). Specifically by:

- 1 Developing a mutual understanding of the missions, goals, constraints, and responsibilities of the BLM, ADOT, and FHWA as they relate to land and resource management practices on public lands under or contiguous to ADOT highways; ADOT development and operation practices on highways located on

- public lands; and public lands needed for transportation purposes;
- 2 Defining BLM, ADOT, and FHWA organizational structures and identifying areas of cooperation to facilitate coordinated work efforts;
- 3 Developing procedures and standardized methods for communication and
- 4 Minimizing duplication of work and streamlining work processes.

This MOU provides for a coordinated approach to accomplish land and resource management, and transportation development and operation management in completing BLM, ADOT, and FHWA goals and objectives. Such coordination is subject to the respective authorities of each agency, and is designed to reduce and, if possible, eliminate duplication of work; to establish procedures for streamlining work processes; to ensure each agency is provided sufficient lead time for proper sequential function; to make more efficient use of and share available resources; and to develop and execute action programs which maximize responsiveness to public needs and concerns.”

The MOU divides responsibilities by establishing:

- 1 FHWA is responsible for administration and management of the Federal-aid highway program and application for right-of-way appropriation consistent with 23 C.F.R. 710.601 Subpart F.
- 2 ADOT is responsible for the design, construction and management of the highway system within Arizona for which it has responsibility.
- 3 BLM is responsible for administration and management of certain public lands and interests in lands within Arizona.

For transportation planning and construction by other agencies, BLM will coordinate with the responsible agency to develop design features that minimize the fragmenting effect of the planned roadway. BLM will work with the responsible agency to evaluate and incorporate safe and effective wildlife crossing to ensure

long term species viability and maintaining habitat connectivity. Where planned roadways potentially fragment other resources, such as (but not limited to) recreation routes or trails, grazing allotments, or mining operations, BLM will work with the responsible agency to provide continued connectivity for those purposes as well. BLM will also work with the agency to provide continued safe access to public lands from any developed roadway for recreation and other public land users.

2.14 Comparison of Impacts by Alternative

A summary comparison of impacts by Alternative can be found on Table 2-8.

Table 2-8:
Summary Comparison
of Impacts by
Alternative

Table 2-8. Summary Comparison of Impacts by Alternative

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.6 Impacts to Special Area Designations					
4.6.1 From Management of Special Area Designations	No impacts.	-Increased visitation along Bloody Basin Rd Back Country Byways could lead to potential degradation of suitable WSR values. -Similar effects in Hassayampa River Wilderness from Constellation Mine Rd Byway.	-Impacts similar to Alt B. No impact is expected from WSR evaluations or ACECs. -Harquahala Mountain ACEC would reduce effects of vehicles on the Harquahala Mountains Wilderness.	Impacts similar to Alt C except no new byways.	-No new byway impacts. -Impacts of Harquahala Mountain ACEC similar to Alt C. -Protection of river values along Agua Fria tributaries eligible for consideration as wild and scenic rivers.
4.6.2 From Lands and Realty Management	-No expected impacts. -Acquiring lands within wilderness areas and WSR corridors would benefit management and prevent development activities that increase disturbance. -Retaining Yarnell utility corridor could degrade the wilderness values.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.6.3 From Management of Soil, Air, and Water Resources	-No impacts are expected. -Air quality standards could reduce fugitive dust in ACECs. -Inventorying and filing water rights in Wilderness Areas would preserve the wilderness values of water sources.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.6.4 From Biological	-Management could	-Elimination of Larry	-Management of	-Effects of management	-The movement corridors

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
Resource Management	enhance suitable WSR segments, wilderness areas (WA), and ACECs.	Canyon ACEC would have no effect. -Management of Harquahala Mountain WHA would enhance values in Harquahala Mountains Wilderness. -New wildlife waters may slightly reduce naturalness in wilderness areas.	pronghorn WHAs could enhance suitable WSR segments. -Controls on vehicle routes and recreational development would help maintain biological resources. -Management of the Harquahala/Belmont/Big Horn wildlife corridor/ the Belmont/Big Horn WHA would enhance values in wilderness.	for wildlife in the AFNM would be similar to Alt C. -Impacts of new wildlife waters would be similar to Alt B.	would protect wildlife habitat and help maintain natural conditions and enhance values in wilderness. -Impacts of new wildlife waters would be similar to Alt B.
4.6.5 From Cultural Resource Management	No impacts are expected.	-Development of sites for public use could increase wildlife disturbance and litter. This could slightly decrease naturalness in wilderness areas. -Increased visitor education and presence of people may reduce illegal dumping and other undesirable uses, but may reduce opportunities for solitude -Conducting cultural inventory could reduce opportunities for solitude during data collection.	-Impacts similar to Alt B, except the Badger Springs petroglyph site would have fewer facilities/create fewer impacts.	-Impacts similar to Alt B, except Wickenburg-Vulture SCRMA no public use reducing impacts in this area.	-Potential impacts would be limited to Harquahala Mountains Wilderness Area and would be the same as described for Alt B.
4.6.6 From Paleontological Resource Management	No impacts expected.	No impacts are expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.6.7 From Recreation Management	-Increased visitation is expected to increase	-Back Country allocations should protect values	-Impacts in the AFNM similar to Alt B.	-Impacts in the AFNM similar to Alt B.	-Impacts in the AFNM similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>motorized use in suitable WSR segments and wilderness areas. This could progressively degrade values of these areas.</p> <p>-Impacts to ACECs are not expected.</p>	<p>along suitable WSR segments.</p> <p>-Front Country/developed campgrounds could increase motorized visits/area of people to suitable WSR segment, degrading values. - Hieroglyphic Mtn SRMA could diminish solitude.</p> <p>-Increased vehicle use could increase fugitive dust entering Hells Canyon Wilderness, obscuring vistas.</p>	<p>-Impacts on Hells Canyon Wilderness from the Hieroglyphic Mountains SRMA would be similar to those described for Alt B.</p>	<p>-The phase-out of motorized activity in the Hieroglyphic Mountains would enhance solitude, naturalness, and visitor experience.</p>	<p>-The Hieroglyphic Mountains SRMA would be similar to Alt B.</p> <p>-No SRP-related impacts on wilderness areas, ACECs, or back country byways are expected.</p>
4.6.8 From Visual Resource Management	<p>-In the AFNM no impacts are expected.</p> <p>-Within Bradshaw-Harquahala, proposed projects could lessen the quality of the recreation setting and viewshed by allowing human intrusions into visual landscapes.</p>	<p>-Managing the Front Country to VRM Class III could allow visual intrusions that degrade the scenic quality of the suitable WSR segments.</p> <p>-Other Special Area Designations are not expected to be affected by VRM management.</p>	<p>-Impacts in the AFNM would be similar to Alt B except that they would mainly be limited to the northern WSR segment.</p> <p>-Managing the Hassayampa River Wilderness to VRM Class II objectives would restrict visual impacts of projects.</p>	<p>-Impacts to WSR would be similar to Alt C.</p> <p>- Managing the Harquahala Mountains ACEC to Class I would maintain the appearance of naturalness across a large landscape.</p> <p>-Managing the Sheep Mountain RNA ACEC and the Black Butte ONA ACEC to Class I would retain the natural settings of those areas.</p>	<p>-Impacts to WSR would be similar to those under Alt C.</p> <p>-Impacts to wilderness areas would be similar to Alt A.</p> <p>-Managing Harquahala Mtn and Black Butte ACECs to VRM Class II would restrict visual intrusions into the landscape.</p>
4.6.9 From Rangeland Management	<p>-Applying land health standards should maintain or improve habitat characteristics.</p> <p>-No impacts to wilderness areas,</p>	<p>-Impacts are expected to be similar to Alt A, except riparian grazing would be limited to the winter season.</p> <p>-Riparian and overall ecological conditions in</p>	<p>-Impacts to the riparian corridors would be similar to those described for Alt B, except that year-round restriction of grazing would further improve and enhance the</p>	<p>-Impacts similar to those described for Alt C.</p>	<p>-Impacts similar to Alt B.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	ACECs, or back country byways are expected.	the WSR corridor/the riparian corridor in the Hassayampa River Canyon Wilderness would improve.	wildlife and scenic values.		
4.6.10 From Minerals Management	-No impacts are expected in the AFNM. -Mining near wilderness areas and along Back Country byways could reduce solitude, increase noise, dust, and traffic; and detract from the visual setting. -In Bradshaw-Harquahala there is little or no leasable or locatable mineral potential, and no impacts are expected from future development.	-Impacts would be similar to Alt A, -closing Tule Creek ACEC to all mineral development would benefit the resources that are important to ACEC designation.	-Impacts would be similar to Alt B, except areas allocated to maintain wilderness characteristics would be closed, thereby reducing the potential area for ground disturbance and maintaining the primitive open space.	-Impacts from managing Tule Creek ACEC would be similar to those described for Alt B, except that more area would be closed to mining.	Impacts similar to Alt B.
4.6.11 From Fire Management	-Prescribed burning would affect the WSR by reducing visual values over the short term, until vegetation regenerates. -Air quality/visibility could also be negatively affected. -Prescribed fire could temporarily increase runoff and erosion along the Agua Fria River. -Over the long term, use of fire as a natural process in the AFNM should lead to increased	-Impacts similar to Alt A. -Visitors would be restricted from parts of the wilderness during prescribed burns. The fire damage would detract from the visual setting until the vegetation recovers.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	ecosystem health.				
4.6.12 From Wild Horse and Burro Management	-Impacts of vegetation damage, soil and vegetation trampling in gathering areas / trailing would continue to diminish the natural setting, especially near water sources and in canyons. -Natural landscape settings would continue to exist in most areas.	Impacts similar to Alt A.	-Removing burros from the Harquahala HA would eliminate impacts to some Wilderness Areas. -Trailing and vegetation impacts now occurring in Hells Canyon Wilderness would continue.	Impacts similar to Alt C.	Impacts similar to Alt C.
4.6.13 From Management of Travel Management	-No impacts are expected on existing ACECs, the five wilderness areas, or the Harquahala Mountain Summit Road Back, Country Byway. -Routes and developments are restricted to protect values, including riparian habitat and wildlife in proposed suitable WSR segments.	-Impacts of establishing the Hieroglyphic Mountains SRMA could concentrate OHV use, and increase traffic, noise, and dust at the southwest edge of the Hell's Canyon wilderness. -Impacts on suitable WSR segments would be similar to Alt A.	Impacts similar to Alt B.	-Would enhance non-motorized recreation settings and opportunities within the Hells Canyon wilderness. -Impacts on suitable WSR segments would be the same as for Alt A.	Impacts similar to Alt B.
4.6.14 From Management of Wilderness Characteristics	-No direct impacts are expected. Indirect benefits could retain more primitive and natural conditions.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.7 Impacts on Lands and Realty Management					

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.7.1 From Management of Special Area Designations	<p>-Wilderness areas would remain closed to rights-of-way and land use authorizations.</p> <p>-Acquiring inholdings would block up federal ownership in sensitive resource areas.</p>	<p>-Special Area Designations would not preclude developing an urban transportation network.</p> <p>-Stipulations consistent with the protection of Tule Creek ACEC would be written into future authorizations.</p> <p>-Locations, or the terms of use and rights-of-way could be restricted to protect Tule Creek.</p> <p>-The effects of wilderness areas would be the same as in Alt A.</p>	<p>-Lands adjoining Harquahala Mountains ACEC would be of higher priority for acquisition than other lands.</p> <p>-A utility corridor width of 2 miles would avoid impacts to archaeological sites.</p> <p>-The effects of wilderness areas would be the same as in Alt A.</p> <p>-The impacts from Tule Creek on lands actions would be the same as Alt B.</p>	<p>-Designating the Agua Fria Riparian Corridor ACEC would constrain the location of rights-of-way in the Black Canyon corridor.</p> <p>-The impacts from Tule Creek and Harquahala Mountains ACECs same as Alt B.</p> <p>-No new rights-of-way would be permitted in the Baldy Mtn ONA.</p> <p>-The effects of WAS would be the same as Alt A.</p>	Impacts similar to Alt B.
4.7.2 From Lands and Realty Management	<p>-In the AFNM, land ownership would not change. No new or widened transportation corridors would be designated, though BLM might permit new rights-of-way.</p> <p>- Lands suitable for R&PP use would be issued on a case-by-case basis.</p> <p>-Major rights-of-way and communication sites would be issued across public lands on a case-by-case basis.</p>	<p>-Impacts in the AFNM would be similar to Alt A, except that the existing corridor would be narrowed.</p> <p>-Future utility uses would locate in undisturbed areas, resulting in possible increased costs.</p> <p>-Land acquisition would consolidate management in five MUs and would likely reduce costs.</p> <p>-Impacts of land leases and patents for R&PP would be the same as Alt A.</p> <p>-Designating corridors would prevent the</p>	<p>-BLM would issue no leases or patents for land within the AFNM to local govts or non-profit organizations under the R&PP Act.</p> <p>-Rights-of-way and communication sites would be similar to Alt B, except the existing corridor would be eliminated from the AFNM.</p> <p>-Land acquisition would be similar to Alt B, except that the lands would be consolidated into six MUs</p>	<p>-Impacts of new rights-of-way would be similar to Alt B, except that the corridor in Bradshaw-Harquahala would be extended, not widened.</p> <p>-Land acquisition would be similar to similar to Alt B, except that lands would be consolidated into seven MUs.</p> <p>-Land use authorizations would be similar to Alt B, except that no new electric or gas corridors would be designated.</p>	<p>-Impacts of new rights-of-way within the AFNM would be the same as Alt B.</p> <p>-Land acquisition would be similar to Alt C.</p> <p>-Impacts of land leases and patents for R&PP use would be similar to Alt A.</p> <p>-Land use authorizations would be the same as Alt B; however the Black Canyon corridor modifications would better meet projected demands.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		proliferation of major utility systems across public lands.			
4.7.3 From Management of Soil, Air, and Water Resources	-Efforts to minimize impacts to soils, water, and air would result in increased project costs and possible project redesign or shifted location.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.7.4 From Biological Resource Management	-Acquisition of lands to enhance management of species is given a high priority and would result in acquisition of those areas in preference to others.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.7.5 From Cultural Resource Management	-The potential discovery of cultural and historical sites could cause restricted land use authorizations. Mitigation could increase project costs.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.7.6 From Paleontological Resource Management	-No impact is expected, but should resources be discovered, land use authorizations could be restricted or relocated.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.7.7 From Recreation Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.7.8 From Visual Resource Management	-Modification of rights-of-way to achieve VRM objectives could lead to	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	increased costs.				
4.7.9 From Rangeland Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.7.10 From Minerals Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.7.11 From Fire Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.7.12 From Wild Horse and Burro Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.7.13 From Management of Trans and Public Access	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.7.14 From Management of Wilderness Characteristics	No impacts expected.	-Allocations to maintain wilderness characteristics would be closed to rights-of-way and inconsistent land use authorizations. Future utilities and private requestors would find other routes through these areas.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.8 Impacts on Soil Resources					
4.8.1 From Management of Special Area Designations	-70,900 acres of AFNM, including Perry Mesa ACEC (9,580 acres) would be protected from increased erosion and decreased soil moisture/productivity by limiting motor vehicle use. -Existing designated Wilderness would be	-Impacts similar to Alt A for suitable WSR segments. -In Bradshaw-Harquahala closing the fenced area of the Tule Creek ACEC (640 acres) to motorized vehicles and grazing could reduce soil disturbance and compaction.	-In the AFNM, impacts similar to Alt A for suitable WSR corridors. -In Bradshaw-Harquahala 8 ACECs, totaling 55,710 acres, would reduce soil erosion and improve soil moisture and productivity.	-Impacts in the AFNM similar to Alt C. -In Bradshaw-Harquahala 10 ACECs, totaling 192,800 acres, impacts similar to those under Alt C.	-Impacts in the AFNM similar to Alt C. -In Bradshaw-Harquahala, ACEC (89,970 acres) impacts similar to Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	managed to maintain soil productivity.				
4.8.2 From Lands and Realty Management	-Short term disturbance may occur from current activities. -In Bradshaw-Harquahala, land disposal and subsequent development could result in loss of soil productivity. Short term disturbance could result from utility, transportation/communications rights-of-way. -Impacts from utility and utility corridor development would be mitigated.	-In the AFNM, no impacts are expected from land tenure adjustments or from utility and transportation corridors or communication sites. -In Bradshaw-Harquahala, impacts similar to Alt A.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.8.3 From Management of Soil, Air, and Water Resources	-In the AFNM, soil resources are expected to improve through measures to reduce loss/improve productivity. -No impacts expected in the Bradshaw-Harquahala.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.8.4 From Biological Resource Management	-Proposals to improve habitat would contribute to soil improvement at specific locations, resulting in an overall slight improvement.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.8.5 From Cultural Resource Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.8.6 From Paleontological Resource Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.8.7 From Recreation Management	<p>-In the AFNM, current recreation management practices could cause localized soil loss and reduced soil productivity.</p> <p>-Lack of OHV management in Bradshaw-Harquahala could lead to progressively increasing soil erosion, compaction, and overall loss of soil productivity.</p> <p>-Concentrated recreation, both motorized and non-motorized use could result in the loss of or reduced vegetation cover, soil compaction, and streambank instability in riparian and wash areas, thus reducing soil moisture and soil productivity.</p> <p>-SRP authorizations are mitigated but impacts are similar to concentrated recreation use.</p>	<p>-Impacts might occur in the Front Country and Passage RMZ as recreation use increases.</p> <p>-In Bradshaw-Harquahala, vehicle route designations and closures in Tule Creek ACEC and allocations to maintain wilderness characteristics would slightly reduce soil impacts.</p> <p>-Area designations within the Castle Hot Springs and Harquahala MUs, would slightly reduce soil disturbance, erosion, and compaction by OHV use.</p> <p>-Selected route closures and planned, sited, and engineered recreation facilities are designed to reduce soil impacts of recreation activities.</p> <p>-Soil loss or damage by intense non-motorized cross-country travel similar to Alt A.</p> <p>-SRP impacts would increase from current levels but are capped.</p>	<p>-Impacts in the AFNM similar to Alt B.</p> <p>-In Bradshaw-Harquahala impacts similar to Alt B, but MUs would slightly reduce soil disturbance, erosion, and compaction by OHV use.</p> <p>-Soil erosion from improper events and OHV use would be lessened by implementing vehicle route designations throughout the Bradshaw-Harquahala.</p> <p>-Soil loss or damage by intense non-motorized cross-country travel similar to Alt A.</p> <p>-SRP caps are lower, impacts would be less than Alt B.</p>	<p>Impacts in AFNM similar to Alt C, though more area would be allocated to Back County RMZ.</p> <p>-Impacts would be reduced in the southern portion of the castle Hot Springs MU by phasing out motorized uses.</p> <p>-Eliminating recreational vehicle use in designated MUs would reduce soil erosion.</p> <p>-Increased BLM signing, OHV route development and connectivity, public education, and better managed motorized and non-motorized recreation in SRMAs would lessen impacts to soils over the long term.</p> <p>-Soil loss or damage by intense non-motorized cross-country travel similar to Alt A.</p> <p>-No SRP impacts in AFNM, elsewhere, impacts similar to Alt B.</p>	<p>Impacts in AFNM similar to Alt C and D</p> <p>-Impacts in the Bradshaw-Harquahala similar to Alt B.</p> <p>-Soil loss or damage by intense non-motorized cross-country travel similar to Alt A.</p> <p>-SRP impacts on the AFNM similar to Alt A.</p> <p>-Impacts similar to Alt B elsewhere.</p>
4.8.8 From Visual Resource Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.8.9 From Rangeland Management	-Implementing guidelines adopted in Arizona Standards for Rangeland Health and Guidelines for Grazing Administration would improve soil conditions.	-Impacts similar to Alt A, except grazing limited in riparian areas to the winter. -Rapid recovery of riparian vegetation and reduced impacts to soils from grazing are expected.	-Impacts similar to Alt B, except grazing in riparian areas would be eliminated, increasing soil cover and reducing streambank damage.	-Cessation of grazing throughout the planning area would give the greatest benefit to soils of any Alt.	Impacts similar to Alt B.
4.8.10 From Minerals Management	-No impact is expected on the AFNM. -Within the Bradshaw-Harquahala, mining activities could cause disturbance, compaction and erosion. Impacts would be mitigated. Residual impacts are likely to be relatively small.	Impacts similar to Alt A.	-Impacts on AFNM similar to Alt A. -Within the Bradshaw-Harquahala, impacts would be similar to Alt A except that the closure of some areas to mineral entry would reduce impacts.	-Impacts on AFNM similar to Alt A. -Within the Bradshaw-Harquahala, impacts would be similar to Alt C except that the closure of more areas to mineral entry would reduce impacts.	In both areas soil impacts similar to Alt A.
4.8.11 From Fire Management	-The use of heavy equipment and mechanical thinning of trees could increase the potential for erosion. Soil moisture and productivity could be reduced in the short term, but increased in the long term. -Prescribed burning would reduce soil erosion. -Full suppression in fire adapted communities could cause herbaceous cover to decline with	-Impacts are similar to Alt A, except that fire use would be allowed in adapted ecosystems. -When natural fires occur, larger wildfires could be allowed, resulting in short term increases in soil loss.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	related soil effects.				
4.8.12 From Wild Horse and Burro Management	-No impact in the AFNM.-Impacts in the Lake Pleasant HMA would be limited through management. -Impacts in the Harquahala HA would eventually be eliminated through animal removal.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.8.13 From Management of Travel Management	-Increased soil erosion is expected from increased visitation, multiplying numbers of routes, and greater use of OHVs. Bank washes could be broken down and made unstable in wash “play” areas.	-In the AFNM, impacts might occur in the Front Ctry and Passage Zones. -The net reduction of 33 mi of routes would likely reduce these effects. -In Bradshaw-Harquahala route closures in Tule Creek ACEC and allocations to maintain wilderness character could slightly reduce soil disturbance, erosion, and compaction by OHV use.	-Impacts in the AFNM would be similar to Alt B, except the net reduction of 48 miles of route would marginally protect more soil resources. -Reducing vehicle traffic routes in the MUs would slightly reduce soil disturbance, erosion, and compaction by OHV use.	-Impacts in the AFNM would be similar to Alt C, except would provide the most protection due to route closures. -Restricting vehicle use to designated routes would further reduce soil impacts in all other parts of the planning area.	-Impacts in the AFNM similar to Alt C. The reduction in route mileage would reduce soil disturbance more than Alt B and C, but less than Alt D. -Soil erosion caused by vehicular travel would be curtailed in Tule Creek ACEC, and by reducing cross-country travel.
4.8.14 From Management of Wilderness Characteristics	No impacts expected.	-56,040 acres would be allocated for wilderness character. -Soil disturbances, compaction, and erosion caused by human induced activities would be reduced.	-Impacts are expected to be similar to Alt B except that 107,843 acres would be allocated. -Soil disturbance would be reduced the most in this Alt.	-Impacts would be similar to Alt B except that 140,235 acres would be allocated. This would provide more protection than Alt B, but less than other alternatives.	-Impacts are similar to Alt B except that 88,179 acres would be allocated. -Soil protection would be more than Alts B and D, but less than Alts C and D.
4.9 Impacts on Air Quality					
4.9.1 From Management	-Restrictions resulting	-Recreation prescription	-Designation of Bk Ctry	-The relative shift in air	-Site-Specific

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
of Special Area Designations	<p>from Special Area Designations are likely to increase emissions because of population growth and increases in OHV use.</p> <p>-In Bradshaw-Harquahala, BLM would continue to prohibit OHV use in five wilderness areas (96,820 acres) and encourage OHV use on one back country byway (Harquahala Mountain Summit Road).</p>	<p>in ACECs, RNAs and SRMAs would shift OHV users to sites where OHV recreation is allowed and intensify use in remaining areas. The result would be (1) reduced localized air quality impacts in the new restricted areas and (2) increased temporary and localized, degraded air quality in the remaining OHV areas.</p>	<p>byways could attract more regional OHV users. This is not expected to increase regional OHV use or regional fugitive dust emissions.</p> <p>-In Bradshaw-Harquahala, seven ACECs would further shift OHV use and possible air quality impacts.</p>	<p>quality impacts between newly restricted areas and the remaining accessible areas would be greatest.</p> <p>-Air quality effects and fugitive dust emissions from vehicular travel and OHV use would be curtailed by eliminating or mitigating recreation vehicle use in the Sheep Mountain RNA.</p>	<p>prescriptions and restrictions applied on ACECs along with cultural and wildlife management prescriptions would shift the locations of increases in OHV use and resulting fugitive dust and emissions.</p>
4.9.2 From Lands and Realty Management	<p>-Land disposal actions would not delay the region's compliance with the air quality standards.</p> <p>-New residential development on previously rural BLM land would have a minor effect immediately downwind from each new development.</p> <p>-Implementing available dust control best management practices during construction of facilities, roads and utilities would ensure that impacts would be temporary and limited to the immediate area of the construction.</p> <p>-Ongoing maintenance</p>	<p>-Narrowing the existing utility corridor is not expected to affect air quality, but it would shift the location of future air quality emissions into a smaller area.</p> <p>-In Bradshaw-Harquahala new utility corridors would be designated for future expected demands. Any such construction would likely generate fugitive dust and tailpipe emissions.</p> <p>-Impacts from ongoing maintenance and improvements of facilities and roadways would be similar to Alt A.</p>	<p>-In the AFNM, elimination of Black Canyon utility corridor would maintain current emissions. Impacts from ongoing maintenance would be similar to Alt A.</p> <p>-In Bradshaw-Harquahala impacts would be similar to Alt B.</p> <p>-Any construction in non-attainment areas would be subject to comply with county air quality rules.</p>	<p>-Impacts in the AFNM would be similar to those described for Alt C.</p> <p>-The portion of the Black Canyon Multi-Use corridor would be extended. If utilities elect to use this corridor in the future, they would generate criteria pollutants and fugitive dust through the use of heavy equipment.</p>	<p>Impacts similar to Alt C.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	and improvement of facilities and roadways would require use of construction equipment. This would generate fugitive dust and tailpipe emissions.				
4.9.3 From Management of Soil, Air, and Water Resources	Improvements resulting from management of soil, water, and air resources are expected to reduce emissions of fugitive dust.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.9.4 From Biological Resource Management	-In the AFNM, measures to protect biological resources, including the use of prescribed fire may result in small amounts of temporary, localized emissions. -In Bradshaw-Harquahala, measures to protect ground cover, biological areas, and habitats would minimize impacts. -Implementation of Land Health Standards would reduce production of windblown fugitive dust not related to roads.	Impacts similar to Alt A.	-Limitations in WHAs and ACECs would improve air quality in these areas. Emissions might increase in remaining areas where OHV use and recreational site developments are allowed.	-Motor vehicle routes that fragment pronghorn habitat and cross known movement corridors would be closed, limited, or mitigated. -The shift in impacts between newly restricted areas and the remaining areas would be greatest under Alt D.	Impacts similar to Alt C.
4.9.5 From Cultural Resource Management	No impacts expected.	-Increased visitation to cultural sites developed for public use is expected to slightly increase emissions of criteria	-Impacts similar to Alt B except to a lesser degree due to less High Public Use designations.	-In the AFNM, impacts from vehicle traffic would be limited to Bloody Basin Road and the Pueblo la Plata	-In the AFNM, impacts would be lower than Alt B and greater than Alt C and D. -In the Bradshaw-

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		pollutants and fugitive dust.		area. Levels of airborne pollutants would be lower than under Alts B or C. -In Bradshaw-Harquahala, impacts generated by site visits would be lower than Alts B and C.	Harquahala, impacts would likely be lower than Alt B and greater than Alt C and D.
4.9.6 From Paleontological Resource Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.9.7 From Recreation Management	-Current recreation uses could generate emissions of criteria pollutants and fugitive dust from OHV travel, as well as emissions and smoke from campfires and stoves. -Prohibiting cross-country, OHV use in the AFNM would reduce levels of criteria pollutants and fugitive dust. In Bradshaw-Harquahala OHV travel would generate increased emissions of criteria pollutants and fugitive dust. -Non-motorized cross-country travel can cause trailing, erosion and dust.	-Impacts are expected to be similar to Alt A, except increased management actions in SRMAs and RMZs are expected to locally address production of fugitive dust and could reduce dust emissions in those areas. -Building and maintaining roadways, trails, and recreation facilities would generate temporary and short-lived emissions of criteria pollutants and fugitive dust from heavy equipment and earthmoving. -Impacts from non-motorized recreation similar to Alt A.	-In the AFNM impacts would be similar to Alt B, except that more vehicle routes would be closed or limited to motorized vehicles. -In Bradshaw-Harquahala, impacts would be similar to Alt B, except BLM would designate seven ACECs, further shifting OHV use and possible air quality impacts. -Implementation of SRMAs could reduce air quality effects/fugitive dust emitted by improper activity, scheduled OHV events/ intensive OHV use. -Impacts from non-motorized recreation similar to Alt A.	-Impacts are expected to be similar to Alt C except that: The relative shift in impacts between newly restricted areas and the remaining areas would be greatest because of restrictions on the most land. -In the AFNM, BLM would issue no SRPs. This would lead to a decrease in emissions of criteria pollutants. -Closing more routes would improve air quality and lessen dust emissions. -Impacts of SRMAs similar to Alt C. -Impacts from non-motorized recreation similar to Alt A.	Impacts similar to Alt C. -Impacts from non-motorized recreation similar to Alt A.
4.9.8 From Visual Resource Management	No impacts expected.	Restrictions to development may slightly	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		reduce dust emissions.			
4.9.9 From Rangeland Management	-May increase production of windblown dust in areas denuded by frequent livestock concentration. -Implementation of Rangeland Health Standards and Guidelines for Grazing Management is expected to reduce dust emissions by increasing ground cover.	-Impacts similar to Alt A, except winter season use of riparian areas would lead to increased vegetation densities in those areas, slightly reducing localized windblown dust.	-Impacts similar to Alt B, except closure of riparian areas to livestock grazing year round would lead to higher vegetation densities and more rapid growth than Alt B.	-Cessation of grazing would result in overall increases in ground cover, reducing windblown dust emissions more than any other alternative.	Impacts similar to Alt B.
4.9.10 From Minerals Management	-No impact is expected on the AFNM. -Within the Bradshaw-Harquahala, mining/associated activities could cause localized increases in fugitive dust/ vehicular exhaust. These are expected to be relatively small.	Impacts similar to Alt A.	Impacts similar to Alt A.	-Alt D would reduce the amount of land open mining more than other alternatives. This action would reduce emissions of criteria pollutants and fugitive dust.	Impacts similar to Alt A.
4.9.11 From Fire Management	-Use of prescribed fire would generate short term smoke emissions. Fire prescriptions minimize smoke drift into populated areas and Class I or II airsheds. -The use of heavy equipment and the mechanical thinning of trees would generate emissions of criteria pollutants as well as	-Impacts similar to Alt A except: Naturally occurring wildfires could be managed to meet resource objectives. -The opportunity for smoke drift into populated areas and/or Class I or II airsheds would increase over Alt A.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	fugitive dust.				
4.9.12 From Wild Horse and Burro Management	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.	No impacts expected.
4.9.13 From Management of Travel Management	<p>-Prohibiting cross-country OHV use in the AFNM would reduce levels of criteria pollutants and fugitive dust.</p> <p>-In Bradshaw-Harquahala OHV travel would generate increased emissions of criteria pollutants and fugitive dust.-Any potential opening of new routes would increase fugitive dust during construction as well as increase emissions created by vehicles once the route is opened.</p>	<p>-In the AFNM, 134 miles of route would be left open and 37 net miles of route would be closed. Route closures could impacts.</p> <p>-In Bradshaw-Harquahala routes would be reduced by 169 miles. Route closures would concentrate more vehicles on remaining roads and thereby increase localized air quality impacts and fugitive dust levels.</p> <p>-Building and maintaining routes would generate temporary and short-lived emissions and fugitive dust from heavy equipment and earthmoving.</p>	<p>-In the AFNM, impacts would be similar to Alt B, except that more vehicle routes would be closed or limited to motorized vehicles (48 miles) with 123 miles of route would be left open.</p> <p>-In Bradshaw-Harquahala, impacts of OHV use would be similar to Alt B except BLM would designate seven ACECs, further shifting OHV use and possible air quality impacts.</p>	<p>-In the AFNM, negative impacts would be the least due to the highest amount of route closures over other Alt (123 miles).</p> <p>-In Bradshaw-Harquahala 723 miles of routes would be closed. The route closures would reduce opportunities for air quality emissions and fugitive dust.</p>	<p>-In the AFNM, Impacts are expected to be similar to Alt B, except that more net route miles would be closed (52 miles).</p> <p>-Impacts in the Bradshaw Harquahala Planning Area similar to Alt B.</p>
4.9.14 From Management of Wilderness Characteristics	No impacts expected.	-56,040 acres would be allocated to the management of wilderness characteristics, which would limit or restrict vehicle use. This could intensity vehicle travel into remaining areas resulting in reduced localized air quality	-Impacts are expected to be similar to Alt B, except that more area would be allocated to the management of wilderness characteristics (107,843 acres).	-Impacts are expected to be similar to Alt C, except that more area would be allocated to the management of wilderness characteristics (140,232 acres).	-Impacts are expected to be similar to Alt D except that more area would be allocated to the management of wilderness characteristics (88,179 acres).

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		impacts in newly restricted sites and increased impacts in other areas.			
4.10 Impacts on Water Resources					
4.10.1 From Management of Special Area Designations	<ul style="list-style-type: none"> -Perry Mesa ACEC is likely to continue to experience minor degradation of water quality. -Eligible WSR segment would continue to be managed for nonimpairment to WSR values. -In Bradshaw-Harquahala management of wilderness areas would improve hydrologic function. 	<ul style="list-style-type: none"> -Impacts in the AFNM would be similar to Alt A. -In Bradshaw-Harquahala, impacts in wilderness areas would be the same as for Alt A. In addition, withdrawal of Tule Creek from mineral development would eliminate disturbance to streambanks, soils, and ground cover. 	<ul style="list-style-type: none"> -Designating 4 ACECs in the AFNM would close the areas to grazing/vehicles. This would encourage revegetation of disturbed areas/would improve hydrologic function. -In the Bradshaw-Harquahala designation of six ACECs would have effects similar to those described above. 	<ul style="list-style-type: none"> -Impacts in the AFNM would be similar to those described for Alt A. -In Bradshaw-Harquahala impacts would be similar to Alt C, but Alt D would close more areas to mineral entry. 	<ul style="list-style-type: none"> -Impacts in the AFNM are expected to be similar to Alt A. -In Bradshaw-Harquahala, management prescriptions for four ACECs would result in impacts similar to Alt C.
4.10.2 From Lands and Realty Management	<ul style="list-style-type: none"> -Water quality could be affected by construction, maintenance of facilities authorized under right-of-way. Mitigation for water impacts would be essentially the same as for soils impacts. -Impacts from land disposal of 54,370 acres include the potential loss of vegetation from development/possible increased erosion and sediment yield. 	<ul style="list-style-type: none"> -In the AFNM, narrowing Black Canyon utility corridor could reduce options for locating towers or other facilities, which could result in slightly higher than normal impacts. -Impacts of disposal of 58,400 acres of public land similar to those described for Alt A. -Water quality could be affected by construction, maintenance of facilities 	<ul style="list-style-type: none"> -Impacts of rights-of-way are similar to Alt A. Eliminating the Black Canyon utility corridor would prohibit more utility right-of-way allocations. -The impacts of disposing of 49,100 acres of BLM-managed lands would be similar to Alt B. -Utility corridors and communication sites would have impacts similar to Alt B. 	<ul style="list-style-type: none"> -Impacts in the AFNM would be the same Alt C. -The impacts on water resources from acquiring private or State lands would be similar to those described for Alt B. -Utility corridors and communication sites would have impacts similar to Alt B. 	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	-Acquiring larger blocks of BLM-managed land could improve vegetation conditions/reduce stream sedimentation.	authorized under right-of-way. Mitigation for water impacts would be essentially the same as for soils impacts.			
4.10.3 From Management of Soil, Air, and Water Resources	Management actions designed to improve soil conditions would have the affect of improving water quality.	Alt B would provide more protection for water resources than Alt A.	Impacts similar to Alt B, but more protection of water resources.	Would provide the most protection of water resources.	Impacts similar to Alt C.
4.10.4 From Biological Resource Management	-Designating the Agua Fria River riparian corridor would improve functional condition of the riparian zone. -In Bradshaw-Harquahala impacts are expected from acquiring water rights to maintain or enhance spring/riparian habitats.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.10.5 From Cultural Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.10.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.10.7 From Recreation Management	-Areas disturbed by concentrated recreation use would continue to contribute to stream sediments and turbidity. -Cross-country OHV use	-In Front Country and Passage RMZs in the AFNM, OHV use would degrade water resources. -In Bradshaw-Harquahala	-In the AFNM, impacts would be similar to Alt B, except the Front Country RMZ would be reduced and the Passage RMZ would be reduced.	-In the AFNM, impacts would be similar to Alt C, except the Front Country RMZ would be reduced and the Passage RMZ would be increased.	-Impacts in the AFNM similar to Alt C and D. Riparian and upland vegetation would benefit from decreased access, resulting in improved

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	could increase soil erosion, sediment yield, damage to banks of drainages, and sediment deposition. -In Bradshaw-Harquahala, impacts are expected from the increased water use by visitors and the proliferation of unplanned and unmanaged recreational trails and facilities.	allocating eight SRMAs and two areas to maintain wilderness characteristics for management of recreation use could reduce soil erosion and sediment yield into drainages.	-Impacts under Alt C are expected to be similar to those described for Alt B, but to a lesser degree.	-In Bradshaw-Harquahala impacts are expected to be similar to those described for Alt C, but to a lesser degree.	functional condition of riparian zones. -Impacts In Bradshaw-Harquahala are expected to be similar to those described for Alt C.
4.10.8 From Visual Resource Management	No impacts are expected.	Implementation of VRM standards could reduce the disturbance of new projects, reducing sediment loading and improving water quality.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.10.9 From Rangeland Management	-Impacts would include trampling and reduced vegetation, resulting in increased soil erosion and reduced streambank stability in riparian areas. -In Bradshaw-Harquahala implementation of the Land Health Standards and the Guidelines for Rangeland Health would result in overall water quality improvements.	-Impacts are expected to be similar to Alt A, except limiting grazing in riparian areas to the winter season would reduce bank instability and increase riparian vegetation cover, slightly reducing grazing impacts to water resources.	-Impacts are expected to be similar to those describe for Alt A, except the prohibition of grazing in riparian areas would result in more rapid bank and vegetation recovery, further increasing riparian vegetation cover and bank stability, reducing grazing impacts to water resources.	-Alt D would cause the greatest improvement for water resources and riparian zone vegetation.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.10.10 From Minerals Management	<p>-No impacts are expected impact in the AFNM.</p> <p>-Mining is expected to somewhat degrade water quality through increased sedimentation.</p> <p>-Extraction of saleable mineral from flood plains could impair stream hydrologic function.</p>	<p>-No impacts are impacts expected in the AFNM.</p> <p>-In Bradshaw-Harquahala Impacts would be similar to those discussed in Alt A.</p>	<p>-No impacts are expected in the AFNM.</p> <p>-In Bradshaw-Harquahala impacts would be substantially lower than Alt B because more land would be removed from mineral development.</p>	<p>-No impacts are impacts expected in the AFNM.</p> <p>-Impacts In Bradshaw-Harquahala would be lowest under this Alt since the most amount of land would be removed from mineral development.</p>	<p>-No impacts are expected in the AFNM.</p> <p>-In Bradshaw-Harquahala impacts would be similar to Alt A, except that riparian areas in the Black Canyon corridor would be closed to mineral material disposal.</p>
4.10.11 From Fire Management	<p>-Prescribed fire would temporarily result in increased surface water turbidity and sedimentation.</p> <p>Vegetative composition would improve in the long-term.</p> <p>-Full suppression of wildfires could lower infiltration, increase runoff, increase erosion, and increase sedimentation.</p> <p>-Use of heavy equipment and construction could increase soil loss and turbidity and sedimentation of waterways.</p>	Fire use would have impacts similar to Alt A.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.10.12 From Wild Horse and Burro Management	-No impacts are expected to AFNM. In Bradshaw-Harquahala, maintaining AMLs in the Lake Pleasant HMA and	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	removing burros in the Harquahala HA, would allow heavily used areas to recover/minimize impacts to water quality/hydrologic function.				
4.10.13 From Management of Travel Management	<p>-Unplanned and unmanaged routes could continue to degrade stream bank stability and water resources.</p> <p>-In Bradshaw-Harquahala unlimited cross-country OHV use on the public lands west of Highway 93 could increase soil erosion, sediment yield, damage to banks of drainages, and sediment deposition.</p>	<p>-In the AFNM OHV use could continue to degrade water resources.</p> <p>-Closing routes would reduce impacts.</p> <p>-Riparian and upland vegetation would benefit from decreased access, resulting in improved functional condition of riparian zones.</p> <p>-In Bradshaw-Harquahala, maintaining a diverse network of motorized vehicle routes would harden some areas.</p>	Impacts are expected to be similar to those described for Alt B, but to a lesser degree due to an increase in closed miles of motorized routes.	-Impacts are expected to be similar to those described for Alt C, but to a significantly lesser degree due to a greater net closure of motorized travel routes.	<p>-In the AFNM, impacts similar to Alt C and D.</p> <p>-Impacts in Bradshaw-Harquahala are expected to be similar to those described for Alt C.</p>
4.10.14 From Management of Wilderness Characteristics	No impacts are expected	<p>-In the AFNM, no impacts are expected.</p> <p>-In Bradshaw-Harquahala, 56,040 acres would be allocated for the management of wilderness characteristics.</p> <p>-This could reduce soil erosion and sediment yield into drainages.</p>	-Impacts are expected to be similar to Alt B, except that a larger area would be allocated for management of wilderness characteristics (107,843 acres).	-Impacts are expected to be similar to Alt B except that 140,235 acres would be allocated for management of wilderness characteristics.	-Impacts are expected to be similar to Alt B except that 88,179 acres would be allocated for management of wilderness characteristics.
4.11 Impacts on Biological Resources					

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.11.1 From Management of Special Area Designations	<p>-Managing WSR suitable segments would reduce vehicle impacts to wildlife and habitat; reduce stream bank erosion, water quality degradation, and disturbance to riparian vegetation.</p> <p>-Within Bradshaw-Harquahala, vehicles on the Harquahala Mountain Summit Scenic Road Back Country Byway would occasionally disturb bighorn sheep and kill desert tortoise.</p> <p>-Management of designated Wilderness protects vegetation and wildlife habitat through prohibition of OHV use.</p>	<p>-In the AFNM, management of WSR segments would have impacts similar to Alt A.</p> <p>-Within Bradshaw-Harquahala, Tule Creek ACEC would improve Gila topminnow and riparian habitat, as well as desert tortoise habitat.</p> <p>-Increased recreational use of the Constellation Road Back Country Byway would increase wildlife disturbance.</p> <p>-Making Bloody Basin Road into a Back Country Byway could increase wildlife deaths from vehicle impacts, as well as impede pronghorn movement and breeding.</p>	<p>-In the AFNM, ACECs would have no new impacts to wildlife.</p> <p>-In Bradshaw-Harquahala, management of seven ACECs would increase bighorn sheep forage; protect unique vegetation communities; reduce habitat fragmentation; protect spring sources, riparian areas, high value desert tortoise habitat; and important raptor nesting sites.</p> <p>-The designation of these 10 ACECs would add additional protection to desert tortoise habitat as well as emphasize protection of 10.4 miles of riparian habitat.</p>	<p>-In the AFNM, impacts would be similar to Alt C.</p> <p>-Within the Bradshaw-Harquahala, the eight ACECs would have impacts similar to those described in Alt C, but over a larger area.</p> <p>-The designation of these nine ACECs would add additional protection to significantly more desert tortoise habitat than Alt C as well as emphasize protection of 49.5 miles of riparian habitat.</p>	<p>-In the AFNM, impacts of designating Bloody Basin Road as a back country byway would be similar to Alt B.</p> <p>-In the Bradshaw-Harquahala, management of four ACECs would be similar to Alt C.</p> <p>-Management of designated Wilderness impacts similar to Alt A.</p> <p>-Designation of 4 ACECs would add additional protection to desert tortoise habitat, as well as emphasize protection of 1.7 miles of riparian habitat.</p>
4.11.2 From Lands and Realty Management	<p>-In the AFNM, existing utility right-of-ways could temporarily disturb vegetation for wildlife habitat, and provide sites for invasive species encroachment.</p> <p>-In Bradshaw-Harquahala, acquisition of lands to consolidate BLM management would improve wildlife habitats.</p> <p>-Increased corridors, along with more</p>	<p>-In the AFNM, narrowing the utility corridor would reduce the likelihood of impacting wildlife habitats.</p> <p>-In the Bradshaw-Harquahala, disposal of 58,400 acres would reduce wildlife habitat, including 10,709 acres of desert tortoise habitat.</p> <p>-Acquisition of lands would help consolidate blocks of BLM land and</p>	<p>-In the AFNM, eliminating the utility corridor would reduce the potential for the impacts described in Alt A.</p> <p>-In the Bradshaw-Harquahala, impacts from acquisition would be similar to Alt B. Disposal of 49,100 acres of BLM land would also have similar impacts to Alt B.</p> <p>-Transportation and utility corridors would</p>	<p>-In the AFNM, impacts similar to Alt C</p> <p>-In Bradshaw-Harquahala, building and maintaining facilities in transportation and utility corridors and at communication sites would have impacts similar to Alt A.</p> <p>-The Black Canyon would be expanded south. This may increase the possibility of having power line towers</p>	<p>-In the AFNM, impacts similar to Alt B.</p> <p>-In the Bradshaw-Harquahala, impacts from acquisition and disposal would be similar to Alt B.</p> <p>-Impacts of utility and transportation corridors would be similar to Alt B and C as the Black Canyon Corridor would be widened.</p> <p>-Impacts from acquiring</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	communication sites, could lead to more habitat disturbance, prevent wildlife movement, result in loss of habitat, result in human presence and harassment, displace individual animals, and facilitate long-term human population growth. -Building and operating facilities in these corridors could create barriers to wildlife movement and disturb tortoise habitat.	add high value resources to those already being managed by BLM. -The impacts of utility and transportation corridors would be the same as described in Alt A, except the Black Canyon Corridor would be widened 1 mile to the west. No impacts are expected within the life of the plan.	have similar impacts as described for Alt A, except the Black Canyon Corridor would be widened 2 miles to the west.	impacting sensitive resources. Impacts from acquiring private or state lands would be similar to those in Alt B.	private or state lands would be similar to those in Alt B.
4.11.3 From Management of Soil, Air, and Water Resources	-Plans to maintain or improve watershed conditions, soil cover, and water flows would maintain or improve riparian vegetation quality, species diversity, and water quality in select drainages.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.11.4 From Biological Resource Management	-In the AFNM, proposed landscape improvements would improve riparian habitats. -Stocking native fish would increase their overall viability. -Fence modifications would improve pronghorn movement.	-Implementation of the Land Health Standards would make progress toward achieving desired plant communities. -Habitat needs of special status species would be a high priority. -Reintroduction, transplanting, and	-Impacts similar to Alt B, except: -In the AFNM, management of the WHA for pronghorn would avoid or mitigate impacts to pronghorn and emphasize management of wildlife habitats. -Prescribed burns would	-Impacts similar to Alt B except: -In the AFNM, impacts of the Pronghorn WHA would be similar to Alt C, except fences would be removed, greatly reducing pronghorn habitat fragmentation. -Impacts of management	- Impacts similar to Alt B except: -In the AFNM, impacts to pronghorn would be similar to Alt C, except seasonal use restrictions on SRPs would reduce disturbance to pronghorn. -Impacts of management for WHAs would be

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>-In the Bradshaw-Harquahala, protection measures on specific stream reaches would improve wildlife habitat.</p> <p>-Acquisition of water rights could reduce competition for water and ensure legal availability and maintenance of flows.</p> <p>-Use of native species for restoration would reestablish native plant communities and improve wildlife habitat.</p> <p>-Protection of significant cliffs for nesting raptors would improve nesting conditions.</p> <p>-Protection of the bighorn lambing areas in the Harquahala Mountains would increase forage and reproductive success in sheep populations.</p>	<p>supplemental stocking of wildlife would contribute to conservation and recovery of T&E species.</p> <p>-Desert tortoise management standards would protect tortoise populations and habitat.</p> <p>-DFC objectives would protect and conserve priority habitats and species.</p> <p>-Wildlife water availability would ensure access.</p> <p>-Distribution and abundance of some species would be enhanced.</p> <p>-Actions to protect springs and seeps would prevent overexploitation.</p> <p>-Prohibiting domestic sheep and goat grazing near desert bighorn sheep habitat will reduce the likelihood of disease transmission.</p> <p>-Exotic species management would emphasize the restoration and maintenance of native species.</p>	<p>improve pronghorn forage and reduce invasive species.</p> <p>-The management of Belmont-Big Horn Mountains and the Date Creek Mountains WHAs would improve species distribution, maintain genetic diversity and ensure bighorn sheep are given priority consideration in future road improvements.</p> <p>-The Upper Agua Fria River Basin WHA would reduce wildlife-vehicle conflicts and improve pronghorn and mule deer movement.</p> <p>-The designation of the WHAs would add additional protection to desert tortoise habitat and 14.7 miles of riparian habitat by emphasizing wildlife habitat management.</p>	<p>for the Date Creek WHA would be similar to those described in Alt C, except that it would further reduce habitat fragmentation and loss of tortoise habitat.</p> <p>-Impacts of management for the Upper Agua Fria River Basin WHA would be similar to those described for Alt C; except they would be applied to a larger area and removal of fences would facilitate big game movement.</p> <p>-The designation of the WHAs would add additional protection to fewer habitats than in Alt C as well as 5 miles of riparian habitat by emphasizing wildlife habitat management.</p>	<p>similar to those described for Alt C.</p> <p>-The designation of the WHAs would add additional protection to desert tortoise habitat, similar to Alt C as well as 14.7 miles of riparian habitat by emphasizing wildlife habitat management.</p>
4.11.5 From Cultural Resource Management	-Management actions for cultural resources that prohibit surface disturbance near known	-In the AFNM, development of High public use at five sites could degrade biological	-In the AFNM, impacts of one High public use areas would be similar to those described for Alt B, but to	-In the AFNM, impacts from developing one Moderate public use sites described would be	-In the AFNM, impacts of High public use at two sites and Moderate public use at six sites would be

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	archaeological sites would protect vegetation and wildlife habitat in those areas.	resources. -Development of four Moderate public use areas would have fewer impacts. -No impact is expected from Low public use sites.--In Bradshaw-Harquahala, impacts from public use would depend on site location, size, and surrounding habitat. -In desert tortoise habitat, the decision to accept no net loss of habitat would reduce impacts from site development.	a lesser degree. -Impacts of developing eight Moderate public use sites would be similar to those described in Alt B, but on more sites. -Overall, impacts are expected to be lower than in Alt B. -Impacts in Bradshaw-Harquahala are expected to be similar to Alt B, but in fewer locations.	similar to those described for Alt B, but at fewer sites. -In the Bradshaw-Harquahala, impacts of public use development would be similar to those described in Alt B, but in fewer locations than Alt C.	similar to those described for Alt B. -Within the Bradshaw-Harquahala, impacts of public use development would be similar to those described for Alt B.
4.11.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.11.7 From Recreation Management	-In the AFNM, recreation uses would be allowed if they are consistent with the proclamation. -In Bradshaw-Harquahala, current levels of recreation management would inadequately protect biological resources. -Informal concentrated recreational use areas would continue to develop and grow causing increasing levels of habitat loss and	-In the AFNM, Front Country and Passage zones could lead to some additional disturbances to wildlife habitats. -Campgrounds could disturb pronghorn movement and fawning behavior. -Designation of 12,700 acres of Back Country, would result in less ground disturbance to vegetation and wildlife habitat. -In the Bradshaw-	-In the AFNM, impacts would be similar to Alt B, except impacts of visitor use in Front Country would affect 42,000 acres and 700 acres of Passage RMZ. -The Badger Springs campground could potentially affect pronghorn behavior and fawning success on Black Mesa. -Impacts from Back Country would be similar to Alt B, but the zone	-In the AFNM, impacts to biological resources would be similar to Alt B, except impacts in Front Country would affect only 1,530 acres and 990 acres of Passage Zone. -The Back Country would be expanded to include 68,380 acres. -Impacts from allocating a Passage zone would be similar to Alt B except that the zone would consist of 990 acres. -In Bradshaw-Harquahala,	-In the AFNM, Impacts are expected to be similar to Alt B, except impacts of visitor use in Front Country would affect 11,900 acres and 1,350 acres of Passage RMZ. -Since Back Country would include 57,650 acres, the impacts to wildlife described in Alt B would be over a much larger area. -Within the Bradshaw-Harquahala, impacts from staging areas and route

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>disturbance.</p> <p>-The location and use of these areas would continue to be unplanned and may conflict with sensitive biological resources, priority species, or priority habitats.</p> <p>-Motorized and non-motorized cross-country users can cause trailing and destruction of vegetation.</p>	<p>Harquahala, seasonally restricting motorized events in Category I and II desert tortoise habitat would reduce impacts to desert tortoises.</p> <p>-Limiting designation of rock crawling sites would protect resources.</p> <p>-In the Table Mesa, Hieroglyphic Mountains, and San Domingo SRMAs, development of OHV staging areas would destroy the vegetation and habitat in those sites.</p> <p>-Impacts from cross-country travel would be similar to Alt A.</p>	<p>would increase to 28,200 acres.</p> <p>-Impacts from allocating a Passage zone would be similar to Alt B, except that the zone would occupy just 700 acres.</p> <p>-Impacts of staging areas and route designation would be less than Alt B.</p> <p>-Impacts from cross-country travel would be similar to Alt A.</p>	<p>impacts from OHV staging areas and route designations would be reduced from Alt C.</p> <p>-Shifting use in the Hieroglyphics SRMA from motorized to non-motorized would reduce habitat fragmentation as well as disturbance and displacement of wildlife.</p> <p>-Impacts from cross-country travel would be similar to Alt A.</p>	<p>designations would be similar to those described for Alt C.</p> <p>-Impacts from cross-country travel would be similar to Alt A.</p>
4.11.8 From Visual Resource Management	<p>-Assigning VRM Class I or II could limit the design and location of some wildlife management developments. This could adversely affect wildlife populations. There are 96,820 acres of Class I.</p>	<p>-Impacts to would be similar to those under Alt A, except that the area in VRM Class I would be 96,820 acres and VRM Class II would be allocated to 486,800 acres.</p>	<p>-Impacts to would be similar to those under Alt B, except that the area in VRM Class I would increase to 109,570 acres and the area in VRM Class II would increase to 502,610 acres.</p>	<p>-Impacts to would be similar to those under Alt B, except that the area in VRM Class I would decrease to 298,310 acres and the area in VRM Class II would decrease to 340,880 acres.</p>	<p>-Impacts are expected to be similar to Alt B, except that the area in VRM Class I would increase to 116,132 acres and the area in VRM Class II would increase to 454,868 acres.</p>
4.11.9 From Rangeland Management	<p>-Implementing the Land Health Standards would reduce soil erosion, restore functional conditions of riparian habitats, and reduce the presence of invasive</p>	<p>-Impacts similar to Alt A.</p> <p>-Applying the Special Ephemeral rule could result in the increase of native grass production, shrub and tree cover, and habitat complexity.</p>	<p>-Impacts similar to Alt B, except:</p> <p>-Impacts of closing riparian areas to grazing would occur quicker and could be more pronounced.</p>	<p>-The affects of removing all livestock from federal lands in both planning areas would be similar to those described for riparian and upland areas under Alt C. However,</p>	<p>Impacts similar to Alt B.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>species.</p> <ul style="list-style-type: none"> -Implementing would prioritize the habitat needs of special status species where wildlife and other land use conflict. -Implementing changes in grazing practices would increase vegetation density and cover. -Fence modifications would improve big game movement. -Development of water facilities for grazing may improve water availability for some species, while being mortally dangerous to others. -Congregation of livestock in and around water developments can result in some habitat loss. 	<ul style="list-style-type: none"> -Retirement of allotments could increase plant diversity and habitat complexity. -In the AFNM, limiting riparian areas to winter use would increase the diversity and abundance of plant species and the complexity of the wildlife habitat. -In Bradshaw-Harquahala, implementing riparian management would have similar impacts to riparian habitats but more slowly and less consistently. 	<ul style="list-style-type: none"> -Seasonal grazing closure in the Harquahala Mountains ONA ACEC during bighorn lambing season would increase forage abundance and availability to bighorn sheep during the critical lambing season, improving their health and potentially improving lamb fitness and survival. -Prohibiting the development of facilities that would increase livestock use in Browns Canyon and the Inner Basin would eliminate concentrated livestock use from sensitive riparian and upland habitat areas. 	<p>Alt D would affect a much larger area.</p> <ul style="list-style-type: none"> -Eliminating all range improvements that serve no purpose in the absence of livestock grazing would remove many fences and corrals that hinder natural movement of pronghorn, mule deer, and bighorn sheep. 	
4.11.10 From Minerals Management	<ul style="list-style-type: none"> -In the AFNM, no impacts are expected. -In Bradshaw-Harquahala, minerals actions would be evaluated on a case-by-case basis and impacts to biological resources would be mitigated and avoided to the extent allowable by regulation. 	<ul style="list-style-type: none"> -Impacts within the AFNM would be similar to Alt A. -In Bradshaw-Harquahala, closing areas to mineral extraction would protect habitat from disturbance and protect the wildlife that depend on those areas. -The riparian area in Tule 	<ul style="list-style-type: none"> -Impacts within the AFNM would be similar to Alt A. -Impacts of closing areas to mineral extraction would be similar to those described in Alt B. -Opening reconvened lands to mining could degrade desert tortoise habitats and habitats for 	<ul style="list-style-type: none"> -Impacts within the AFNM would be similar to Alt A. -Impacts of closing areas to mineral would be similar to those described in Alt B. 	<ul style="list-style-type: none"> -Impacts within the AFNM would be similar to Alt A. -In the Bradshaw-Harquahala, impacts to reconveyed lands would be similar to those described for Alt C. -Impacts in Tule Creek

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	-Some residual loss of desert tortoise habitat is likely.	Creek would especially benefit. -Opening reconveyed lands to mining could degrade riparian and areas and habitats for priority species.	priority species, but in this alternative, riparian habitats would be protected.		would be similar to Alt B. Impacts in other areas would be similar to Alt A.
4.11.11 From Fire Management	-In the AFNM, use of prescribed fire affects pronghorn habitats and helps control invasive species and restores the natural fire cycle. -Full suppression of natural fire starts could interrupt the natural fire cycle required for natural succession, allowing establishment of invasive species, and a buildup of fuel loading. -In Bradshaw-Harquahala, full suppression of fires in fire adapted communities would have the same impact. Full suppression of fires in Sonoran desertscrub habitat would decrease mortality to species not adapted to fire.	-The impacts of prescribed fire use in fire adapted plant communities would be the same as Alt A. -Treatments would reduce the population size of invasive species in fire-adapted environments, reducing competition between invasive species and native vegetation. -Allowing natural starts to burn when conditions are suitable would allow natural fire cycles to return, creating natural mosaics of vegetation age classes and successional stages, improving wildlife habitat and helping to control invasive species. -Impacts of full suppression would be similar to Alt A.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.11.12 From Wild Horse and Burro Management	-No impacts are expected in the AFNM. -In Harquahala HA, continued degradation of	Impacts similar to Alt A.	-Impacts in the AFNM and the Lake Pleasant area are the similar to Alt A.	Impacts similar to Alt C.	Impacts similar to Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>sensitive habitats and increased competition with wildlife for scarce resources.</p> <p>-In Lake Pleasant HMA, Managing for AML would minimize competition with wildlife and livestock.</p>		<p>-In Bradshaw-Harquahala, eliminating the burro population in the Harquahala HA would help sensitive habitats recover and reduce competition for forage, water, or other habitat.</p>		
4.11.13 From Management of Travel Management	<p>-In the AFNM, biological resources would benefit from prohibiting cross-country OHV use, which would prevent the destruction of vegetation and priority wildlife habitats.</p> <p>-In Bradshaw-Harquahala, prohibiting cross-country OHV use would provide some protection for sensitive desert tortoise habitat.</p> <p>-Use of routes that degrade the value of sensitive riparian and tortoise habitat would likely continue and increase.</p>	<p>-In the AFNM, Designating 134 miles of road as open and closing 37 miles would reduce habitat fragmentation and human disturbance to priority habitats, including riparian and pronghorn habitats.</p> <p>-Closed roads would reclaim and restore habitat.</p> <p>-In Bradshaw-Harquahala, designating vehicle routes and closing undesignated routes and cross-country travel would benefit biological resources by reducing (1) habitat fragmentation, (2) vegetation destruction, and (3) human disturbance of wildlife.</p>	<p>-Impacts in the AFNM would be similar to Alt B, except that 123 miles of roads would remain open, providing less habitat fragmentation.</p>	<p>-Impacts in the AFNM would be similar to Alt B, except that 48 miles of roads would remain open, fragmenting even less habitat than under Alt C.</p>	<p>-Impacts in the AFNM would be similar to Alt B, except that 52 miles of roads would be closed. Impacts would be more than in Alt C, but less than Alt D.</p>
4.11.14 From Management of Wilderness Characteristics	No impacts are expected.	-Allocations to wilderness characteristics would recognize wildlife populations and habitat as	-Impacts similar to Alt B, except that allocating 107,843 acres to maintain wilderness characteristics	Impacts similar to Alt C, except 140,235 acres would be allocated to maintain wilderness	Impacts similar to Alt C, except 88,179 acres would be allocated to maintain wilderness

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<p>important aspects of naturalness and actively manage them.</p> <ul style="list-style-type: none"> -Allocating 56,040 acres in the Harquahala Management Unit, would reduce disturbances to priority wildlife habitats. -Closing lands allocated to maintain wilderness characteristics to mineral material disposal would reduce ground disturbance and impacts to vegetation and wildlife habitat. 	<p>in 3 management units would further reduce disturbances to priority wildlife habitats.</p>	<p>characteristics.</p>	<p>characteristics and these areas would not be closed to mineral material disposal making them subject to impacts associated with this activity.</p>
4.12 Impacts on Cultural Resources					
4.12.1 From Management of Special Area Designations	<ul style="list-style-type: none"> -Management of WSR non-impairment would continue to protect cultural resources. -Management of designated Wilderness would preserve cultural resources in current condition. 	<ul style="list-style-type: none"> -Impacts are similar to Alt A, except ACEC designation for Perry Mesa and Larry Canyon would be removed which would have little effect. -Increased use from Back Country byways could increase vandalism, accelerated erosion at roadside sites, and create a need for more maintenance to preserve historic features off of Constellation Road. -Designating Tule Creek would limit surface disturbances that could damage archaeological 	<ul style="list-style-type: none"> -Proposed ACEC designations would include restrictions on transportation routes, rights-of-way, livestock grazing, and minerals actions. Such restrictions could help protect cultural resources by limiting public access and ground-disturbing activities. -Impacts of Back Country Byways would be similar to Alt B. 	<ul style="list-style-type: none"> -No back country byways are proposed; therefore, no impacts to cultural resources are expected. -ACEC designations would have similar impacts to Alt C. -Designating more ACECs would further restrict and uses, thereby better protecting cultural resources. 	<ul style="list-style-type: none"> -Impacts are similar to Alt B except ACEC protection would be more like Alt C, extending to 89,970 acres. -Black Mesa would be recommended for recognition in the National Register of Historic Places. -No back country byways are proposed; therefore, no impacts to cultural resources are expected.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		features.			
4.12.2 From Lands and Realty Management	<p>-Land acquisitions would acquire valuable cultural resources and consolidate important areas. This would increase protection of many sites and assure their availability for future scientific or public uses.</p> <p>-Installation of utilities within the Black Canyon Corridor could reduce the physical integrity and visual setting of the AFNM's natural and cultural landscape.</p> <p>-Disposal of lands in the Upper Agua Fria River Basin could remove significant cultural resources from Federal protection.</p>	<p>-Acquisitions impacts similar to Alt A.</p> <p>-Narrowing the Black Canyon Corridor and restrictions on utility development should help maintain integrity of cultural and natural landscapes.</p> <p>-Acquiring or disposing of lands in Bradshaw-Harquahala might add or remove significant cultural resources from federal protection. Impacts would be assessed on a case-by-case basis.</p> <p>-Widening the Black Canyon Corridor could put more sites at risk of disturbance. Installation of above-ground facilities would detract from the visual setting. Establishing corridors protects sites outside of corridors.</p>	<p>-Acquisitions impacts similar to Alt A</p> <p>-Eliminating the Black Canyon utility corridor would reduce the likelihood that cultural resources would be affected by ground disturbance or visual intrusions from future utility development.</p> <p>-In Bradshaw-Harquahala, disposal of 600 acres would be unlikely to affect significant cultural resources. Disposal of 49,100 acres could transfer significant cultural resources out of federal protection.</p> <p>-Widening the Black Canyon Corridor two miles west would have similar impacts to Alt B, but would allow additional flexibility.</p>	<p>-In the AFNM, eliminating the Black Canyon utility corridor would have impacts similar Alt C.</p> <p>-In the Bradshaw-Harquahala, acquiring state and federal lands would likely increase the level of protection for cultural resources on those lands, much as would Alt C.</p>	<p>-In the AFNM, Impacts are expected to be similar to Alt C.</p> <p>-In Bradshaw-Harquahala, Impacts are expected to be similar to those described in Alt B except only 38,755 acres are available for disposal and the Black Canyon Utility corridor has been adjusted to exclude known sensitive cultural resources.</p> <p>-Project related impacts would be mitigated.</p>
4.12.3 From Management of Soil, Air, and Water Resources	Actions to improve soil and vegetation stability would help protect cultural resources from eroding.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.12.4 From Biological Resource Management	-In the AFNM, modification of existing	-Actions designed to protect wildlife habitats	Limiting routes in pronghorn corridors could	Impacts similar to Alt C.	Impacts similar to Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>fences would have no affect, but new fences could disturb cultural resources and degrade the visual setting.</p> <p>-Restricting public access to sensitive wildlife habitats would have the spin off benefit of also reducing disturbance and vandalism to cultural sites.</p>	<p>generally also protect cultural resources. Building wildlife management facilities, such as water developments, could disturb cultural resources. Specific surveys and mitigation would be needed that is specific to any proposal.</p> <p>-Travel limitations could restrict access to cultural sites for research or cultural heritage tourism.</p>	<p>protect sites but limit opportunities for research, monitoring, and interpretation.</p> <p>-In the AFNM, fence modifications would have impacts similar to Alt A.</p> <p>-In Bradshaw-Harquahala, limiting routes in sensitive habitats could restrict access that leads to damage.</p>		
4.12.5 From Cultural Resource Management	<p>-In the AFNM, restrictions to surface disturbance would help protect cultural resources, but may limit research opportunities.</p> <p>-Protective actions would minimize disturbance to cultural resources. Mitigation devised under Section 106 of the National Historic Preservation Act would help ensure protection of National Historic Register eligible sites.</p>	<p>-Proactive management helps protect sites from disturbance. Inventories and consultation with tribes would help identify sites and needs for future uses or protective measures that may be important.</p> <p>-Implementation of measures could stop, limit, or repair damage from vandalism, erosion and other disturbances, or could improve success in prosecution.</p> <p>-Scientific research methods might disturb sites.</p> <p>-Development of sites for public use could improve understanding, reducing</p>	<p>-Impacts to cultural resources would be similar to Alt B, except:</p> <p>-In the AFNM, one site would be developed for High public use and eight sites would be allocated to a less intensive Moderate.</p> <p>-Impacts of public use development would be similar to Alt B, but in fewer areas and less intensive for the Moderate developed sites.</p> <p>-Overall there is less potential for damage to cultural resources and reduced opportunity for public education and enjoyment of cultural</p>	<p>-In the AFNM, no sites would be developed to High public use and one site would be developed to Moderate public use.</p> <p>-This alternative would subject the fewest sites to potential damage, but also develop the fewest sites for public education and enjoyment.</p> <p>-In Bradshaw-Harquahala, sites would be allocated to public use in two SCRMA's.</p> <p>-This alternative subjects the fewest sites to potential damage from visitation, but also provides the least opportunities for public education, recreation, and</p>	<p>-Impacts to cultural resources would be similar to Alt B, except:</p> <p>-Two sites would be allocated to High public use development and six sites would be allocated to Moderate.</p> <p>-Impacts would be similar to Alt B, but slightly less.</p> <p>-At least 60,000 acres in the AFNM would be excluded from public use allocations. In these remote areas, visitors could encounter and observe archaeological sites under conditions of solitude in pristine settings.</p> <p>-In the Bradshaw-Harquahala, sites in six</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<p>behaviors that put cultural sites at risk. Attracting people to particular sites can cause disturbance.</p> <p>Cultural Heritage Tourism can provide an economic benefit to nearby communities.</p> <p>-Development of four sites to High public use within the AFNM would potentially result in increased disturbance, but would provide the greatest opportunity for interpretation, public education and enjoyment.</p> <p>-In the Bradshaw-Harquahala, sites would have the largest potential for damage as well as having the greatest opportunity for interpretation, public education and enjoyment.</p>	<p>sites than in Alt B.</p> <p>-In the Bradshaw-Harquahala, sites in four cultural priority areas would be developed for public use, reducing the potential for damage, but also reducing the opportunities for public education and enjoyment of cultural sites.</p> <p>-Alt C entails a moderate potential for damage to sites from public use, as well as a moderate potential benefit in public education and the recreational opportunities and economic returns of cultural heritage tourism.</p>	<p>economic return from cultural heritage tourism.</p>	<p>cultural priority areas would be developed for public use, reducing the potential for damage to cultural sites from Alt B, but also reducing the opportunities for public education and enjoyment of cultural sites.</p>
4.12.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.12.7 From Recreation Management	<p>-In the AFNM, limiting motorized vehicle use would help protect sites.</p> <p>-In Bradshaw-Harquahala, continued protection and interpretation of the Harquahala Peak</p>	<p>-Prohibiting geocaches on sites would reduce vandalism and disturbance.</p> <p>-Restricting camping and campfires near sites could reduce damage.</p> <p>-For SRPs, limiting group</p>	<p>-This alternative would allocate a smaller proportion of the AFNM to the Front Country RMZ than Alt B with an expected reduction in levels of recreational facilities and visitation.</p>	<p>-This alternative would create the lowest level of visitation and the least risk of damage to cultural resources. Access restrictions would limit the regular monitoring of sites in remote areas,</p>	<p>-In the AFNM, the relatively large area allocated to the Back Country zone, along with a number of route closures, would contribute to protecting cultural resources, while</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>Observatory would enhance opportunities for public education and cultural heritage tourism.</p> <ul style="list-style-type: none"> -The potential for damage could continue as public awareness and subsequent casual use increases. -Cross-country non-motorized recreation use can cause trailing which can degrade cultural features. These impacts are relatively minor. 	<p>size would help preserve integrity of sites and reduce potential disturbance.</p> <ul style="list-style-type: none"> -Public outreach and education programs could make the public more aware of cultural values and may discourage damaging behaviors. -Vehicle route designations can reduce damage. Routes that increase the risk of damaging particular sites can be closed. -This alternative would allow the highest amount of visitation and access by motorized vehicles and would have the greatest potential for site disturbance along with the greatest opportunity for interpretation and education. -Non-motorized recreation impacts similar to Alt A. 	<p>Impacts to archaeological sites are expected to be less extensive in areas allocated to the Back Country zone. Site visitation and educational opportunities from interpretive development of archaeological sites would also decline.</p> <ul style="list-style-type: none"> -In the Bradshaw-Harquahala, reductions in travel routes are expected to contribute to lower levels of damage. -Opportunities for cultural heritage tourism partnerships would slightly decrease. -Non-motorized recreation impacts similar to Alt A. 	<p>leaving some sites vulnerable to vandalism. Reduced access would reduce opportunities for interpretation and public education, as well as reduced opportunities for scientific research.</p> <ul style="list-style-type: none"> -In Bradshaw-Harquahala, more emphasis on non-motorized recreation, issuance of fewer SRPs, and more miles of closed routes would reduce the potential of damage. Opportunities for public education, community partnerships, and revenues from cultural heritage tourism would be reduced. -Non-motorized recreation impacts similar to Alt A. 	<p>still allowing for unobtrusive interpretive uses and access for scientific research and monitoring.</p> <ul style="list-style-type: none"> -In Bradshaw-Harquahala, there would be an intermediate level of recreational facilities and route closures. Impacts would likely be similar to Alt C. Recreational activities would continue to threaten cultural resources but community partnerships would be developed. This would enhance the long-term effectiveness of public education, stewardship, and cultural resource protection by enlisting citizens as partners in these efforts. -Non-motorized recreation impacts similar to Alt A.
4.12.8 From Visual Resource Management	A lack of VRM Class objectives throughout the planning area could lead to a steady degradation of visual landscapes that contribute to prehistoric and historic sites.	Establishing VRM classes through RMP decisions, along with actions that minimize or mitigate visual intrusions, would protect the integrity of cultural resources.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.12.9 From Rangeland Management	<p>Livestock grazing can cause physical damage to sites from rubbing or walking on them.</p> <p>-Sites could be damaged by soil erosion resulting from the loss of stabilizing vegetation or the trampling of streambanks. Damage is expected to be greatest at sites where livestock tend to concentrate.</p> <p>-Installing and maintaining livestock management facilities could damage the physical or visual integrity of cultural sites.</p> <p>-Implementing the Land Health Standards and Guidelines for Rangeland Health would reduce soil erosion impacts to cultural sites.</p>	<p>Impacts are expected to be similar to Alt A, except that grazing riparian areas in winter only would reduce impacts.</p> <p>-Grazing in the Front Country may result in conflict between livestock and visitors to sites developed for public use.</p> <p>-Projects for installing and maintaining livestock management would avoid or mitigate impacts to physical or visual integrity.</p>	<p>In both planning areas reductions in upland grazing and the removal of livestock from riparian habitats would reduce damage to cultural resources in nearby areas. Other impacts similar to Alt B.</p>	<p>Removing grazing from public lands would eliminate livestock impacts to cultural resources and enhance primitive experiences for visitors.</p>	<p>Impacts similar to Alt B.</p>
4.12.10 From Minerals Management	<p>Surface disturbance from mining can disturb or destroy cultural sites.</p> <p>-Two active mining claims occur within the AFNM that may continue to be mined for casual use.</p> <p>-In the Bradshaw-Harquahala, archeological surveys are conducted to evaluate if cultural</p>	<p>In the AFNM, impacts similar to Alt A.</p> <p>In the Bradshaw-Harquahala, impacts are expected to be similar to Alt A, except more areas would be closed to, or contain restrictions to mining, increasing protection of cultural resources.</p>	<p>In the AFNM, impacts similar to Alt A.</p> <p>In the Bradshaw-Harquahala, impacts similar to Alt B, except more areas would be closed to, or contain restrictions to mining, increasing protection of cultural resources.</p>	<p>In the AFNM, impacts similar to Alt A.</p> <p>In the Bradshaw-Harquahala, impacts similar to Alt C, except even more areas would be closed to, or contain restrictions to mining, further increasing protection of cultural resources.</p>	<p>In the AFNM, impacts similar to Alt A.</p> <p>In the Bradshaw-Harquahala, impacts similar to Alt B, except mining closures in Tule Creek ACEC and in riparian areas within the reconveyed lands would be closed to mineral materials disposal,</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	resources might be affected by proposed mining. However, casual use mining does not require a mining plan and impacts to cultural resources may occur.				protecting cultural sites in these areas.
4.12.11 From Fire Management	Fires (wild or prescribed) can damage cultural sites, especially those with flammable components. Fires could temporarily affect visual settings. Methods to fight fire or prepare a site for prescribed burning can disturb cultural sites and cause surface disturbances. Prescribed fire planning includes input from an archeologist to avoid or minimize potential damage. Wildfires that may threaten cultural sites have archeologist input on tactics to minimize the potential for resource damage.	Impacts similar to Alt A, except archeological surveys would help locate sensitive resources that may require special attention. MIST would be used to reduce potential damage.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.12.12 From Wild Horse and Burro Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.12.13 From Management of Travel Management	-Continued restrictions that limit the use of motorized vehicles to designated routes in the AFNM would help	-Selected routes that lead directly to sites that have been damaged or are threatened by vandalism would be closed.	-Impacts similar to Alt B, except Alt C would allocate fewer transportation routes. -More limited public	-Alt D would close the largest number of transportation routes in both planning areas. In the AFNM, only limited	-Impacts from Travel Management would be similar to Alt C for The AFNM. The number of route closures would

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	protect cultural resources. -Continued use of existing roads leading to large archaeological sites might increase the potential for vandalism and damage.	-Limiting vehicle traffic on fragile sites would help protect the surface and could deter illegal digging and collecting activities. -Alt B would allow for a more extensive network of transportation routes, which could increase the potential for damage. A more extensive network would facilitate access to a larger number of sites, increasing vulnerability to vandalism and theft. Conversely, increased access would also allow for more interpretation, which could enhance understanding and stewardship of cultural resources.	access would be expected to reduce the impacts to archaeological sites from vehicle and visitor traffic in both planning areas.	motorized use would be allowed in the extensive Back Country RMZ. While this would reduce the levels of damage, fewer areas would be available for site visitation and cultural heritage tourism projects. -Restricted access would also limit the regular monitoring of archaeological sites in remote areas. -Restrictions on access for permitted scientific studies would limit the scientific use of sites and the gathering of information useful for research and resource management.	contribute to protecting cultural resources, while still allowing for unobtrusive interpretive uses and access for scientific research and monitoring. -In Bradshaw-Harquahala, there would be an intermediate level of route closures. Impacts to cultural resources would likely be similar to those described for Alt C.
4.12.14 From Management of Wilderness Characteristics	No impacts are expected.	Management of wilderness characteristics would preserve the visual integrity and natural settings of archaeological sites and cultural landscapes.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.13 Impacts on Paleontological Resources					
4.13.1 From Management of Special Area Designations	Impacts expected to be minimal. Where resources are discovered, management for reduced public use would	Impacts similar to Alt A except in the Bradshaw-Harquahala, fencing Tule Creek ACEC would prevent damage and	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	diminish potential impacts.	special designations would protect more areas than Alt A.			
4.13.2 From Lands and Realty Management	Impacts minimal.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.13.3 From Management of Soil, Air, and Water Resources	Management to improve soil conditions in the AFNM could preserve potential sites. No impacts are expected in the Bradshaw-Harquahala.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.13.4 From Biological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.13.5 From Cultural Resource Management	Actions to protect cultural resources may preserve potential paleontological sites.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.13.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.13.7 From Recreation Management	Impacts are expected to be inadvertent and minimal. Damage may occur from concentrated recreation use.	Impacts similar to Alt A, except reduction of routes may help preserve potential sites.	Impacts similar to Alt B, but more routes would be closed and more area allocated to Back Country RMZ.	Impacts similar to Alt C, except more routes would be closed and more area allocated to Back Country RMZ.	Impacts similar to Alt B, except more routes would be closed and more area allocated to Back Country RMZ.
4.13.8 From Visual Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.13.9 From Rangeland Management	Continued grazing may reduce vegetation and increase erosion.	Impacts similar to Alt A.	Impacts similar to Alt A.	Elimination of grazing could help preserve potential sites.	Impacts similar to Alt A.
4.13.10 From Minerals	No impacts are expected.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
Management	Should sites be found, potential damage would be mitigated.				
4.13.11 From Fire Management	Prescribed burning equipment may affect potential sites.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.13.12 From Wild Horse and Burro Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.13.13 From Management of Travel Management	No impacts are expected in the AFNM. Unrestricted vehicle use in B-H may damage sites.	OHV use in the AFNM could damage potential sites. Restricted vehicle use in B-H may preserve sites.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.13.14 From Management of Wilderness Characteristics	No impacts are expected.	Management may preserve sites by restricting uses.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.14 Impacts on Recreation					
4.14.1 From Management of Special Area Designations	-Recreation opportunities in WSR corridors and wilderness areas would be retained. -Growing numbers of non-motorized users could impair solitude and cause trailing and campsite use impacts in wilderness areas.	-Bloody Basin Road back country byway could increase traffic and interaction among visitors. -Primitive recreational experiences WSR corridor could be diminished. -Interpretive elements of byway would increase visitor awareness, appreciation, and enjoyment. -Constellation Mine Road byway impacts similar to Bloody Basin Road	-Impacts of byways similar to Alt B. -ACEC designation would have little impact in the AFNM. -Tule Creek ACEC would have impacts similar to Alt B. -ACECs in the Bradshaw-Harquahala would improve opportunities for primitive recreation experiences. -Impacts to wilderness areas would be similar to Alt B.	-No impacts from byways. -Impacts from ACECs similar Alt C but cover more area. -Impacts to wilderness areas due to group size and permit restrictions would be similar to Alt B.	-No impacts from byways. -Tule Creek ACEC would have impacts similar to Alt B. - Impacts from ACECs similar Alt C. -Opportunities for non-motorized recreation maintained in wilderness areas. -Impacts to wilderness areas due to group size and permit restrictions would be similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<ul style="list-style-type: none"> -Conflicts between byway users and large OHV groups could diminish scenic drive experience. -Tule Creek ACEC would reduce opportunities for vehicular recreation. -Eliminating grazing would retain a more natural setting and reduce conflicts with livestock. -Interpretive elements would increase appreciation of the natural and cultural resources. -In wilderness areas, establishing criteria to manage larger groups would protect wilderness values. 			
4.14.2 From Lands and Realty Management	<ul style="list-style-type: none"> -Disposal of lands would reduce or eliminate recreation opportunities in those areas. OHV use in Skull Valley and Table Mesa would relocate elsewhere. -In the Upper Agua Fria River Basin, some recreation connectivity between local communities and the Prescott National Forest would be lost. -Corridors are not expected to impact 	<ul style="list-style-type: none"> -Acquiring non-Federal lands that enhance AFNM's values would improve recreation opportunities by improving access. -Lands in the Table Mesa area would be retained and recreation on those lands could continue. -Acquiring lands could enhance opportunities for recreation by increasing connectivity of public lands. 	Impacts similar to Alt A.	<ul style="list-style-type: none"> -In the AFNM, impacts would be similar to Alt C. No lands would be disposed, and no impacts are expected. Impacts from corridors would be similar to Alt A. 	<ul style="list-style-type: none"> -In the AFNM, impacts would be similar to Alt B. -No impacts are expected to result from disposing of lands because parcels are small, isolated, or generally an urban area. -Because recreation on these parcels is generally minimal, relocating the activities to other BLM-managed lands is not expected to have great impacts. -Impacts from other lands actions would be similar

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	recreation until future projects are proposed. Impacts of utility proposals would be analyzed at the time of application.				to Alt B.
4.14.3 From Management of Soil, Air, and Water Resources	In the AFNM, maintaining water quality would enhance wildlife viewing opportunities and water related recreation. Managing air quality could result in restrictions to recreation activities that have the potential to exceed standards. Any recreation related facilities would need to be designed to address emissions.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.14.4 From Biological Resource Management	-In the AFNM, fence modifications and development of additional wildlife waters could enhance wildlife viewing opportunities. -Protection of sensitive habitat could reduce motorized recreation opportunities, but improved habitat could improve wildlife viewing opportunities. -Development of wildlife waters and protection of	Impacts in the AFNM would be similar to Alt A. -Designation of Harquahala Mountains Wildlife Habitat Area (WHA) would Protect sensitive wildlife habitat but route closures would diminish opportunities for motorized recreation. -Management for desert tortoise could limit development of new motorized vehicle routes. -Seasonal limitations on	-Limitation of routes in pronghorn movement corridors could reduce connectivity of motorized routes within the AFNM. -Prohibiting recreational sites in pronghorn corridors could preclude facilities that enhance the recreation experience of some users. -Impacts of habitat enhancement projects similar to Alt B. -Management of WHA	- AFNM impacts similar to Alt C. -Removal of all fences would maintain route connectivity and enhance the natural appearance of the landscape. -Wildlife viewing would be enhanced. -In the Bradshaw-Harquahala, impacts similar to Alt B. -Impacts from WHA management similar to Alt C.	-AFNM impacts similar to Alt C. -Prohibiting new fences in specified WHA would help maintain the current connectivity of the route network. -Impacts from desert tortoise management similar to Alt B. -Impacts from WHA management similar to Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>big horn sheep habitat would improve hunting and wildlife viewing opportunities.</p> <p>-Motor vehicle restrictions in desert tortoise, Arizona night lizard, and Sonoran mountain king snake habitats could reduce motorized recreation opportunities.</p>	<p>motorized special events and the number of events could limit future expansion of those events.</p> <p>-Ensuring connectivity of wildlife habitats could reduce motorized recreation by closing routes that cross sensitive areas or movement corridors.</p> <p>-Wildlife viewing would be enhanced habitat enhancement projects.</p>	<p>and wildlife corridor could affect diminish recreational opportunities while enhancing wildlife viewing.</p> <p>-Impacts from desert tortoise management similar to Alt B.</p>	<p>-Impacts from desert tortoise management similar to Alt B.</p>	
4.14.5 From Cultural Resource Management	<p>-More permits could lead to allocation and protection problems if larger numbers of tours and activities visit the same sites.</p> <p>-Allocation to scientific use or preservation would limit certain sites for commercial or general recreation use.</p>	<p>-Route closures on the AFNM could reduce motorized recreation opportunities.</p> <p>-Conflicts among users could reduce, and natural opportunities be enhanced.</p> <p>-Developing education and interpretive programs would lead to a better appreciation of cultural resources.</p> <p>-Improving routes and trails could open sites to a wider variety of users, but could limit access for some users.</p> <p>-Developing five sites for High public use and four sites for Moderate</p>	<p>-In the AFNM, impacts would be similar to Alt B, except that one site would be allocated to High public use and eight sites would be allocated to Moderate public use.</p> <p>-Impacts would be similar to Alt B, although this would not provide the educational and interpretive opportunities provided by Alt B.</p> <p>-Restricting SRPs to educational tours could reduce recreational and educational opportunities for casual users.</p>	<p>-In the AFNM, no sites would be developed to High public use and one would be developed to Moderate use.</p> <p>-Education and awareness afforded by developed sites would be least under this alternative.</p> <p>-Self-discovery opportunities would be greatest.</p> <p>-User conflicts could increase.</p> <p>-In the Bradshaw-Harquahala, impacts would be similar as described for Alt B, except sites in two cultural priority areas would be developed for</p>	<p>-In the AFNM, impacts would be similar to Alt B except that two sites would be developed for High public use and six sites for Moderate public use.</p> <p>- closing of routes as a protective measure would impact recreational.</p> <p>-In the Bradshaw-Harquahala developing sites for public use in each cultural priority area would increase awareness and recreational opportunities for experiencing cultural resources.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		public use in the AFNM would increase access and education programs on 16,000 acres. -Development of public use sites in eight cultural priority areas would increase awareness and opportunities within Bradshaw-Harquahala.		public use. -Educational and interpreted recreational opportunities would be less than in Alt C. -Opportunities for self-discovery would increase, but conflicts between users increases.	
4.14.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.14.7 From Recreation Management	-Increasing recreation could diminish the experience of some users and alter the setting for many activities. -Could result in inappropriate use in sensitive areas, overcrowding and user conflicts. -Dispersed camping expected to proliferate. -Conflicts between users and resource disturbance are expected to escalate. -Closures of some OHV routes or activity areas could limit opportunities. -In Bradshaw Harquahala, cross-country could disrupt other recreational settings. -Settings would shift over	-Back Country RMZ would benefit non-motorized activities. -Front Country RMZ would concentrate more intensive uses. -In the AFNM, restrictions on dispersed camping would reduce impacts. -The two developed campgrounds would increase vehicle based camping opportunities. -Some popular shooting areas would be closed for safety reasons. Shooters would be displaced to other areas. -Connecting trails for non-motorized activities would enhance some opportunities and reduce	-In the AFNM, impacts would be similar to those to Alt B, except: Front Country would be 42,000 acres and Back Country 28,200 acres. -Camping in Front Country allowed only at designated camp sites. -Impacts of developed campground similar as described in Alt B, but in only one place. -Campfires allowed at campsites with some limitations. -Impacts of recreational target shooting similar to Alt B, except the Front Country zone would be closed. -Management actions in the Bradshaw-Harquahala	-In the AFNM, impacts similar to Alt C, except: The Front Country zone reduced to 1,530 acres and the Back Country zone 68,380 acres. -Impacts of dispersed camping similar to Alt C, except restricted to designated sites. -Designated routes include campsites. -Campfires allowed at dispersed sites, but wood for campfires must be brought in from outside the AFNM. -Closure of the AFNM to recreational target shooting would displace all non-hunting shooters to locations outside the AFNM.	-In the AFNM, dispersed camping impacts similar to Alt B. -Impacts from vehicles of dispersed camping are expected to be similar to Alt D. -Recreational target shooting impacts similar to Alt D. -Non-motorized trail connections would have impacts similar to Alt B. -Black Canyon Trail would become a trail of regional significance for mountain bikers, equestrians, and hikers. -Management actions applied to the entire Bradshaw-Harquahala would have impacts similar to Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>time to more motorized settings.</p> <ul style="list-style-type: none"> -Increased demand for large recreation events requiring SRPs would continue. -With no limits on the number of motorized competitive races the number of permits could increase. 	<p>conflicts.</p> <ul style="list-style-type: none"> -The North Black Canyon Trail SRMA would enhance non-motorized opportunities. -On the AFNM, 35 miles of route would be closed to reduce resource conflicts and 5 miles of new route construction would be built to improve route connectivity and looping opportunities. -Cross-country travel would be prohibited for game retrieval, may diminish hunting opportunities. -Management of 149,760 acres of BLM land in SRMAs would maintain opportunities and reduce conflicts. -Developed facilities would enhance recreation experience for many users. -Increasing SRP permits to 12 on the AFNM could increase opportunities for structured tour groups, while increasing conflicts between commercial tours and casual users sites. -In the Bradshaw-Harquahala, impacts from 	<p>would reduce impacts on resources; maintain recreation opportunities and settings and increase.</p> <ul style="list-style-type: none"> -Staging and trail areas would enhance recreation experiences -In the AFNM, impacts of SRPs would be similar to Alt B, except the maximum number to be authorized across the AFNM would be six. -In the Bradshaw-Harquahala, impacts from SRP management similar to Alt A, except: a maximum of six races per year. Races not allowed in the Table Mesa SRMA. -Annual limits for races may result in races being relocated but conflicts minimized. 	<p>-56,240 acres of SRMAs and RMZs allocated for intensive recreation management.</p> <ul style="list-style-type: none"> -Area available for intensive motorized use smaller than all other alternatives. -Many users and activities would be displaced to other areas. -Conflicts between casual users and larger group activities would intensify and conflicts between motorized and non-motorized recreation could increase. -Prohibiting SRPs in the AFNM may reduce ability of some users to experience the resources. -It could also eliminate conflicts between casual visitors and large groups, especially at popular locations. -In the Bradshaw-Harquahala, impacts of SRPs would be similar to Alt A. -Race limits lower than current. -No races allowed in the Hieroglyphic Mountains SRMA would impact motorized racing because 	<p>-384,510 acres would be allocated to SRMAs and RMZs in this alternative.</p> <ul style="list-style-type: none"> -8motorized races would be allowed annually. -The Yarnell SRMA impacts similar to Alt B. -Access to the North Black Canyon Trail RMZ would enhance non-motorized recreation experiences -In the Bradshaw-Harquahala, impacts are similar to Alt C except: number of race events could be increased to 4 per year in the Vulture Mountains RMZ.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<p>SRPs would be similar to those described in Alt A except: the number of motorized competitive races would be limited to 14 per year and spread to minimize user conflicts and allow OHV opportunities.</p> <p>-The Yarnell SRMA would preserve hang gliding takeoff and landing areas.</p> <p>-Restricting competitive, commercial, and organized group events could limit the opportunities for new events.</p> <p>-VRM standards and recreation settings could limit existing events and prevent new events.</p>		<p>remaining area is less diverse and farther.</p> <p>-Racing opportunities would be lost and the demand would not be met.</p>	
4.14.8 From Visual Resource Management	No impacts are expected.	<p>-In the AFNM, managing 12,700 acres as VRM Class II and 57,900 acres as Class III would maintain appearance of Back Country and allow Front Country to accommodate recreation activities.</p> <p>-Elsewhere, VRM Class II in areas allocated to maintain wilderness</p>	<p>-In the AFNM, impacts similar to Alt B, except VRM Class III reduced to 42,000 acres and VRM Class II increased to 28,200 acres.</p> <p>-In the Bradshaw-Harquahala, impacts similar to Alt B, except 107,843 acres allocated to maintain wilderness characteristics and</p>	<p>-In the AFNM, impacts would be similar to Alt B, except VRM Class III reduced to 1,530 acres and VRM Class II increased to 68,380 acres.</p> <p>-In the Bradshaw-Harquahala, 102,664 acres allocated to maintain wilderness characteristics and 98,500 acres of ONA ACEC managed for VRM</p>	<p>-In the AFNM, impacts similar to Alt B, except VRM Class III on 11,900 acres, and VRM Class II on 57,650 acres.</p> <p>-In the Bradshaw-Harquahala, impacts similar to Alt B, except 67,279 acres allocated to maintain wilderness characteristics managed as VRM Class II.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<p>characteristics would retain appearance of naturalness.</p> <p>-Improvements would need to be designed to meet VRM standards and may require design modifications to do so.</p>	<p>allocated to VRM Class II.</p> <p>-Managing Sheep Mountain ONA ACEC as VRM Class I would enhance the visual setting of the area.</p>	Class I.	
4.14.9 From Rangeland Management	<p>-Conflicts between recreation users and livestock grazing increase. -Limited access across private lands would reduce recreation opportunities.</p>	<p>-In the AFNM, grazing limitations would degrade the recreational experience during use periods.</p> <p>-Primitive recreation experience enhanced during non-use months.</p> <p>-Additional fencing may limit access.</p> <p>-Improved conditions would enhance settings and improve wildlife viewing opportunities.</p> <p>-In the Bradshaw-Harquahala, impacts similar to those described for the AFNM above.</p> <p>-Improved vegetation conditions would improve the recreation setting for non-motorized users.</p>	<p>-In the AFNM, removal of livestock from riparian areas would eliminate conflicts with cattle and enhance the recreational experience in those areas.</p> <p>-Other grazing related impacts similar to Alt B.</p>	<p>-Conflicts with livestock would be eliminated.</p> <p>-Recreation experiences improve as recreation settings become free of livestock inconveniences.</p> <p>-Access could be lost if ranchers sell private property.</p>	Impacts similar to Alt B.
4.14.10 From Minerals Management	<p>-In the AFNM, no impacts.</p> <p>-Mining in popular recreation areas would degrade the experience.</p> <p>-Most impacts would</p>	<p>-In the AFNM, no impacts.</p> <p>-Closing lands allocated to maintain wilderness characteristics and ACECs to mineral</p>	<p>-In the AFNM, no impacts.</p> <p>-Impacts similar to Alt B, except closing lands allocated to maintain wilderness characteristics</p>	<p>-In the AFNM, no impacts.</p> <p>-Impacts similar to Alt B, except closing lands allocated to maintain wilderness characteristics</p>	<p>-In the AFNM, no impacts.</p> <p>-Impacts similar to Alt B, 172,80 acres closed to mineral material disposal.</p> <p>-Primitive recreation</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	result from developing saleable minerals.	material disposal would improve recreation opportunities and settings on 56,680 acres. -There would be no impacts from leasable minerals management -Few impacts from locatable minerals.	and ACECs to mineral material disposal would improve recreation opportunities and settings on 163,220 acres. -Visual settings maintained due to objectives.	and ACECs to mineral material disposal would improve recreation opportunities and settings on 284,280 acres. -Recreation opportunities in undisturbed natural settings over the largest area under any of the alternatives.	opportunities in undisturbed natural settings.
4.14.11 From Fire Management	-Fires displace recreation users from burned areas until recovery. -Improved vegetation conditions could improve recreational experiences and wildlife viewing opportunities.	-Impacts similar to Alt A, except natural fire starts could increase disruptions to recreation through area closures.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.14.12 From Wild Horse and Burro Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.14.13 From Management of Travel Management	-Motorized use in AFNM unchanged. -In the Bradshaw-Harquahala, Mechanized use would increase. -Conflicts between various users would occur. -Vehicle routes would remain open, and motorized recreation opportunities would not be affected. -Recreation settings shift to more motorized.	-In the AFNM, 134 miles of routes open. -Route system would enhance opportunities for motorized recreation. -Closing 37 miles of routes could limit opportunities for motorized recreation and displace some users. -Limiting vehicles to inventoried routes would eliminate cross-country OHV travel. -Some hunter access	-In the AFNM, route designation impacts similar to Alt B, except 123 miles of routes remain open and 48 miles of existing routes would be closed. -The impacts of route designation and developing route networks in the Bradshaw-Harquahala similar to Alt B.	-In the AFNM, 48 miles of routes would be open and 123. miles closed. -Opportunities for motorized recreation would be limited, and loop trails would not be developed. -Opportunities for motorized recreation would diminish in some areas. -Opportunities for non-motorized recreation would be enhanced	-In the AFNM impacts of route designations would be similar to Alt C, except 94 miles of route would be designated as open and 52 miles of route would be closed. -Impacts on opportunities for recreation in the Bradshaw-Harquahala Planning Area would be similar to Alt C. -The Black Canyon Trail

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<p>could be limited.</p> <ul style="list-style-type: none"> -Development of new routes could be precluded. -Developing connected route networks would provide expanded opportunities and reduce conflicts. -The North Black Canyon Trail SRMA would enhance non-motorized recreation opportunities. 		<p>throughout the AFNM.</p> <ul style="list-style-type: none"> -There would be more opportunity to experience solitude and natural landscape settings. -In the Bradshaw-Harquahala, impacts from route designations on recreational opportunities would be similar to Alternative B. 	<p>from Carefree Highway to north of Highway 69 would become a major trail of regional significance for mountain bikers, equestrians, and hikers.</p> <ul style="list-style-type: none"> -Opportunities for intensive motorized recreation is provided in various RMZs. -The North Black Canyon Trail SRMA would enhance non-motorized recreation opportunities.
4.14.14 From Management of Wilderness Characteristics	<ul style="list-style-type: none"> -In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, opportunities for primitive and non-motorized recreation would decline due to increasing motorized recreation and land use authorizations. 	<ul style="list-style-type: none"> -In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, 56,040 acres of land would be managed to maintain wilderness characteristics. -Designation of these areas would limit motorized access to little-used routes. -Motorized recreation would be displaced. -Crowded motorized routes would reduce the quality of dispersed recreational experiences. -Non-motorized users would benefit from a more natural setting. 	<ul style="list-style-type: none"> -In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, impacts similar to Alt B except 107,843 acres would be managed to maintain wilderness characteristics -More displacement of motorized recreation than Alt B. -More non-motorized recreational opportunities than Alt B. 	<ul style="list-style-type: none"> -Impacts are similar to Alts B and C with the exception, 140,235 acres would be managed to maintain wilderness characteristics including 37,571 acres in the Agua Fria National Monument. 	<ul style="list-style-type: none"> -In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, impacts similar to Alt B and C except, 88,179 acres would be managed to maintain wilderness characteristics. -More non-motorized recreational opportunities than Alt B, but less than Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.15 Impacts on Visual Resources					
4.15.1 From Management of Special Area Designations	<ul style="list-style-type: none"> -Present conditions would be maintained. BLM would evaluate future projects for visual impacts. -The two ACECs in the AFNM have no impact on visual resources. -The Agua Fria River WSR guidance would benefit visual resources. -In the Bradshaw-Harquahala Planning Area, 5 wilderness areas would be managed by VRM Class I standards. 	<ul style="list-style-type: none"> -In the AFNM, WSR corridors maintain the natural views. -Back Country Byway designation on the Bloody Basin Road would have low impacts. -In the Bradshaw-Harquahala, retaining the Harquahala Mtn Summit Road would not affect existing scenic quality. -The wilderness areas would remain under VRM Class I. -Tule Creek ACEC would improve conditions and restrictions would steadily improve visual resource. 	<ul style="list-style-type: none"> -In the AFNM, WSR impacts similar to Alt B. - ACECs requiring fencing could degrade visual resources. -ACEC required route closures could improve visual character. -In the Bradshaw-Harquahala, impacts similar to Alt B, except: 7 ACECs could slightly degrade visual resources with fencing, but improve visual resources by prohibiting mining, closing roads, prohibiting construction of facilities. -Wilderness impacts similar to Alt B. 	<ul style="list-style-type: none"> -In the AFNM, WSR impacts similar to Alt B. - Impacts from ACECs similar to Alt C, but over a larger area. -In the Bradshaw-Harquahala, impacts would be similar to those described in Alt B except: impacts from 8 ACECs would be similar to Alt C, except over a larger area. -Wilderness impacts similar to Alt B. 	<ul style="list-style-type: none"> -In the AFNM, WSR impacts similar to Alt B. except no by-way impacts. -In the Bradshaw-Harquahala, impacts similar to Alt C.
4.15.2 From Lands and Realty Management	<ul style="list-style-type: none"> -In the AFNM, land acquisitions, rights-of-way and utilities would be evaluated for visual impacts on a case-by-case basis. -New utility proposals could impact the visual character of the landscape. -Impacts would be along the western edge of the AFNM where existing facilities exist. -In the Bradshaw- 	<ul style="list-style-type: none"> -In both planning areas, acquired lands would be subject to Visual Resource Management. -Land disposal could impair visual resources by eliminating VRM standards. -Designating utility corridors could increase potential for development. -Narrow corridors allow placement in disturbed areas. 	<ul style="list-style-type: none"> -Impacts from land tenure changes, corridors and authorizations would be similar to Alt B, except: -Eliminating the existing utility corridor in the AFNM would eliminate potential impacts of future utilities. -Expansion of the corridor to the west could extend facilities into sight of Sunset Point Scenic Overlook, but would allow room for route that 	<ul style="list-style-type: none"> -Impacts similar to Alt B, except: -Impacts in AFNM from utility corridors would be similar to those under Alt C. -In the Bradshaw-Harquahala, no lands identified for disposal. 	<ul style="list-style-type: none"> - Impacts in AFNM from utility corridors would be similar to those under Alt B. - In the Bradshaw-Harquahala impacts from utility corridors would be similar to a combination of Alt B and C. - Expanding the Black Canyon Utility Corridor allows for future development with flexibility to adjust facilities to minimize

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>Harquahala, no impacts are expected from land acquisition.</p> <p>-Disposal actions would be evaluated on a case-by-case basis.</p> <p>-Future actions on disposal lands would not conform to VRM standards.</p> <p>-Various authorizations would degrade visual qualities.</p>	<p>-Wide corridors allow route selection to minimize impacts.</p> <p>-All utilities and telecom projects are evaluated on a case-by-case basis and mitigated to minimize impacts and conform to VRM class.</p> <p>-The Wickenburg Bypass corridor would be inconsistent with VRM objectives.</p>	<p>minimizes visibility.</p>		<p>visual impacts.</p> <p>-All other lands impacts similar to Alt B.</p>
4.15.3 From Management of Soil, Air, and Water Resources	<p>-Project designs minimizing or mitigating air quality impacts would maintain visual landscape.</p>	<p>Impacts similar to Alt A.</p>	<p>Impacts similar to Alt A.</p>	<p>Impacts similar to Alt A.</p>	<p>Impacts similar to Alt A.</p>
4.15.4 From Biological Resource Management	<p>-Negligible impacts are expected.</p>	<p>-Impacts similar to Alt A, except:</p> <p>-Wildlife project design to VRM Class I and II standard would reduce visual impacts.</p> <p>-WHA management prescriptions could improve visual landscapes.</p>	<p>Impacts similar to Alt B, except WHAs in more areas.</p>	<p>Impacts similar to Alt C, except some WHAs are managed in ACECs.</p>	<p>Impacts similar to Alt C.</p>
4.15.5 From Cultural Resource Management	<p>No impacts are expected.</p>	<p>-Implementing protective measures could impair visual resources.</p> <p>-Closing routes and</p>	<p>-Impacts in both areas would be similar to those described in Alt B.</p>	<p>-In the AFNM, impacts would be similar to Alt B except no sites would be allocated to High public use.</p>	<p>-Impacts in AFNM would be would be similar to Alt C.</p> <p>-Impacts in the Bradshaw-Harquahala</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<p>restricting grazing could increase vegetation cover, improving visual resources.</p> <p>-Commercial and group tours could degrade visual resources.</p> <p>-In the AFNM high public use areas could add visitor facilities, signs and improve routes impacting visual.</p> <p>-In the Bradshaw-Harquahala, public use sites would have similar impacts to those described in the AFNM.</p> <p>-Public use sites would be developed in all eight SCRMA's.</p>		- In the Bradshaw-Harquahala, impacts similar to Alt B.	Planning Area would be similar to Alt B.
4.15.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.15.7 From Recreation Management	<p>-In both areas, visual resources impacts would occur from installing signs and target shooting.</p> <p>- Large public land area OHV activity would continue to affect visual resources with dust.</p> <p>-As visitation increases</p>	<p>-In the AFNM, Front Country maintaining or enhancing visitor travel could impact visual resources with facilities.</p> <p>-In the Back Country zone no impacts are expected.</p> <p>-In the Passage zone</p>	<p>- In the AFNM impacts would be similar to those discussed for Alt B except Front Country and Passage impacts are reduced from Alt B.</p> <p>-In the Bradshaw-Harquahala, impacts similar to Alt B.</p>	<p>-In the AFNM impacts would be similar to those discussed for Alt B except Front Country impacts are reduced and Passage impacts are increased from Alt B.</p> <p>- In the Bradshaw-Harquahala, impacts</p>	<p>-In the AFNM impacts would be similar to those discussed for Alt B except Front Country impacts are reduced and Passage impacts are increased from Alt B.</p> <p>- In the Bradshaw-Harquahala, impacts</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	visual qualities could be further degraded by landscape damage and increasing dust.	some visitor related development could occur, would maintain visual character. -In the Bradshaw-Harquahala Visual resources could be affected by the development of recreational and visitor facilities. -Motorized events could alter the visual landscape by reducing local visual clarity.		similar to Alt B.	similar to Alt B.
4.15.8 From Visual Resource Management	-The visual landscape is expected to gradually decline. -VRM application inconsistent.	-In the AFNM, 57,900 acres would be allocated to VRM Class III, 12,700 allocated to VRM Class II and visual landscapes would be protected. -In the Bradshaw-Harquahala, VRM management consistent. -Some visual intrusions but expected to be minimal.	-In the AFNM, impacts would be similar to Alt B, except: 42,000 acres managed as class III and 28,200 acres managed as VRM Class II. -In the Bradshaw-Harquahala, impacts similar to Alt B, except more area included in VRM Class II. -Preserves natural landscape over larger areas than Alt B.	-In the AFNM, impacts would be similar to Alt B, except: 1,530 acres managed as Class III and 69,380 acre managed as class II. -In the Bradshaw-Harquahala, impacts similar to Alt C, except more area included in VRM Class I. -Preserves natural landscape over larger areas than Alt C.	-In the AFNM, impacts would be similar to Alt B, except: 11,900 acres managed as Class III and 57,650 acre managed as class II. - In the Bradshaw-Harquahala, impacts similar to Alt C.
4.15.9 From Rangeland Management	-Construction of livestock facilities could contribute to decline in visual quality.	-Impacts similar to Alt A, except: -Construction of features to restrict access to riparian areas would impair while improve vegetative from actions	-Impacts similar to Alt B, except the improvements to riparian vegetation would be faster.	-Visual impacts from some range facilities would be removed. -Improved vegetation conditions would improve visual landscapes. -Additional livestock	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		would improve views.		facilities on non-Federal lands or private land development could degrade visual landscapes.	
4.15.10 From Minerals Management	<p>-In the AFNM, mineral development on existing claims would have minimal impacts on visual resource.</p> <p>-In the Bradshaw-Harquahala, mining would alter the visual landscape adding surface disturbance, facilities, and routes.</p> <p>-Localized degradation of air quality and visual clarity could occur from mining.</p> <p>-The five Wilderness areas continue to be closed to mineral development.</p> <p>-Visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):</p> <ul style="list-style-type: none"> ▪ 167,720 acres closed to saleable minerals ▪ 171,680 acres closed to locatable minerals ▪ 171,680 acres closed to leasable minerals 	<p>-In the AFNM, impacts similar to Alt A.</p> <p>-In the Bradshaw-Harquahala, minerals management could affect visual resources over most of the planning area. Mining impacts would be minimized by compliance with VRM standards.</p> <p>-Alt B would protect the visual landscape more than would Alt A.</p> <p>-In addition, mining would be prohibited from some lands as follows:</p> <ul style="list-style-type: none"> ▪ 224,400 acres closed to saleable minerals ▪ 101,000 acres closed to locatable minerals ▪ 101,000 acres closed to leasable mineral 	<p>-In both areas, impacts similar to Alt B, except that visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):</p> <ul style="list-style-type: none"> ▪ 330,940 acres closed to saleable minerals ▪ 188,450 acres closed to locatable minerals ▪ 188,190 acres closed to leasable minerals 	<p>-In both areas, impacts similar to Alt B, except that visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):</p> <ul style="list-style-type: none"> ▪ 452,000 acres closed to saleable minerals ▪ 457,664 acres closed to locatable minerals ▪ 464,734 acres closed to leasable minerals 	<p>-In both areas, impacts similar to Alt B, except that visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):</p> <ul style="list-style-type: none"> ▪ 167,720 acres closed to saleable minerals ▪ 171,940 acres closed to locatable minerals ▪ 171,680 acres closed to leasable minerals
4.15.11 From Fire	-Prescribed burning	-Impacts similar to Alt A	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
Management	would reduce visual quality in the short term but improve vegetation health and visual quality in the long term. -Wildfires would have a similar affect, but in non fire adapted communities visual impacts could last for decades.	except some natural start fires may be allowed to burn in the AFNM, increasing slightly the potential visual impacts.			
4.15.12 From Wild Horse and Burro Management	No impacts are expected.	No impacts are expected.	Removal of burros in the Harquahala Herd Area could improve vegetation cover and visual resources.	Impacts similar to Alt C.	Impacts similar to Alt C.
4.15.13 From Management of Travel Management	-In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, new roads and routes authorized or pioneered could eventually create visual disturbances in the planning area.	-In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, a wide range of impacts are anticipated from management of travel, travel management. -Small transportation projects would be mitigated and consistent to the appropriate VRM classes.	Impacts similar to Alt B.	-In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, less adverse impacts are anticipated. Impacts would be greatly reduced than those considered under Alt B and C. -As described in Alt B, there could be visual impacts from major county, state and federal highway projects. -Overall, allocated VRM classes would maintain or enhance the appearance of public lands.	-In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, impacts would be similar to those under Alt B and projects would be installed mostly consistent with VRM objectives.
4.15.14 From Management of	No impacts.	-Visual and scenic resource conditions	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
Wilderness Characteristics		would be maintained and protected in areas allocated to maintain wilderness characteristics. -Light pollution could be less and dark skies more effectively maintained.			
4.16 Impacts on Rangeland Management					
4.16.1 From Management of Special Area Designations	-Exclusion of grazing in Larry Canyon ACEC has a negligible effect on rangeland management. -If WSR corridors are designated, winter use only livestock use in riparian segments would be implemented. -Vegetation health and density would improve, and with it forage conditions in the riparian areas would improve. -During the period the riparian is closed, the altered livestock distribution could cause increased disturbance in areas livestock congregate. -Slight potential of vehicle-livestock impacts along the Harquahala Summit Scenic Road Back Country Byway.	-Designation of the Bloody Basin Road and Constellation Mine Road as back country byways would increase traffic in the area, therefore increasing animal-vehicle collisions. -In the Bradshaw-Harquahala, Tue Creek ACEC would exclude grazing from fenced areas, improving health of riparian vegetation and negligibly decrease AUMs for the grazing allotment.	-Impacts similar to Alt B, except: -Exclusion of livestock from 810 acres of riparian ACEC in the AFNM would have a negligible affect on livestock grazing. -In the Bradshaw-Harquahala, reduced surface disturbance from non-grazing activities restricted by ACEC designation on 55,710 acres would improve forage conditions and reduce potential for vehicle-animal collisions. -Back country byway impacts similar to Alt B.	-Management of the 13,070 acres of ACEC in the AFNM would improve range conditions by reducing vehicle traffic, damage to riparian vegetation, disturbance by recreational users, and potential vectoring of noxious and invasive species. -Designation of 8 ACEC in the Bradshaw-Harquahala would have similar impacts to Alt C, but over a larger area (192,800 acres).	-In the AFNM, there are no impacts from Special Area Designations. -In the Bradshaw-Harquahala, impacts from ACECs would be similar to Alt C, except the ACEC acreage would cover 89,970 acres.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.16.2 From Lands and Realty Management	<ul style="list-style-type: none"> -In the AFNM, no impacts are expected. -In the Bradshaw-Harquahala, maintenance or construction of utilities in corridors may disturb vegetation and disrupt grazing operations. -Acquiring privately owned and state-held lands could consolidate management, and increase AUMs. -Land disposal of 54,370 acres would reduce available grazing lands. -AUMs may be reduced or whole allotments may be closed. 	<ul style="list-style-type: none"> -In the AFNM, narrowing utility corridor would restrict impacts to vegetation from new utility. -In the Bradshaw-Harquahala, impacts similar to Alt A, except: Lands available for disposal would be 58,400 acres. Authorized AUMs might need to be adjusted. Total acreage would be less than 6% of grazing land. 	<ul style="list-style-type: none"> -Eliminating the Black Canyon corridor would eliminate development impacts. -In the Bradshaw-Harquahala, impacts similar to Alt A. -Impacts of the land tenure adjustment of 49,100 acres similar to Alt B. 	<ul style="list-style-type: none"> -Impacts to rangeland vegetation would be similar to that described in Alt C. -Impacts to grazing and livestock would end with the cessation of grazing. 	<ul style="list-style-type: none"> -In the AFNM impacts to rangeland vegetation and grazing would be similar to Alt B. -In the Bradshaw-Harquahala, impacts would be similar to Alt C, except that 38,755 acres would be offered for disposal (4% of available grazing land). -Utility impacts similar to Alt A.
4.16.3 From Management of Soil, Air, and Water Resources	<ul style="list-style-type: none"> -Livestock authorizations could be modified to meet standards. -Reduced livestock numbers would improve range conditions. 	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.16.4 From Biological Resource Management	<ul style="list-style-type: none"> -In the AFNM, the use of prescribed fires could improve vegetation quantity and quality but disrupt pasture rotations. -Limits on mechanical vegetation treatment could assist invasive species. -Fence modifications could movement of 	<ul style="list-style-type: none"> -Impacts on the AFNM similar to Alt A. -In the Bradshaw-Harquahala, prohibiting construction of range improvements in Browns Canyon could limit opportunities to improve livestock distribution in the Aguila allotment. -Potential restrictions to 	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>livestock across pastures and allotments creating additional work for permittees.</p> <p>-In the Bradshaw-Harquahala, mitigation and closure of waters could result in poor livestock distribution and added operation costs.</p> <p>-Sheep restrictions would adversely impact operators.</p> <p>-Bighorn lambing restrictions would impact livestock distribution and use patterns.</p>	<p>vehicle routes could limit access to range facilities and increase maintenance costs.</p> <p>-Prohibiting domestic sheep and goat grazing within 9 miles of occupied desert bighorn sheep habitat would affect 1 grazing allotment where sheep are currently an authorized class of livestock.</p>			
4.16.5 From Cultural Resource Management	-Site protection measures to exclude livestock from sites through fencing may slightly reduce available forage.	-For both planning areas, High public use development would damage vegetation in the area of the site construction. If the protected areas contain livestock waters, alternate sources would need to be found or developed. -Moderate public use area impacts to vegetation would be minimal, and Low public use impacts would even be smaller.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.16.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.16.7 From Recreation Management	<p>-Current OHV management has lead to proliferation of vehicle routes, disturbance to vegetation, vehicle-animal encounters, and vandalism of range improvements and private property.</p> <p>-SRPs have the potential to have similar effects, but may be slightly lower due to restrictions.</p>	<p>-Recreation allocations on the AFNM are would increase visitation, bring increased vehicle numbers, increasing animal-vehicle encounters, and vectoring of invasive weeds.</p> <p>-Limiting vehicles to designated routes would reduce vehicle related impacts.</p> <p>-Other recreation impacts in the Bradshaw-Harquahala would include target shooting being restrictions on 27,570 acres would decrease risk of animal stress and mortality.</p> <p>-Campground/staging areas could require adjustment to authorized livestock numbers.</p> <p>-New trails established for pedestrian, non-motorized, and motorized use could increase animal stress and potential mortality from collisions with vehicles.</p>	<p>Impacts similar to Alt B, except:</p> <p>-In the AFNM, RMZs would reduce people-livestock encounters and associated visitor impacts.</p> <p>-Reductions in route miles may make some areas difficult to access, increasing operating costs of grazing permits.</p> <p>-In the Bradshaw-Harquahala, target shooting restrictions could further reduce potential conflicts with livestock.</p> <p>-Reduced SRPs issued to motorized race events could reduce the risk of disturbance to livestock and mortality from collisions with vehicles.</p>	<p>Impacts to rangeland resources and remaining facilities similar to Alt C, except that the elimination of grazing would remove impacts to livestock.</p>	<p>In the AFNM, impacts from allocations for RMZs similar to Alt C. For both planning areas, confining vehicles to designated routes would have impacts are similar to Alt C.</p> <p>Activities authorized through Special Recreation Permits (SRPs) are expected to have impacts similar to those in Alt B.</p>
4.16.8 From Visual Resource Management	<p>Impacts from VRM management could include increased costs, project relocation or possible denial.</p>	<p>Impacts similar to Alt A.</p>	<p>Impacts similar to Alt A.</p>	<p>No impacts are expected.</p>	<p>Impacts similar to Alt A.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.16.9 From Rangeland Management	<p>-Implementation of the Land Health Standards and Guidelines for Grazing Administration could reduce livestock numbers, rest or close pastures, or convert some pastures or allotments to ephemeral use.</p> <p>-These standards would also improve and maintain range conditions.</p> <p>Riparian areas would improve health and density of vegetation. Livestock distributions may be disrupted in some areas, and loss of water sources in summer may require development of range improvements to replace the lost water.</p>	Impacts similar to Alt A	<p>Impacts similar to Alt A, except:</p> <p>-Prohibiting grazing in riparian areas in the AFNM would close 25,989 acres to livestock. Prohibiting grazing in Bradshaw-Harquahala would potentially close 249,400 acres to livestock.</p> <p>-For both planning areas, the potential loss in availability to livestock grazing from riparian closure would be greater than for closing upland areas. The loss of water sources in some instances could result in no grazing on public lands. Riparian vegetation and vegetation cover would increase more rapidly than in Alt A.</p>	<p>-Closing all allotments to grazing would eliminate 13,492 AUMs in the AFNM and 69,568 AUMs in the Bradshaw-Harquahala. If ranchers cannot find alternative forage for their livestock, holders of all 104 permits and leases would go out of business. Cost of removal of unnecessary range improvements would be born by the BLM, as well as costs of maintaining facilities used for other purposes.</p> <p>-Vegetation conditions would improve until environmental stability is reached.</p>	Impacts similar to Alt A.
4.16.10 From Minerals Management	<p>-The AFNM is closed to new mineral entry.</p> <p>-Impacts in the Bradshaw-Harquahala are expected to be negligible.</p>	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.16.11 From Fire Management	<p>-Short term impacts from removal of forage and closure of pastures before and after burning.</p> <p>-Fire treatments would improve vegetation</p>	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	quality and quantity.				
4.16.12 From Wild Horse and Burro Management	-No impacts in the AFNM. -In the Bradshaw-Harquahala, maintaining the Lake Pleasant HMA has negligible impact. -Removing all burros from Harquahala HA would increase vegetation, improve riparian, and reduce competition for water with livestock.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.16.13 From Management of Travel Management	Vehicle limitations in Perry Mesa ACEC have reduced the potential for upland vegetation damage by unauthorized cross-country OHV travel. -Damage to roadside vegetation has increased due to unauthorized OHV travel around poorly maintained segments of roadway. Decreased OHV travel would reduce the potential for animal stress. --The OHV travel restriction has also decreased the potential for animal-vehicle collisions.	Limiting vehicular travel in these same areas would reduce damage to upland and riparian vegetation, stress to animals, risk of animal-vehicle collisions, and potential vectoring of noxious weeds.	Impacts similar to Alt B.	No impacts.	Impacts similar to Alt B.
4.16.14 From Management of	No impacts are expected.	For both planning areas, small impacts are	Impacts similar to Alt B.	No impacts.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
Wilderness Characteristics		expected by preventing the construction of new range improvements. This may have an adverse impact on improving livestock distribution through the prohibition of development of new livestock waters.			
4.17 Impacts on Minerals and Energy Resources					
4.17.1 From Management of Special Area Designations	Mining closed in designated areas, including wilderness and the AFNM prevents any potential resources in these areas from being developed. Potential is low for leasable minerals, moderate for salable minerals, and varies for locatable minerals. Current needs and future demands of public users would be affected.	Impacts similar to Alt A, except Tule Creek ACEC in Bradshaw-Harquahala would be closed to mining. This is expected to have negligible impact. This could result in a loss of economic opportunity or prohibit future development or expansion.	Impacts similar to Alt A in the AFNM. Impacts in Bradshaw-Harquahala would be similar to Alt B, except more areas would be closed to mining including Sheep Mountain RNA ACEC. Material disposal in Vulture Mountains Raptor Area ACEC and Black Butte ONA ACEC would prevent the sale of sand, gravel and decorative rock.	Impacts similar to Alt C, except more acreage would be specially designated. Mineral development would also be closed in Baldy Mountain ONA ACEC, Harquahala Mountains ONA ACEC, and Vulture Mountains ACEC. Any potential leasing and sales would not occur in the Belmont-Big Horn Mountains ACEC.	Acreage of closures are similar to Alt A, but Desired Future Conditions for the ACECs makes the impacts more like Alt C.
4.17.2 From Lands and Realty Management	No impacts are expected in the AFNM. -Acquisition of non-Federal mineral estate in two RCAs would increase potentially developable mineral resources. -Closure of reconveyed	No impacts are expected in the AFNM. -Rights-of-way, leases, and patents establish superior rights to future mineral development, but may also cause access restrictions. However,	Impacts similar to Alt B, except opening small tracts and reconveyed lands for high potential areas only would limit future development opportunities. This would potentially reduce conflict	Impacts similar to Alt B, except that keeping all small tract and reconveyed lands closed to mineral development would be the same as Alt A.	Impacts similar to Alt B, except small tract lands would remain closed. Reconveyed lands would be opened, but riparian areas would remain closed to mineral material sales. Impacts to mining

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	lands in the Black Canyon corridor precludes opportunities for mineral development. -Small tract lands closed to location could cause conflicts with surface owners. -Utility developments could restrict access and interfere with mineral removal. -Impacts are addressed when specific proposals are developed.	rights-of-way for roads, highways, and powerlines could improve access and infrastructure. -Land ownership adjustments may dispose of or acquire valuable mineral resources. -Opening reconveyed lands to mineral development might provide further opportunities. -Opening small tracts to locatable mineral development could increase opportunities but potentially create conflict with surface owners.	with surface owners.		development are expected to be minimal.
4.17.3 From Management of Soil, Air, and Water Resources	No impacts in AFNM. Actions to protect soil, air, and water resources generally increase mine productions costs, occasionally rendering operations economically unfeasible.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.17.4 From Biological Resource Management	No impacts in the AFNM. Tortoise habitat restrictions decrease opportunities for developing mineral resources. -Stipulations and mitigation for wildlife	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	increase operating costs and permitting timeframes, and may potentially constrain mining actions. -Mineral development is restricted in habitat for T&E species and discovery of a T&E species may interrupt operations.				
4.17.5 From Cultural Resource Management	Cultural survey and mitigation for found cultural resources create delays in approval of mining operations and increase cost of mineral development.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.17.6 From Paleontological Resource Management	Discovery of paleontological resources could increase the costs of mineral extraction.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.17.7 From Recreation Management	No impacts in the AFNM. Allocations such as SRMAs might limit potential surface disturbances and where development can occur. Compliance with management prescriptions could increase costs.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.17.8 From Visual Resource Management	VRM managed to Class III, except wilderness is Class I. Class III is not	-Impacts of VRM Class III and IV would be similar to current	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	expected to affect minerals and energy management.	standards, though Class IV would allow additional flexibility. -VRM Class I and II would increase mining costs. -Some discretionary mining and related infrastructure may be excluded.			
4.17.9 From Rangeland Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.17.10 From Minerals Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.17.11 From Fire Management	Wildfires may affect access to mineral resources during fire operations. Management can protect mine developments from wildfires.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.17.12 From Wild Horse and Burro Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.17.13 From Land Health Standards	Land Health Standards would raise reclamation standards and costs, and result in a greater delay in bond release.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.17.14 From Management of Travel Management	-No impacts are expected.	-Authorization would be required to drive off road to access mining claims or conduct exploration. -Fewer access roads would inhibit access for	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		prospecting. -Improved road conditions leading to improved access would facilitate operating existing and potential mines.			
4.17.15 From Management of Wilderness Characteristics	No impacts are expected.	-Lands allocated to maintain wilderness characteristics would be closed to mineral material disposal. -Closing these areas would prevent the exploitation of potential resources.	Impacts similar to Alt B.	Impacts similar to Alt B except that in addition to closing lands allocated for management of wilderness characteristics to mineral material disposal, mineral and geothermal leasing would also be prohibited.	Impacts similar to Alt A.
4.18 Impacts on Fire and Fuel Resources					
4.18.1 From Management of Special Area Designations	-In areas with limits on motorized vehicles, the potential for human-caused wildfire ignitions could be reduced. -Travel restrictions would not affect management. Areas of limited development with fewer improvements and structures would affect suppression. -Wilderness areas could limit suppression and access. Motorized equipment may be used in emergency circumstances, affecting fire suppression strategies	Designation of Bloody Basin Road and Constellation Mine Road as Back Country Byways could increase the risk of human caused fires.	-Vehicular travel could be further limited in this alternative, decreasing risk of human-caused ignition. -Prohibiting grazing in the Harquahala Mountains ACEC could increase fine fuels on the surface, resulting in easier ignition and a more continuous fuel bed.	Impacts similar to Alt C.	Impacts similar to Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	and options for fuel treatment.” The use of motorized equipment to fight wildfire in emergency circumstances in wilderness can be authorized				
4.18.2 From Lands and Realty Management	<p>Continued use of existing utility rights-of-way could increase opportunities for human caused ignition.</p> <ul style="list-style-type: none"> -Improvements and structures require additional fire protection, introduce hazards to aircraft and ground resources, and restrict fire operations, thereby increasing overall costs. -Utility maintenance impacts minimal. Utility construction could benefit suppression in the short term and encourage weed invasions in the long term. -Disposing of 54,370 acres can consolidate federal lands, making fire operations more efficient and less expensive. -Conversion of disposed acres to development would increase human populations and change ignition potential, fire 	Impacts similar to Alt A, except disposal increases to 58,400 acres.	Impacts similar to Alt A, except disposal decreases to 49,100 acres.	Impacts similar to Alt A. However, impacts related to land disposal are eliminated as no acres are available for disposal.	Impacts similar to Alt A, except potential disposal acres are 38,755.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	behavior, and risk decisions.				
4.18.3 From Management of Soil, Air, and Water Resources	-Meeting air quality standards limits the amount of prescribed burning. An approved prescribed burn plan defines measures that would be taken to reduce impacts. -Implementing prescribed fire in fire-adapted environments and fuel treatments in other high-risk locations would improve watershed conditions, increase soil cover, and promote proper water flows.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.18.4 From Biological Resource Management	Management of sensitive species limits prescribed fire, fire treatment, and fire suppression operations. The allocation of WHAs may decrease the occurrence of human-caused fires and overall suppression costs.	Impacts similar to Alt A, except further restrictions could reduce visitor use and decrease the opportunity for human-caused ignitions.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.18.5 From Cultural Resource Management	The use of MIST minimizes the impacts on cultural resources and the landscape, although unintentional damage could occur.	Impacts similar to Alt A, except increased public visitation from development of public use cultural sites may increase the risk of	Impacts similar to Alt B, except the number of sites developed for public use would be less and 276,527 acres are allocated to SCRMA's.	Impacts similar to Alt C, except the number of sites developed for public use would be less than in Alt C and 125,292 acres are allocated to SCRMA's.	Impacts similar to Alt B, except the number of sites developed for public use would be less (but more than for Alt C).

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>For fire suppression, consideration for cultural resources can result in larger fires and higher costs.</p> <p>Mitigation measures during prescribed burning would increase costs and time associated with planning projects, and excludes some areas from prescribed burns.</p>	<p>human caused fires. In addition, increased numbers and types of facilities could lead to changes in suppression decisions and commitments of suppression resources</p> <p>In Bradshaw-Harquahala, impacts would increase due to allocation of 316,103 acres SCRMA's and developing sites for interpretation.</p>			
4.18.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.18.7 From Recreation Management	<p>As recreation use increases so would fire frequency.</p> <p>Target shooting increases the potential for ignitions as shooting is a common cause of wildfire in some areas.</p>	<p>Continued dispersed camping would increase the risk of human-caused ignitions.</p> <p>In both planning areas, increased visitor use could increase the risk of human-caused fires and change suppression decisions, prioritization of resources, and resulting costs.</p>	Impacts similar to Alt B, except the restriction of vehicle use in SRMA's could decrease the potential of human-caused ignition.	Impacts similar to Alt B, except more routes would be closed than in Alt C.	Impacts similar to Alt B.
4.18.8 From Visual Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.18.9 From Rangeland Management	Livestock grazing can reduce the loading of fine	Impacts similar to Alt A.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>fuels, reducing the frequency and size of wild fires.</p> <p>Grazing can also convert ecological types resulting in lower frequencies but higher intensities.</p> <p>Conversion to fire dependent annual grass communities greatly increases fire risk in these areas and may result in the eventual loss of native desert vegetation.</p> <p>Improvements for managing livestock present potential hazards to fire fighters and fire operations.</p> <p>Suppression actions often depend on water from range improvements.</p> <p>In areas planned for fire treatment, livestock use can remove enough forage to preclude prescribed burning.</p>				
4.18.10 From Minerals Management	-Mineral development in the Bradshaw-Harquahala could increase human-caused fire ignitions.	Impacts similar to Alt A.			

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<ul style="list-style-type: none"> -Development associated with mining also increases the risk and complexity of wildland fire suppression operations. -No impacts are expected in the AFNM. 				
4.18.11 From Fire Management	<ul style="list-style-type: none"> -Full suppression of all wildfires helps to keep some fires small, reducing harm to resources. -In Bradshaw-Harquahala 14,000 acres have been selected for prescribed fire treatments for hazardous fuel accumulations and reduce the threat of large catastrophic wildfires. -Prescribed fire operations would also be limited and costs increased. 	<ul style="list-style-type: none"> -Impacts similar to Alt A, except wildland fire could be allowed if defined prescriptive conditions are being met, especially in the AFNM's tobosa grasslands. -Wildland fire use would be beneficial in both planning areas except in the Sonoran Desert vegetation communities. 	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.18.12 From Wild Horse and Burro Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.18.13 From Management of Travel Management	<ul style="list-style-type: none"> -Restricting vehicles to existing roads and trails would reduce the potential for accidental human-caused ignitions. -Initially, no major impacts are expected, but as increases in vehicle travel 	<ul style="list-style-type: none"> -Impacts to fire would be similar to those described for Alt A. -Restricting vehicles to designated roads would reduce potential human-caused ignitions. 	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	on designated routes continue, the potential for human-caused fire would also increase.				
4.18.14 From Management of Wilderness Characteristics	No impacts are expected.	For both planning areas, management of wilderness characteristics may impact fire suppression by preventing the construction of new firelines using heavy equipment. Management response would offset the impacts from the potential loss of heavy equipment.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.19 Impacts on Wild Horses and Burros					
4.19.1 From Management of Special Area Designations	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.19.2 From Lands and Realty Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.19.3 From Management of Soil, Air, and Water Resources	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.19.4 From Biological Resource Management	Development of springs and seeps to improve ecological function could improve forage conditions and reliable water supplies. However, fencing those areas would reduce availability of forage and water.	Impacts similar to Alt A, except for the Harquahala Mountain WHA allocation which would have no effect on the burros.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.19.5 From Cultural Resource Management	Fencing cultural sites could reduce available range and forage for burros. The impact is expected to be negligible.	Impacts similar to Alt A, except development of sites for public use could result in the increased congregation of visitors. This could increase the risk of injury to both visitors and burros and may reduce the quantity and quality of habitat.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.19.6 From Paleontological Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.19.7 From Recreation Management	Increasing OHV use can increase vehicle-burro conflicts and burro-human encounters, increasing the risk of injury to both people and burros. Increased vegetation disturbance from recreation uses could slightly reduce available forage.	Impacts similar to Alt A, except Areas allocated to non-motorized settings could help minimize impacts to vegetation from motorized recreation, increasing available forage.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.19.8 From Visual Resource Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.19.9 From Rangeland Management	-Implementing Rangeland Health Standards and Guidelines for Grazing Management could improve habitat conditions. -Maintaining existing grazing practices could result in more water	-Impacts similar to Alt A, except construction of fences or other barriers to restrict riparian grazing could also restrict burros. -This could limit available forage and water, decrease available range size and increase	Impacts similar to Alt B.	Eliminating grazing would eliminate forage and water competition between burros and livestock. Removal of unneeded grazing improvements could decrease water sources, but may also allow burros	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	sources, but competition for these sources and forage would continue.	competition.		to expand their range.	
4.19.10 From Minerals Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.19.11 From Fire Management	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.19.12 From Wild Horse and Burro Management	-Management of the Lake Pleasant HMA would potentially enhance genetic viability of the herd. The social structure of the herd may be disrupted by removal of burros. -All burros from the Harquahala HA are to be removed.	-Impacts to the Lake Pleasant HMA would be similar to Alt A. -The Harquahala HA would not become an HMA, and removal of nuisance burros and burros damaging sensitive habitats could result in elimination of the herd.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.19.13 From Management of Travel Management	Increasing OHV use could increase the possibility of vehicle-burro conflicts and cause a loss of habitat. The amount of available forage could be slightly reduced. The incidence of burro-human encounters could increase, intensifying the risk of injury to people and burros.	-Designated motorized routes could decrease the amount of available habitat and increase the risk of bodily injury to burros. Increasing levels of use by visitors on designated non-motorized trails would further fragment burro habitat. Burros could be harassed by visitors. -Areas allocated to non-motorized settings could minimize impacts to vegetation from motorized recreation, and	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		increase available forage.			
4.19.14 From Management of Wilderness Characteristics	No impacts are expected.	-Lands with wilderness characteristics would have minimal impacts on the number or location of wild burros. -Harassment would be less since most areas with wilderness characteristics have few trails and overall lower levels of visitation. Increases in primitive recreation in burro areas could increase harassment and movement of burros away from visitors. This would be significant only if the visitors occupy critical burro watering areas during periods of heat stress.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.20 Travel Management					
4.20.1 From Special Area Designations	-The AFNM ACECs would have no impacts on access. -WSR non-impairment guidelines could restrict use of some routes. -Five designated wilderness areas (96,820 acres) in Bradshaw-Harquahala would remain closed to motorized vehicle use.	-WSR impacts on the AFNM similar to Alt A. -Bloody Basin Road Back Country Byway could improve access if designated. -Wilderness impacts similar to Alt A. -Constellation Mine Road Back Country Byway could improve access if designated but could	-Impacts in the AFNM similar to Alt B except the 4 additional ACECs would close ½ mile of route. -In the Bradshaw-Harquahala impacts would be similar to Alt B except additional ACECs would be designated. -Development of new routes in these ACECs	-In the AFNM, no impacts from Back Country Byway and Riparian ACEC impacts would be similar to WSR management. -In the Bradshaw-Harquahala impacts would be similar to Alt C except additional ACECs would be designated. -The modeled route	- In the AFNM, no impacts from Back Country Byway and ACECs as none are designated WSR impacts similar to Alt A. -In the Bradshaw-Harquahala impacts would be similar to Alt D except fewer ACECs would be designated. -The modeled route

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	-Access to the Harquahala Mountain Backcountry Byway would continue and associated management would benefit users.	increase conflicts with local residents. -Tule Creek ACEC would have no impact on access as the fenced area is currently closed to motorized vehicles.	would be impacted. -The impacts of ACECs on existing routes would be determined through the route evaluation and designation process.	system could close 723 miles of routes which would significantly impact travel and access. -Nominating the Black Canyon Trail as National Recreation Trail could improve access in the area.	system could close 211 miles of routes which would significantly impact travel and access. -Impacts of Black Canyon Trail similar to Alt D.
4.20.2 From Lands and Realty	Authorizations would expand the travel network. Development of state and private lands could lead to the disruption or loss of public access.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.20.3 From Management of Soil, Air, and Water Resources	Actions to protect or mitigating damage to soil, water and air resources could diminish the motorized route network.	Impacts similar to Alt A, except BLM would take direct action to reduce impacts on soil, water and air resources. -BLM would designate routes, reduce dust, re-route or close problem routes, apply buffer zones, SRMA prescriptions, and improve existing routes to reduce impacts.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.20.4 From Biological Resources Management	No impacts are expected.	-Transportation routes and public access could be reduced to resolve conflicts in WHAs and tortoise habitat through the route evaluation/designation	-In the AFNM, route closures for riparian protection 3.54 miles. -Pronghorn management a factor in route restrictions. -Impacts similar to Alt B,	-In AFNM impacts similar to Alt C. -In Bradshaw-Harquahala impacts similar to Alt C except 18,020 acres in WHAs.	- In AFNM impacts similar to Alt C. -In Bradshaw-Harquahala impacts similar to Alt C except 179,640 acres in WHAs.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		<p>process.</p> <ul style="list-style-type: none"> -WHA 64,220 acres. -New routes could be restricted. -Vehicle use on routes that remain open could increase. -Route connectivity secondary to wildlife habitat in WHAs. 	<p>except 156,120 acres WHAs in Bradshaw-Harquahala and 39,330 acres in the AFNM.</p>		
4.20.5 From Cultural Resources Management	-A few specific vehicle travel routes could be closed to protect cultural sites or mitigate damage, but this would have little overall impact.	<ul style="list-style-type: none"> -In the AFNM, some routes would be closed for cultural site protection. -Route connectivity could be diminished and the quality of vehicle-based recreation pursuits would decline. - In Bradshaw-Harquahala impacts could include some restrictions to protect sites. 	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.20.6 From Paleontological Resource Management	No impacts on expected.	No impacts on expected.	No impacts on expected.	No impacts on expected.	No impacts on expected.
4.20.7 From Recreation Resource Management	<ul style="list-style-type: none"> -In the AFNM, no impacts are expected. Most routes remain open. -SRP route use would mostly be displaced. -In Bradshaw-Harquahala, 2,240 miles of vehicle routes would remain open. In some areas, route mileage 	<ul style="list-style-type: none"> -In the AFNM, impacts similar to Alt A, shooting restrictions may reduce or displace use. -37 miles of existing routes would be closed. -134 miles remain open. -5 miles of new routes. -Users of these routes would be displaced to 	<ul style="list-style-type: none"> -In the AFNM, impacts similar to Alt B, except: -48 miles closed. -123 miles remain open. -6 miles of new routes. -In Bradshaw-Harquahala impacts similar to Alt B, except: based on route model -382 miles closed 	<ul style="list-style-type: none"> -In the AFNM, impacts similar to Alt B, except: -123 miles closed. -48 miles remain open. -In Bradshaw-Harquahala impacts similar to Alt B, except: based on route model -723 miles closed -1,645 miles remain open 	<ul style="list-style-type: none"> -In the AFNM, impacts similar to Alt B, except: -52 miles closed. -94 miles remain open. -In Bradshaw-Harquahala impacts similar to Alt B, except: based on route model -211 miles closed. -2,028 miles remain open

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	would increase over the long-term.	<p>other areas.</p> <ul style="list-style-type: none"> -Recreational opportunities for motorized users would be enhanced by creating loop trails. -In Bradshaw-Harquahala, based on route model, 169 miles of existing routes would be closed. -14 miles of new routes -Total distance of open routes would be 2,086 miles. -Overall effect would be to maintain existing settings and opportunities. -Limiting vehicles to inventoried routes before completing the route designation process would eliminate cross-country OHV travel and prevent development of new routes. 	<ul style="list-style-type: none"> -1,889 miles remain open -26 miles of new routes -Traditional users could be displaced and recreation opportunities diminished. 	<ul style="list-style-type: none"> -62 miles of new routes -Traditional users could be displaced and recreation opportunities diminished. -Route networks would be disconnected. 	<ul style="list-style-type: none"> -39 miles of new routes. -Non-motorized routes would be expanded. -Once completed, the Black Canyon Trail from the Carefree Highway to north of Highway 69 would become a major trail. -Managing the North Black Canyon Trail RMZ would enhance the non-motorized recreation. -Impacts of limiting vehicles to inventoried routes before completion of the route designation process would be similar to Alt B.
4.20.8 From Visual Resource Management	No impacts are expected.	<ul style="list-style-type: none"> -Designation of VRM I and II classes could affect route construction or cause re-alignment of existing routes. Class I designation would allow few motorized routes. Non-motorized routes would be easier to install. -Installation of new travel routes within Class III 	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		and IV VRM class areas enable development of access.			
4.20.9 From Rangeland Management	-Impacts would be minimal. -New developments could increase access. -Vandalism to livestock facilities from visitors could potentially lead to closure of routes.	Impacts similar to Alt A.	Impacts similar to Alt A.	The elimination of grazing could lead to route deterioration.	Impacts similar to Alt A.
4.20.10 From Minerals Management	-No impacts in AFNM. -In Bradshaw-Harquahala new actions may increase public access if routes are made available for public use. -New mining routes could displace traditional trail users. -Closure of mining could eventually contribute to the loss of public access when routes are reclaimed. -Existing routes may be closed if active mining operations pose a threat to public health or safety.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.20.11 From Fire Management	Some routes could be closed on a temporary basis due to fire suppression or controlled burns.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts similar to Alt A.
4.20.12 From Wild Horse	No impact is expected.	No impact is expected.	No impact is expected.	No impact is expected.	No impact is expected.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
and Burro Management					
4.20.13 From Management of Travel Management	<p>-The AFNM is closed to cross-country motorized travel, but existing routes are open. No impacts are likely to occur.</p> <p>-In Bradshaw-Harquahala, 2,240 miles of vehicle routes would remain open, and access would not be affected.</p>	<p>-In the AFNM, impacts similar to Alt A, -37 miles of existing routes would be closed. -134 miles remain open. -5 miles of new routes. -Users of these routes would be displaced to other areas. -Recreational opportunities for motorized users would be enhanced by creating loop trails. -In Bradshaw-Harquahala, based on route model, 169 miles of existing routes would be closed. -14 miles of new routes -Total distance of open routes would be 2,086 miles. -Overall effect would be to maintain existing settings and opportunities. -Limiting vehicles to inventoried routes before completing the route designation process would eliminate cross-country OHV travel and prevent development of new routes.</p>	<p>-In the AFNM, impacts similar to Alt B, except: -48 miles closed. -123 miles remain open. -6 miles of new routes. -In Bradshaw-Harquahala impacts similar to Alt B, except: based on route model -382 miles closed -1,889 miles remain open -26 miles of new routes -Traditional users could be displaced and recreation opportunities diminished.</p>	<p>-In the AFNM, impacts similar to Alt B, except: -123 miles closed. -48 miles remain open. -In Bradshaw-Harquahala impacts similar to Alt B, except: based on route model -723 miles closed -1,645 miles remain open -62 miles of new routes -Traditional users could be displaced and recreation opportunities diminished. -Route networks would be disconnected.</p>	<p>-In the AFNM, impacts similar to Alt B, except: -52 miles closed. -94 miles remain open. -In Bradshaw-Harquahala impacts similar to Alt B, except: based on route model -211 miles closed. -2,028 miles remain open -39 miles of new routes. -Non-motorized routes would be expanded. -Once completed, the Black Canyon Trail from the Carefree Highway to north of Highway 69 would become a major trail. -Managing the North Black Canyon Trail RMZ would enhance the non-motorized recreation. -Impacts of limiting vehicles to inventoried routes before completion of the route designation process would be similar to Alt B.</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
4.20.14 From Management of Wilderness Characteristics	No impacts are expected.	-In the AFNM no impacts. -In the Bradshaw-Harquahala maintenance of wilderness character would be a consideration in the route evaluation and designation process. -New routes would be limited or precluded on 56,040 acres in areas managed for wilderness character.	-In both areas, impacts similar to Alt B, except 107,843 acres are allocated for wilderness character in the Bradshaw-Harquahala area.	- In both areas, impacts similar to Alts B and C, except 102,664 acres are allocated for wilderness character in the Bradshaw-Harquahala area and 37,571 acres within the Agua Fria National Monument.	-In the AFNM, 20,900 acres allocated for wilderness character. -New route construction precluded in this area but designated routes would be open. -In the Bradshaw-Harquahala, impacts similar to Alt B except 68,970 acres allocated for wilderness character.
4.21 Impacts on Wilderness Characteristics					
4.21.1 From Special Area Designations	No impacts are expected.	No impacts are expected.	Impacts similar to Alt A except ACEC and WSR management would conserve wilderness characteristics.	Impacts similar to Alt C.	Impacts similar to Alt C.
4.21.2 From Lands and Realty	No impacts are expected.	-Rights-of-ways, utility lines and communication sites could impact natural conditions and solitude.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.21.3 From Management of Soil, Air, and Water Resources	No impacts are expected.	Management actions to maintain or enhance water, soil, and air quality would help maintain wilderness characteristics.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.21.4 From Biological Resource Management	No impacts are expected.	Habitat improvements could impact natural conditions and solitude.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.
4.21.5 From Cultural Resource Management	No impacts are expected.	-Route closures to protect cultural sites could benefit wilderness	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
		characteristics by reducing public access and increasing solitude. -Development of sites for public use would allow concentrations of users in certain areas, while limiting development would preserve the natural setting of places with wilderness characteristics.			
4.21.6 From Paleontological Resources	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.21.7 From Recreation Resource Management	Increasing intensity of recreation could result in a loss of solitude. -Increasing numbers of non-motorized users could impair solitude opportunities and contribute to trailing and campsite use impacts. - Increased number of SRPs could lead to increased numbers of users and conflicts, deteriorating opportunities to experience solitude and wilderness characteristics.	-Designating RMZs could benefit wilderness characteristics through management of more intensive recreation uses. -Opportunities for solitude would be maintained in the Back Country RMZ. -Reduction in lands available for competitive OHV events would maintain opportunities to experience more natural settings.	-Impacts similar to Alt B, except that a larger Back Country RMZ, and fewer SRPs would offer more solitude opportunities and maintain more wilderness characteristics.	-Impacts similar to Alt C, except for more Back Country RMZ acreage, and fewer SRPs.	-Impacts similar to Alt B, although restrictions on SRPs would more closely resemble Alt C.
4.21.8 From Visual Resource Management	The application of VRM Class III standards may eventually lead to some intrusions in to the visual	-Management of lands to VRM Class II would retain the current physical setting of 96,150 acres	Impacts similar to Alt B, except 486,800 acres would be managed to VRM Class II, 284,720	Impacts similar to Alt B, except 502,610 acres would be managed to VRM Class II, 260,020	Impacts similar to Alt B, except 340,880 acres would be managed to VRM Class II, 220,790

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	landscape in or around lands allocated to maintain wilderness characteristics.	and enhance primitive recreational experiences and opportunities for solitude. -Design criteria would maintain the area with little to no visual impacts and would retain naturalness.	acres to VRM Class III, and 98,660 to VRM Class IV.	acres to VRM Class III, and 94,800 to VRM Class IV.	acres to VRM Class III, and 107,020 to VRM Class IV.
4.21.9 From Rangeland Management	Impacts would be minimal. Site specific water projects, fencing, or vegetation projects may impact small areas but impacts would be consistent with the management of wilderness characteristics.	Impacts similar to Alt A.	Impacts similar to Alt A.	No expected impacts.	Impacts similar to Alt A.
4.21.10 From Minerals Management	-No impacts are expected in the AFNM. -In Bradshaw-Harquahala, wilderness characteristics could be impaired, decline or be foregone within areas not afforded protection of their wilderness characteristics.	Closing the allocation to maintain wilderness characteristics to mineral material disposal would reduce the potential for ground disturbance and maintain primitive open space.	Impacts similar to Alt B.	Impacts similar to Alt B, except wilderness characteristics would also be closed to mineral and geothermal leasing and mineral entry. This would further maintain primitive open space.	Impacts similar to Alt A.
4.21.11 From Fire Management	No impacts are expected	No impacts are expected	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.21.12 From Wild Horse and Burro Management	No impacts are expected	No impacts are expected	No impacts are expected	No impacts are expected.	No impacts are expected.
4.21.13 From Management of Travel	-No impacts are expected in the AFNM.	Adverse impacts on wilderness characteristics	Impacts similar to Alt B, except adverse impacts	Impacts similar to Alt B, except adverse impacts on	Impacts similar to Alt C.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
Management	-In Bradshaw-Harquahala road and route development, access rights-of-way and other developments requiring roads could adversely affect wilderness characteristics.	would be of a lesser scale than described under Alt A.	would be of a lesser degree than described under Alt A or B.	wilderness characteristics would be considerably less than described under Alt A, B or C.	
4.21.14 From Management of Wilderness Characteristics	-In the AFNM, primitive or semi-primitive non-motorized settings would likely be maintained due to the management guidelines set forth in the AFNM Proclamation. -Wilderness characteristics could be impaired, decline or be foregone within Bradshaw-Harquahala in areas not afforded protection of their wilderness characteristics.	-In the AFNM, impacts would be similar to Alt A. Allocation of wilderness characteristics would allow individuals to recreate in a more natural and remote setting. -Wilderness characteristics would be maintained in areas with management for WSR suitable segments, and ACECs. In more accessible unprotected areas wilderness character could be impaired.	More acres of wilderness characteristics would be maintained than under Alt B as additional lands are allocated. Loss of wilderness characteristics would be minimal under Alt C.	Impacts similar to Alt C, except fewer acres would be managed to maintain wilderness characteristics. This alternative would designate some of the areas described under Alt B and C as ONA ACECs.	Non-motorized, primitive recreation users would benefit more than under Alt B, but less than under Alt C and D.
4.22 Impacts on Social and Economic Conditions					
4.22.1 Planning Area Growth and Development					
Recreation Related Impacts	-Designation of the AFNM would likely result in increased visitor use. Activities that might be less available in the AFNM might place greater demands on surrounding lands. -Use of land in the	Impacts would be similar to Alt A, but development of recreation facilities would be encouraged to improve recreational experiences, resulting in increase visitation and use. -Protection of biological	-Primitive recreation would be favored in the AFNM. The number of commercial and guide/outfitter permits would be about half of those than under Alt B. Public access to cultural resources would also be	-The emphasis on non-motorized recreation would reduce visitation more than any other alternative by closing the most vehicle routes. No motorized competitive races would be authorized.	-Primitive recreation would be favored in the AFNM, but overall access would be greater than Alt D. Total visitation and related expenditures are expected to be less than Alt A, B, or C.. -Access in Bradshaw-

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>planning areas would continue to increase as the population increases. Visitation is expected to increase 55% by 2025.</p> <p>-Growth and a continuation of current access would yield economic benefit to local communities that provide services compatible with recreation.</p> <p>-Access for OHV users and equestrians would continue to benefit the economy.</p> <p>In the long term, as recreation continues to increase, resource conditions could deteriorate thereby increasing the need for more management.</p>	<p>and cultural resources would enhance the quality of experiences and increase visitation.</p> <p>-2,220 miles of routes would be designated. The allocation of nine SRMAs and eight SCRMA would increase visitor use.</p> <p>-One WHA and two areas proposed for lands allocated to maintain wilderness characteristics would attract visitors seeking more primitive experiences.</p> <p>-Designation of Bloody Basin and Constellation Mine Roads as Back Country Byways could increase visitation.</p> <p>-Overall, recreation demand would increase more than in the other alternatives resulting in increased overall spending by recreationists in nearby communities.</p> <p>-The long term impacts of recreational use would be the same as Alt A.</p>	<p>more limited.</p> <p>-Public access in Bradshaw-Harquahala would also be more restrictive than Alt A or B. Biological and cultural resources would be more protected. Visitation and visitor spending would be reduced. Economic benefits to local communities would be less for this Alt than for Alt A or B but greater than Alt D.</p> <p>-Designation of Bloody Basin Road and Constellation Mine Road would have impacts as similar to Alt B.</p> <p>-2,012 miles of routes would be designated. SCRMA would be reduced to four, lands allocated to maintain wilderness characteristics would increase, and 11 ACECs would be designated, which would likely reduce visitation, although some communities would continue to benefit from providing services to recreationists.</p> <p>-The long term impacts of</p>	<p>-Public access to cultural resources would be more limited than any other alternative. Visitation and OHV use would decline, resulting in somewhat lower visitor spending.</p> <p>-If this loss is offset by increased non-motorized recreation, the difference between the impacts of Alt D and the other alternatives would not be so great.</p> <p>-1,639 miles of routes would be designated and use of trails would be limited. SCRMA would be reduced to two, the number of areas allocated to maintain wilderness characteristics would increase to six, and eight ACECs would be designated. Visitation and related spending would likely decline, although some communities would continue to benefit.</p> <p>-The overall economic impacts from motorized recreation would be slightly less than Alt C due to fewer available routes and concentrated use areas.</p>	<p>Harquahala would be more limited than Alt B, but less than C.</p> <p>-Designated vehicle routes (2,122 miles) are expected accommodate use at current levels.</p> <p>-OHV impacts would continue similar to those described in Alt A and B.</p> <p>-Increased opportunities for non-motorized recreation may increase overall visitation, but this is unlikely to greatly increase spending.</p> <p>-Allocating SRMA to more intensive recreation could attract more users. Use is expected to increase along with user satisfaction. Overall, the economic benefits of recreation are expected to be lower than under Alt A, B, and C, but greater than under Alt D.</p> <p>-Six SCRMA would contain sites allocated to public use, which would have impacts similar to Alt B. The increase in areas allocated to maintain wilderness characteristics and designation of 4 ACECs would provide non-</p>

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
			recreational use would be the same as Alt A.		motorized opportunities. -Bloody Basin Road and Constellation Mine Road would not be considered as back country byways thus impacts would be the same as Alt A. -The long term impacts of recreational use would be similar to Alt A, except that management actions should result in sustainable conditions.
Ranching, Agriculture, and Livestock Production-Related Impacts	-Increases in population and urbanization have resulted in loss of agricultural land and increased conflicts with farm and ranch operations. -Livestock production on BLM land contributes to the local economy. Prohibiting grazing in the Larry Canyon ACEC has minimal impact on production and the economic impacts would not change.	-Impacts are expected to be the similar to Alt A except that grazing in riparian areas would be limited to winter. Grazing would likely decline but would not measurably differ from current livestock management. Should allocating eight SCRMA result in restricting grazing, livestock production may decrease.	-Impacts are expected to be the similar to Alt B except livestock grazing is prohibit in riparian areas, which would reduce the number of allotments to 43. This may eliminate or reduce some allotments to the point that ranches would no longer be viable. -Impacts on the regional economy would be minimal.	-Closing BLM-managed lands to grazing would significantly affect holders of grazing leases, local economies, and reduce livestock production in the state.	-Impacts would be the similar to Alt B, except six SCRMA would be allocated which might result in fencing some areas from grazing use.
Minerals-Related Impacts					
Locatable Minerals	-The AFNM is closed to all forms of mineral entry. -Bradshaw-Harquahala would generally be left open to mineral location and development. Should	-Impacts similar to Alt A, except Alt B would be the most encouraging to mineral development. -Tule Creek ACEC would be closed to mineral	-Impacts similar to Alt A, except for the closure of 3 ACECs and riparian areas. This could result in some economic limitations.	-This alternative would tend to more or less eliminate mining via attrition over the duration of the plan. It would also reduce mining-related	Impacts similar to Alt B, except fewer acres would be allocated to VRM Classes II and IV, and more acres would be allocated to VRM Class

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	<p>prices reach a high enough level to begin exploration or reopen mines, there would be a positive economic impact in mining employment and earnings.</p> <p>-Recreational prospecting for gold has resulted in the formation of numerous prospecting clubs that hold mining claims. Businesses have begun to cater to their needs and support their social structure. Current access would allow continued use by these groups, and the possibility of expansion to new areas.</p>	<p>location and development.</p> <p>-VRM standards may increase costs of mining by requiring rehabilitation standards. Increased rehabilitation may result in economic benefits if local labor and/or material are used.</p>	<p>-Casual use miners and prospecting clubs could continue with their activities, except route closures may make it difficult or expensive to maintain access to claims.</p> <p>-Impacts from VRM would increase compared to Alt B, but be less than those under Alt D.</p>	<p>additions to the local and regional economies, thereby limiting economic opportunity more than the other alternatives.</p> <p>-Impacts similar to Alt C, but more acreage would be closed to mining, and more areas would be classified as VRM I and II.</p>	<p>III. Re-conveyed lands, mainly in the Black Canyon area between Black Canyon City and Bumblebee, would be closed to mineral location and development along with Tule Creek ACEC.</p>
Saleable Minerals	<p>Continued sale of mineral materials would contribute to local economies. BLM would continue to issue free use permits to the state and to local communities as the need arises. The result would be the continued availability of materials. Impact of mineral material sales is expected to be slight.</p>	<p>Impacts similar to Alt A, except Tule Creek ACEC and two areas allocated to maintain wilderness characteristics would be closed to mineral material sales. This would somewhat reduce the opportunity to extract those commodities, but the impact is expected to be negligible.</p>	<p>Impacts similar to Alt A, except ACECs and areas allocated to maintain wilderness characteristics would be closed to mineral material sales. These areas would be larger than in Alt A or B.</p>	<p>Impacts similar to Alt C, except more acres would be closed to mineral material sales. In the short term, demand is expected to be met by non-Federal and federal production. But future demand may not be met. Increased costs of importing building material would increase building costs in all parts of the economy.</p>	<p>-Impacts similar to Alt A, except Tule Creek ACEC and riparian areas would be closed to mineral material disposal. Impacts are expected to be minimal.</p> <p>-VRM standards might affect mineral material and decorative rock mining.</p>
Leasable Minerals	No known viable sources	Impacts similar to Alt A,	Impacts similar to Alt A	Impacts similar to Alt A	Impacts similar to Alt B.

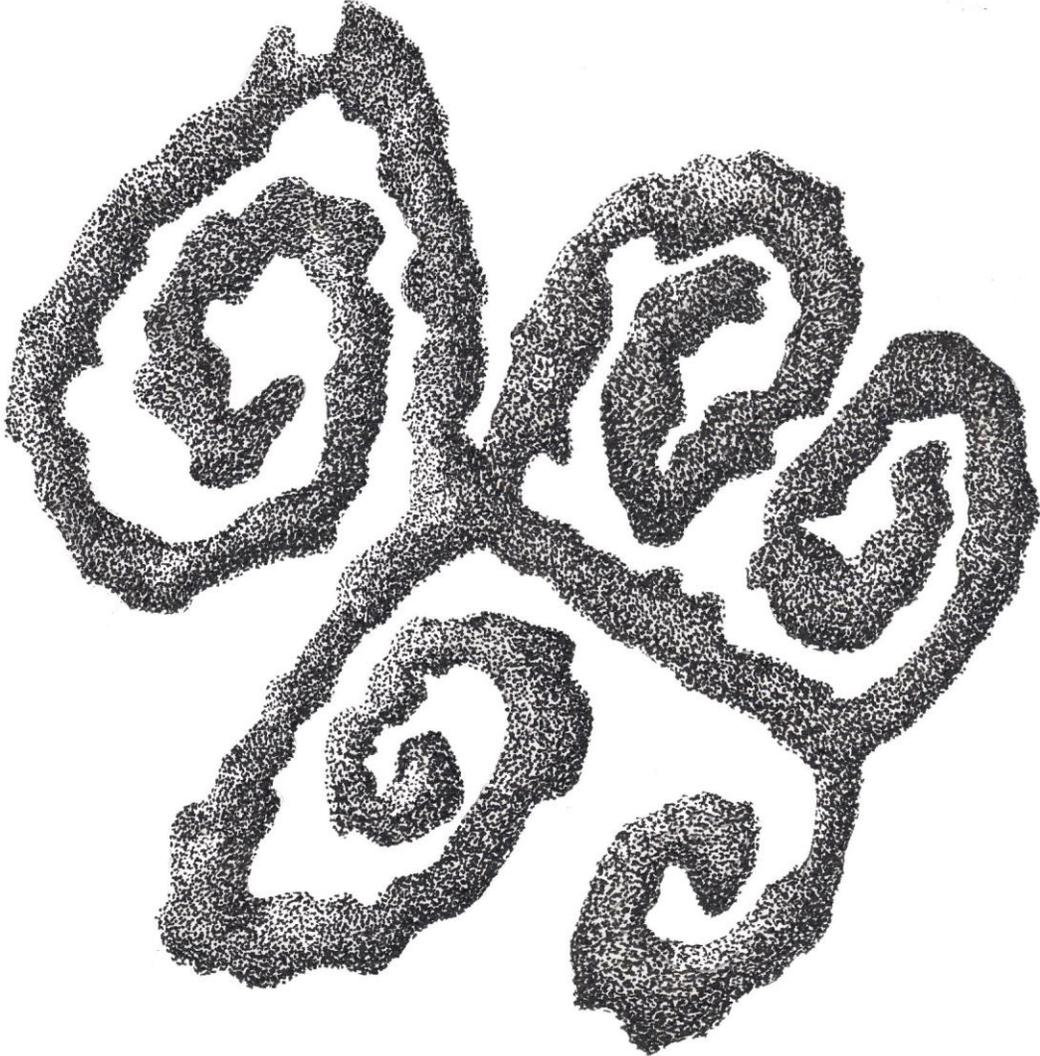
Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	of leasable minerals exist within the planning area. No measurable economic impacts are expected except in areas that might be explored north of the planning area but within the Phoenix District boundary.	except Tule Creek ACEC would be closed to mineral leasing which would have a negligible impact.	except mineral leasing would be prohibited in four ACECs and on scattered lands outside the planning area.	except mineral leasing would be prohibited in a number of ACECs and lands allocated to maintain wilderness characteristics.	
Lands and Corridors-Related Impacts	<ul style="list-style-type: none"> -Disposal of 54,370 acres of BLM land would contribute not be a significant growth inducing action. -Development of disposed land would increase resource demands on remaining BLM land and could contribute to the loss of small, rural communities by increasing traffic and the need for more urban services. However, growth could also contribute to local economies. -Maintaining current utility corridors would meet future demand. - Jobs related with future utility development could contribute to local economies. -Utility developments can have profound impacts on regional economic 	<ul style="list-style-type: none"> -Impacts are expected to be similar to Alt A, except 58,400 acres would be available for disposal. -The 58,400 acres would mainly affect the communities of Dewey, Humboldt, Mayer, and Goodyear for future potential development. 	<ul style="list-style-type: none"> -This alternative considers two options for land disposal. Under Option 1, 600 acres would be available, and impacts would be similar to Alt D. In Option 2, 49,100 acres would be available for disposal and impacts are expected to be similar to Alt A. -Impacts of the multi-use utility and transportation corridor that includes the Interstate 17 right-of-way would be similar to Alt A, except the corridor would be narrowed to move it out of the AFNM. 	<ul style="list-style-type: none"> -No BLM land would be available for disposal. This would have no measurable impacts on potential growth or availability of land for development. Retaining all BLM land may contribute to maintaining rural lifestyles in some parts of the planning area. -Reduction in the level of corridors would support continued growth but may somewhat constrain siting of potential utilities in the future. 	<ul style="list-style-type: none"> -Impacts are expected to be similar to Alt A, except 38,755 acres would be available for disposal. This would mainly affect the communities of Buckeye, Goodyear, Wickenburg, and the greater Phoenix area. -Impacts of utility and transportation corridors would also be similar to Alt A.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	sustainability but is often controversial to local communities.				
4.23 Environmental Justice					
Impacts to Minority and Low Income Populations	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.	No impacts are expected.
4.24 Cumulative Impacts					
Population Growth and Development	-Potential effects of growth include the loss of ranching/related western lifestyle, and change in social leadership resulting from increases in urban values. -Growth would result in economic changes. 54,370 acres of BLM land would be available for disposal by sale or exchange, but this is not expected to be a significant growth-inducing action and so there would be no measurable cumulative impact. However, growth would continue to impact resources on BLM land.	-Impacts similar to Alt A, but 58,400 acres would be available for disposal.	-Impacts similar to Alt A, but 49,100 acres would be available for disposal.	-Impacts similar to Alt A, even though BLM would make no land available for disposal.	-Impacts similar to Alt A, but 38,755 acres would be available for disposal. -The Black Canyon Utility Corridor under this alternative improves long term economic condition of central Arizona by accommodating more types of utilities.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	-The reconstruction and widening of I-17 would facilitate growth of local communities as well as the State as a whole.				
Recreation and Visitation	<p>-Impacts would include intensified use in certain areas, especially for motorized activities, as recreation increases and growth and development occur. General plans for the counties and communities include provisions for open space, which is likely to further concentrated motorized activities on BLM land.</p> <p>-Increased visitation is expected to result in increased local spending for recreational goods and services.</p> <p>-The reconstruction and widening of I-17 could enhance or restrict access for recreation and likely have a negative visual impact on the surrounding areas.</p>	Impacts are expected to increase over those in Alt A since visitation is expected to increase the most in this alternative. The trend toward non-motorized recreation in urban areas would be similar to Alt A.	Impacts are expected to decrease as compared Alt A and B as this alternative favors primitive recreation and visitation would likely decline. The beneficial economic effects of recreation and visitation would be lower than under Alt A and B, but greater than under Alt D.	Impacts are expected to decrease more than under Alt C, as this alternative would devote the most area to non-motorized recreation and close more areas to vehicular access. Visitation is expected to be the lowest and so cumulative affects would be least.	Primitive recreation would be favored in the AFNM and access would also be somewhat reduced in Bradshaw-Harquahala. Visitation and related expenditures are expected to be less than Alt A and B, but more than C or D.
Air Quality	Cumulative air quality impacts have been addressed by air quality non-attainment plans and maintenance plans prepared by MAG and	Impacts similar to Alt A, except the miles of trails open to recreation would decrease by 3%. Air quality impacts on the region would be minimal.	Impacts similar to Alt A, even though miles of trails open to recreation would decrease by 4%.	Impacts similar to Alt A, although OHV emissions and particulates in rural areas would possibly be less, given more restrictions on areas open	Impacts similar to Alt A, although miles of trails open to recreation would decline.

Resource	Alternative A (Current Management)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed Alternative)
	ADEQ. -It is possible that increased OHV use would cause increased fugitive dust impacts immediately near the roads and trails. But future OHV emissions would probably decline and contribute a proportionately smaller fraction of emissions.			to OHV use and competitive events.	
Soils	Cumulative effects are generally limited to a site. Management practices have led to some detrimental conditions. Development may compact and displace soil and remove vegetation. Soil productivity in these areas is lost for all practical purposes.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts are expected to be the least of all Alternatives given that recreation and mining would be more restricted and grazing would be prohibited.	Impacts are expected to be less than Alts A or B, but more than C or D given that motorized recreation would be more restricted and fewer acres would be available for disposal and eventual development.
Water Resources	Many watercourses in central Arizona have been degraded by increased sediment load due to urbanization, livestock grazing, and recreation as well as leachate from mining. Under this Alt, these activities would continue.	Impacts similar to Alt A.	Impacts similar to Alt A.	Impacts are expected to be less than those under other alternatives, given that recreation and mining would be more restricted and grazing would be prohibited.	Impacts are expected to be less than Alts A or B, but more than C and or D given that motorized recreation would be more restricted and fewer acres would be available for disposal and eventual development.
Wild Horse and Burro Management	No noticeable cumulative affects are expected.	Impacts similar to Alt A, even though the Harquahala HA would not be a managed herd.	Impacts similar to Alt B.	Impacts similar to Alt B.	Impacts similar to Alt B.

Chapter Three



Chapter 3 - Affected Environment

3.1 Introduction

This chapter describes the environmental components of BLM-administered Federal lands within the planning areas that would potentially be affected by implementation of the proposed RMPs/EIS. These environmental components include lands, vegetation, wildlife habitat, cultural and paleontological resources, recreation, wilderness, rangeland, minerals, visual resources, wild horses and burros, soils, water, air quality, and socioeconomics. The data contained within this chapter is drawn from the Management Situation Analysis (BLM PFO 2003), and detailed resource assessments completed for each of the environmental components occurring within the planning area. The detailed resource assessments and the Management Situation Analysis are available for public review at the BLM's Phoenix District.

3.2 Special Area Designations

3.2.1 Introduction

Special Area Designations describe areas which have special values that warrant or require special management or protection. These areas, which are specifically addressed through this planning process, include Areas of Critical Environmental Concern (ACEC), Scenic and Back Country Byways, Wilderness Areas (WAs), and areas designated as part of the Wild and Scenic River System.

3.2.2 Wilderness Areas

Five congressionally designated wilderness areas administered by BLM are located within the Bradshaw-Harquahala Planning Area, including the Big Horn Mountains Wilderness, Harquahala Mountains Wilderness, Hassayampa River Canyon Wilderness, Hells Canyon Wilderness, and Hummingbird Springs Wilderness (Map 1-1). Castle Creek Wilderness, administered by the U.S. Forest Service, is located next to BLM-managed lands in the Bradshaw-Harquahala Planning Area. Agua Fria National Monument does not have designated wilderness. BLM-managed wilderness totals 96,820 acres within the planning areas.

3.2.3 Areas of Critical Environmental Concern (ACECs)

ACECs are areas where unique resources exist, making them worthy of a higher level of concern and protection. A designation of an ACEC on BLM-managed lands requires approval by the Arizona State Director, who can also remove the designation. Once an ACEC is designated, the focus of management is to preserve and restore the resources that inspired the recommendation for designation.

There are two ACECs located within the Agua Fria National Monument. The first is the Perry Mesa ACEC, encompassing 9,580 acres, which was designated in 1988 to protect its significant cultural resources, and the second is the Larry Canyon ACEC, totaling 80 acres, which was designated in 1988 to protect its unique riparian-forest/desert ecosystem habitat. Currently, the Bradshaw-Harquahala Planning Area does not have ACECs.

3.2.4 Wild and Scenic Rivers

BLM is an active participant in managing designated wild, scenic, and recreational rivers. It is also involved in studying the eligibility, classification, and suitability of rivers. Presently, there are not any officially designated wild and scenic rivers flowing within either planning area. Portions of the Agua Fria River were identified in the 1994 Arizona Statewide Wild & Scenic Rivers Legislative Environmental Impact Statement (BLM 1994b) as being suitable for designation. More specifically, in the Final Legislative Environmental Impact Statement for Wild and Scenic Rivers (BLM 1994), the Agua Fria River was found to have outstandingly remarkable values for its scenic characteristics, fish and wildlife habitat, and cultural resources. The scenic value reflects the topographic diversity and ancient volcanic activity of the area. Mesas and grasslands border a lush riparian valley surrounded by cliffs. The fish and wildlife habitat is representative of a rare riparian system that supports wildlife populations in the desert. The value of the landforms and habitat contributed to the development of one of the most important systems of late prehistoric archaeological sites in central Arizona. While awaiting congressional determination of designation, BLM is managing these river portions under the 1968 National Wild and Scenic Rivers Act and according to guidance in BLM's Manual 8351, Section 53.

According to the Agua Fria River Wild and Scenic River Study Area EIS (BLM 1994a), three river segments totaling 22.4 miles qualify for designation as either wild, scenic, or recreational depending on the segment characteristics see (Table 3-1).

Additionally, portions of the Hassayampa River were identified suitable for further study in the wild and scenic river evaluation process. However, in the *Proposed*

Table 3-1. Special Area Designations: Wild and Scenic Rivers

River/ Classification Eligibility	Distance	Location
Agua Fria River/Scenic	7.7 miles	Sycamore Creek to the juncture of Bloody Basin Road at Horseshoe Ranch.
Agua Fria River/Wild	10.3 miles	Horseshoe Ranch to the Arizona Department of Transportation pump house.
Agua Fria River/Scenic	4.4 miles	Segment between pump house to Larry Canyon.

Alternative developed in the 1994 Arizona Statewide Wild and Scenic Rivers Legislative EIS, BLM determined after further study that the Hassayampa River was not suitable. Therefore, BLM did not recommend the river to Congress for inclusion in the National Wild and Scenic River System (WSR).

3.2.5 Back Country Byways

Agua Fria National Monument does not have designated Back Country Byways. In the Bradshaw-Harquahala Planning Area, the Harquahala Mountain Summit Road Scenic Drive is designated a Back Country Byway. Located 40 miles west of Wickenburg, it includes 10.5 miles of dirt vehicle route leading from Eagle Eye Road to the Harquahala Peak Observatory.

3.3 Lands and Realty

3.3.1 Land Tenure

BLM is authorized under several authorities to acquire, dispose of, convey, and lease

portions of the federally owned land it manages for the benefit of the national interest. Land tenure decisions select lands for retention, proposed disposal, acquisition, or lease. The Federal Land Policy and Management Act (FLPMA) requires that BLM-managed lands be retained in Federal ownership unless BLM determines through the land use planning process that conveyance of a particular parcel will serve the national interest (43 USC 1701). Land tenure decisions must achieve the goals, standards, and objectives outlined in the land use plan. Land tenure options include the following:

- land purchase,
- land exchange,
- land conveyance by public sale, and
- land patents and leases under the 1954 Recreation and Public Purposes (R&PP) Act.

Land ownership in the planning area is a complex mosaic of Federal, State, and private lands. As shown in Table 3-2, BLM, the Arizona State Land Department (ASLD) and private owners each administer about one-third of the area.

3.3.2 Agua Fria National Monument (AFNM)

Agua Fria National Monument is located in Yavapai County, in central Arizona, 40 miles north of Phoenix. The 70,900 acres of Federal land consist of Perry Mesa and Black Mesa, the public land to the north of these mesas, and the Agua Fria River Canyon.

The national monument has 1,444 acres of scattered private lands within its boundary. In addition to recreation and hunting, the most common uses for these lands are ranching and mining.

As a requirement of the January 2000 Monument Proclamation (Appendix A), all Federal lands and interests in lands within the monument are appropriated and withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws. This protection furthers the purposes of the monument. Although existing withdrawals, reservations, or appropriations are not revoked within the monument, Federal lands may not be disposed of. Lands and interests in lands within the monument that are not owned by the United States shall be reserved as a part of the monument upon acquisition of title thereto by the United States.

Table 3-2. Details of Land Ownership within the Planning Area

Surface Management	Agua Fria National Monument	Bradshaw-Harquahala	Total Acreage	Percentage of total (%)
Federal				
Bureau of Land Management	70,900	896,100	967,000	30%
National Forest Land	0	308,300	308,300	10%
Bureau of Reclamation	0	2,670	2,670	<1%
Subtotal	70,900	1,207,070	1,277,970	41%
State and County				
Arizona State Land Department (ASLD)	0	863,450	863,450	28%
State and County Parks	0	52,770	52,770	2%
County Lands	0	2,220	2,220	<1%
Subtotal	0	918,440	918,440	30%
Tribal Lands	0	450	450	<1%
Private Lands	1444	841,366	842,810	28%
Total	72,344	2,967,326	3,039,670	100%

3.3.3 Bradshaw-Harquahala Planning Area

The Bradshaw-Harquahala Planning Area is located within Maricopa, Yavapai, and La Paz Counties. It includes portions of the Phoenix metropolitan area, the fourteenth largest and one of the fastest growing metropolitan areas in the United States. This planning area also includes the following:

- The cities of Glendale, Peoria, Surprise, El Mirage, and Litchfield Park; portions of the cities of Phoenix, Prescott, Avondale, and Goodyear; portions of the towns of Buckeye and Prescott Valley.
- The unincorporated communities of Sun City, Sun City West, Sun City Grand, Black Canyon City, Castle Hot Springs, Cordes Junction, Mayer, Humboldt, Dewey, Morristown, Congress, Yarnell, and Aguila; and portions of the unincorporated communities of New River and Tonopah.

BLM issues permits in response to requests for public-use easements or rights-of-way across the planning area. These easements are generally confined to clearly identified corridors. Corridors may be used for highways, railroads, and utilities including electric, gas, water and communications. Information on corridors appears in the Utility and Communications Corridors section of this chapter (Table 3-3).

In some cases land ownership is separated into (1) surface interests and (2) subsurface or mineral estate interests. BLM administers 945,160 acres of mineral estate within the planning areas. Where one party owns the surface estate and another owns the mineral estate, the land is termed "split estate."

Table 3-3. Existing Utility Corridors

Corridor Name	Width	Current Utility/Transportation Uses
Black Canyon	2 miles	Electricity, Gas
Wickenburg-Yarnell	1 mile	Transportation
Meade-Phoenix	1 mile	Electricity
Parker-Liberty	2 miles/varies	Electricity
Palo Verde-Devers	1 mile	Electricity
CAP Canal	1 mile	Water
Palo Verde-West Wing	1 mile	Electricity
Wenden-Wickenburg	1 mile	Transportation

A total of 54,370 acres within the Bradshaw-Harquahala Planning Area have been determined to be suitable for disposal. More than 100,000 acres in the Bradshaw-Harquahala Planning Area—mainly State and privately owned lands—have been determined to be potentially suitable for acquisition. BLM has acquired some lands since the adoption of the previous plans. The most commonly employed criterion for acquisition continues to be to create contiguous blocks of federally managed lands.

3.3.4 Utility and Communications Corridors

BLM easement procedures, including corridor designation, are set out in the BLM Rights-of-Way Manual, Sections 2801.11 and 2801.12. FLPMA and this manual are consistent in saying that designated utility corridors should include existing facilities that would lend themselves to a corridor designation. Once corridors have been designated, all future assigned uses should be compatible with existing uses. The eight major designated corridors within the Bradshaw-Harquahala Planning Area are listed in Table 3-3 and shown in Map 2-

7. Their widths and general-use categories are also shown in Table 3-3. A portion of the Black Canyon utility corridor runs parallel to Interstate 17 and edges into Agua Fria National Monument along its western boundary.

The existing corridors were designated in accordance with BLM's regulations in effect at the time of designation. While the corridor locations have not changed since they were shown in the Lower Gila North Management Framework Plan (BLM 1983) and the Phoenix RMP and EIS (BLM 1988a), the regulatory framework and adjacent BLM's area designations have changed.

Each of the existing utility corridors, except Wickenburg–Yarnell, has at least one active right-of-way occupying its full length.

National monument status for the Agua Fria area dictates that no new utility corridors will be designated on monument lands. Existing utilities as shown in Map 2-3, including the Black Canyon utility corridor, comply with regulations as prior existing uses.

The BLM's Rights-of-Way Manual, Section 2801.12, states that microwave communication sites, associated pathways, and communication lines for interstate use are to be considered for designation as corridors. Some of the designated communication site corridors in the Bradshaw-Harquahala Planning Area existed when the manual went into effect. The nine communication sites within the Bradshaw-Harquahala Planning Area are Lone Mountain, Harquahala Mountain, Burnt Mountain, Valencia, Black Canyon, and White Tank Mountain Park sites (North, Middle, East, and West). No communication sites are within the national monument.

3.3.5 Transportation Corridors

Transportation corridors are included as a part of the utility corridors in both planning areas. These corridors were first identified in the Phoenix RMP and EIS (BLM 1988a). All of the information about existing utility corridors also applies to the transportation corridors. Designated corridors that contain highways and railroads are shown on Map 2-7.

In the Bradshaw-Harquahala Planning Area the highway study corridor that appears in the Maricopa Association of Governments (MAG 2003) Long Range Transportation Plan 2003 Update (MAG 2002) is the CANAMEX Trade Corridor. The CANAMEX corridor, as defined by Congress in the 1995 National Highway Systems Designation Act, is a high-priority corridor. It follows Interstate 19 from Nogales to Tucson, I-10 from Tucson to Phoenix, U.S. 93 from near Phoenix to Las Vegas, and Interstate 15 from Las Vegas through Montana to the Canadian border.

A MAG resolution for designating the CANAMEX corridor through the Maricopa region included a recommendation for a portion of it to be “an alignment in the general vicinity of Wickenburg Road and Vulture Mine Road that connects to the future U.S. 93/U.S. 60 Wickenburg Bypass, the specific alignment of which is to be determined following the completion of needed studies by ADOT; and the future U.S. 93/U.S. 60 Wickenburg bypass from its junction with Vulture Mine Road to U.S. 93” (MAG 2002).

Railroads, particularly freight, are a key part of the transportation system within the planning areas. Rail is not considered a factor in designating more corridors because no new rail line locations are likely to be proposed in the foreseeable future.

3.4 Soil, Air, and Water Resources

3.4.1 Soil Resources

Most of the planning areas are located within the Basin and Range Geologic Province. The northern sections fall within the Central Highlands. The basins generally consist of surficial and sedimentary deposits. The mountain ranges consist of granitoid and metamorphic rock. The Bradshaw-Harquahala Planning Area includes several mountain ranges. The White Tank Mountains, Harquahala Mountains, and mountain ranges surrounding the town of Wickenburg are in the Basin and Range Province. The Bradshaw Mountains are within the Central Highlands region.

Geologic faults in central Arizona are generally short, discontinuous, normal faults that date back to the Quaternary Period, the last two million years. The Verde Fault, a potentially active fault, is located 25 miles northeast of Prescott near the town of Jerome. The only areas of concern for earthquake hazard within the planning areas are at the moderate to low level for the northern portions near Prescott. The remainder of the planning areas is in the low hazard level. The last known earthquake in the planning areas occurred near Constellation, Arizona in 1930.

Soil consists of mineral particles of different sizes, organic matter, and many species of living organisms. The planning areas contain a wide array of soil textures, including various types of cobble, gravel, clay, loam, silt, sand, and stone as shown in Map 3-1.

Soil texture in the monument is mainly clay loam. Small portions along the monument's southern boundary and the southern portion

of the Agua Fria River are classified as very gravelly-sandy loam.

The Bradshaw-Harquahala Planning Area contains a more complex soil composition. Southern portions consist of an assortment of gravelly-sandy loam textures. However, the Hummingbird Springs and Big Horn Mountains Wilderness Areas, and White Tank Mountain Regional Park, contain soil textures that are extremely stony-coarse, sandy loam. Areas, immediately surrounding these regions, have extremely gravelly-sandy loam. Additionally, the southeast corner of this planning area has one large parcel containing fine-sandy loam just west of the Agua Fria River. Soil on the eastern side of the Agua Fria is classified as loam.

3.4.2 Air Resources

The climate in central Maricopa, La Paz, and Yavapai Counties, including the planning areas is characteristic of the Sonoran Desert, with hot summers, mild winters, and annual average precipitation totals of about 8 inches (Map 3-2). From 1960 to 1995, the long-term annual average rainfall was 7.99 inches, and the median rainfall was 7.62 inches (CH2M HILL et al. 1997).

Air quality is evaluated by measuring ambient concentrations of pollutants known to have deleterious effects. The Environmental Protection Agency (EPA) has issued primary and secondary National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM₁₀), ozone (O₃), sulfur dioxide (SO₂), and lead (Pb). Primary standards are adopted to protect public health, and secondary standards are adopted to protect public welfare. States are required to adopt ambient air quality standards that are at least as stringent as the Federal NAAQS. The Arizona Department of Environmental

Quality (ADEQ) regulates air quality in the State and has adopted the Federal NAAQS as State standards. The Maricopa Association of Governments (MAG) was designated by the Governor as lead air quality planning agency for the Phoenix metropolitan area, and prepares air quality plans for nonattainment area pollutants.

EPA has designated several places within Arizona as nonattainment areas for criteria pollutants. Once an area has been designated as a nonattainment area, the State's implementation plan must be developed to show the measures that will be undertaken to reduce the pollutant levels to meet the air quality standards. Cumulative air quality impacts in the planning areas have been addressed by the air quality nonattainment plans and air quality maintenance plans that MAG and ADEQ have been required to prepare for approval by the EPA (MAG 2004; MAG 2003). These plans are required because the Phoenix area is already a nonattainment area for several air pollutants and these plans are, in reality, quantitative cumulative air quality impact assessments. The general steps the agencies conduct for their air quality forecasting are as follows:

- The counties in the region coordinate to predict future regional population and transportation growth. MAG assumes that all of BLM's parcels would be developed into residential areas at the same rate and intensity as all of the surrounding parcels, so MAG's forecasts accounts for the issue of "induced growth" by BLM's land disposal.
- ADEQ and Maricopa County develop regulations to reduce emissions from industry, while MAG (1) develops fugitive dust regulations for construction and commercial operations, (2) tracks trends in improved automobile emissions, and (3) prepares measures to reduce emissions from

on-road and off-road engines. Using this data, MAG forecasts future air pollutant emissions throughout the region, accounting for new ADEQ air regulations and vehicle emission trends. MAG then models future air pollutant concentrations to show that future air pollutant concentrations would be within allowable Federal limits. Future population growth in the outlying areas of the planning area is built directly into MAG's air quality modeling. MAG's modeling (using EPA's Urban Airshed Model) for future photochemical smog revealed that the maximum 1-hour ozone concentration in 2015 would be less than the Federal limit of 0.120 ppm at all points in the planning area (MAG 2004).

Yavapai and La Paz counties are in attainment for all criteria pollutants and do not need a State Implementation Plan (ADEQ 2002a). However, Maricopa County is considered a nonattainment area for three criteria pollutants, including particulate matter, carbon monoxide, and ozone. Criteria pollutant attainment status for the planning areas and sources of pollutants are described in the following sections.

3.4.2.1 Particulate Matter

On June 10, 1996, EPA reclassified Maricopa County as being in serious nonattainment for particulate matter (PM₁₀). Map 3-3, shows the current PM₁₀ nonattainment area for the Phoenix metropolitan area. On July 8, 1999, the Maricopa Association of Governments (MAG) submitted to EPA the MAG 1999 Serious Area Particulate Plan for PM₁₀ (Executive Summary, MAG 1999). This plan addressed both the 24-hour and annual PM₁₀ standards. In February 2000, MAG submitted a revised nonattainment plan. That plan requested that EPA extend

Phoenix's PM₁₀ attainment date to December 31, 2006. ADEQ submitted a SIP revision of the Agricultural PM₁₀ General Permit (Arizona Administrative Code, Title 18, Chapter 2, §609–611) on July 11, 2000. On June 13, 2001, ADEQ submitted to EPA a later SIP revision package for the Agricultural Best Management Practices program (Maricopa County PM₁₀ Serious Area State Implementation Plan Revision Agricultural Best Management Practices) to address issues with agricultural sources. On January 10, 2002, EPA announced the approval of Arizona's plan for attaining the annual and 24-hour standards for PM₁₀ in the metropolitan Phoenix area. In addition, EPA granted a five-year extension of the required attainment date for both the 24-hour and annual PM₁₀ standards from December 31, 2001, to December 31, 2006. This extension was based on the showing that, even by implementing the best available control measures, attainment by 2001 was not possible (ADEQ 2002b).

Emission Sources: According to ADEQ (2002b), the main sources of particulate pollution in the Phoenix area are fugitive dust from:

- paved roads,
- construction sites,
- unpaved vehicle routes,
- windblown dust from agricultural fields,
- disturbed areas on construction sites,
- vacant lots.

On June 10, 1996, EPA reclassified Maricopa County as being in serious nonattainment for carbon monoxide. Map 3-4 shows the boundaries of the Phoenix carbon monoxide (CO) nonattainment area. MAG submitted the required CO SIP to EPA on July 8, 1999. On April 18, 2001, MAG submitted A Revised MAG 1999 Serious Area Carbon Monoxide Plan (Executive Summary, MAG 1999). On October 9, 2001, EPA

determined the plan was complete, and approval is pending (ADEQ 2002b). The plan sets forth the required actions to bring Phoenix into attainment with the Federal carbon monoxide standards by December 31, 2005.

In September 2005, EPA received additional PM₁₀ control measures from ADEQ for the Salt River SIP, a portion of the Phoenix nonattainment area. These measures, when approved by EPA, will apply in the entire Phoenix PM₁₀ attainment area. The Phoenix area had a number of exceedances and violations of the PMN10 NAAQS in November and December 2005 and in January 2006. Based on this preliminary information (quality assured monitoring data will not be available until early April 2006), all indications are that Phoenix will not make its 12/31/2006 attainment date. This means that a CAA section 189(d) plan or "5% plan" will be due on 12/31/2007 and will need to show emissions reductions of 5% per year until attainment of the PM₁₀ standard can be shown.

Emission Sources: The main sources of carbon monoxide (ADEQ 2002b) are

- on-road mobile sources,
- non-road mobile sources, and
- area sources (e.g. fuel combustion, onsite incineration, open burning, fireplaces, and woodstoves).

3.4.2.2 Ozone

On February 13, 1998, EPA reclassified Maricopa County as being in serious nonattainment for ozone. Since that time, the area has experienced three clean years of air quality data, which is the minimum amount of time required to demonstrate attainment. The Maricopa County Serious Area One-hour Ozone SIP was submitted by ADEQ to EPA in December 2000 to fulfill the attainment demonstration requirements. On March 21, 2005, EPA proposed approval of MAG's Final Serious Area Ozone State

Implementation Plan for Maricopa County, and MAG's One-Hour Ozone Redesignation Request and Maintenance Plan (See 70 FR 1342). EPA finalized this action on June 14, 2004 at 70 FR 34362. EPA designated areas for the new eight-hour ozone standard effective June 15, 2004. The Phoenix metropolitan area was designated as a "basic" Subpart I nonattainment area, with all attainment date of June 2009, and a SIP demonstrating attainment of this standard due in June 2007. The eight-hour ozone nonattainment area can be seen at <http://www.epa.gov/oar/oaqps/greenbk/az8.html>.

Emission Sources: Ozone is a gas formed by a chemical reaction between oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. VOC and NO_x emissions come from point, non-road, area, stationary, motor vehicle, and biogenic sources (ADEQ 2002b).

3.4.3 Water Resources

The public lands in both planning areas fall within the three major watersheds of south-central Arizona: the Middle Gila, Verde, and Bill Williams (See Map 3-5 for the locations of the major watersheds and sub-watersheds within the planning areas). These watersheds can be defined into river basins that collectively drain the watersheds. The river basins of the Middle Gila watershed that pertain to this planning effort include the Hassayampa, Agua Fria, and Lower Salt Rivers. The Agua Fria River originates northeast of Prescott and drains into the Gila River south of Avondale.

The Hassayampa River originates in the Bradshaw Mountains south of Prescott and drains the central Bradshaw-Harquahala Planning Area, flowing south into the Gila River east of Arlington. The Hassayampa is mainly an ephemeral stream, flowing typically when it rains. It flows perennially for several miles in limited

reaches, where the shallow depth of the bedrock maintains the flow at the surface. The Hassayampa flows most commonly at the northern end of the planning area, notably in Hassayampa River Canyon Wilderness. At the southern end of the planning area, the Hassayampa River fills the basin during high rainfall events, providing short-term recharge to the basin fill aquifer.

Tributaries of the Salt River, including the Grand and Arizona Canals, cross the extreme southeast portion of the Bradshaw-Harquahala Planning Area. In the Prescott area, the Verde watershed drains to the north via several small drainages, including tributaries of Willow, Miller, and Granite Creeks. This planning area also includes the extreme eastern portion of the Bill Williams watershed, which is drained by the tributaries of the Santa Maria River, including Kirkland, Cottonwood, and Date Creeks.

The groundwater in the planning areas is confined to the unconsolidated sand and gravel aquifer that underlies most of western Arizona. The planning areas extend across several designated groundwater basins and sub-basins, including the

- Phoenix Active Management Area (AMA),
- Prescott AMA, and
- Upper Agua Fria, Upper Hassayampa, Bill Williams, McMullen Valley, Tiger Wash, and Harquahala sub-basins.

Map 3-6 shows the major groundwater basins, sub-basins, and AMAs within the planning areas.

Groundwater in the planning areas occurs mainly in unconsolidated sand and gravel deposits, which fill the bottom of the Agua Fria River Canyon and occur locally in stream alluvium along streams in the Agua Fria River drainage and in drainages

in mountainous areas. Water levels are generally within a few feet of the surface near streams and tens of feet in areas away from streams. Groundwater also occurs locally in limited amounts within 20 to 50 feet of the surface in fractures in the rock that form most of the mountains in the northern part of the Bradshaw-Harquahala Planning Area. In deposits where pumping has lowered shallow groundwater supplies, water levels have declined.

In the southwest part of the Bradshaw-Harquahala Planning Area where broad basins dominate the landscape, groundwater occurs in basin fill deposits and in unconsolidated alluvium in the Bradshaw-Harquahala Basin, the Hassayampa Plain, and the West Salt River Valley. In these basins, irrigation has lowered groundwater levels. Declines range from 50 feet to more than 400 feet in some basins (USGS 1992). The magnitude of the water-level declines varies from basin to basin and reflects the influences of hydro-geologic conditions and the amount and length of pumping.

Groundwater also occurs in limited amounts within fractures in rock in localized areas. Well yields are often low, and these units are not a major source of groundwater.

Public lands in the planning areas are located within the Gila River System and Source General Water Rights Stream Adjudication (See Map 3-7 for adjudication watershed basins). BLM has filed claims for State-based water rights for stockwatering, wildlife, and recreation on many small springs, seeps, stock ponds, streams, and wells within the Agua Fria River, Upper Salt River, and Lower Gila River subwatersheds. In addition, BLM is quantifying its Federal reserved water rights established by the 1990 Arizona Desert Wilderness Act for the five wilderness areas within the Bradshaw-Harquahala Planning Area and by the proclamation establishing Agua Fria National Monument. The proclamation (Appendix A) states that “subject to valid

existing rights, a quantity of water sufficient to fulfill the purposes,” for which the national monument was established is reserved, and that “nothing in this reservation shall be construed as a relinquishment or reduction of any water use or rights reserved or appropriated by the United States,” on or before the date of the proclamation.

For more detailed information on water resources in the Agua Fria River watershed, please see Reconnaissance Watershed and Hydrologic Analysis on the Upper Agua Fria Watershed (Barnett and others 2002) and the U.S. Geological Survey 2004 draft report Hydrologic Characteristics of the Agua Fria National Monument, Arizona, Determined from the Phase One Reconnaissance Study (Fleming 2004).

3.5 Biological Resources

3.5.1 Vegetation

BLM manages vegetation within the planning areas to ensure high-quality wildlife habitat and to protect water resources and watershed conditions.

Agua Fria National Monument is dominated by a variety of grassland communities, with some mixed paloverde-cacti communities along its southern boundary.

Mixed paloverde-cacti and creosote-bursage communities dominate the Bradshaw-Harquahala Planning Area. Grassland communities are most abundant in the central portions of Yavapai County, which includes the northwest and northeast portions of the planning area. Evergreen sclerophyll (dry forests) dominate the north-central portions of the planning area. Pinyon-juniper and desert scrub grasslands

are predominant in this planning area's northern portion that is managed directly by BLM (Map 3-8).

The planning areas include a single type of wetland plant community and five upland vegetation formations. Most wetland formations in the planning areas are concentrated in riparian corridors along perennial and ephemeral streams, rivers, and washes.

3.5.2 Riparian Resources

Approximately 140 miles of riparian corridor occur generally in the north and northeast sections of the two planning areas, 47 miles within Agua Fria National Monument and 92 miles within the Bradshaw-Harquahala Planning Area (Map 3-9). These corridors are important resources that support a variety of rare plants, vertebrates, invertebrates, and native fishes. These corridors also serve as important water sources, habitat, and resting areas for many migratory birds. Additionally, livestock use these streams as water sources.

Since 1995, BLM completed a Proper Functioning Condition (PFC) assessment of the riparian corridors on BLM-managed lands. The table in Appendix Q1 and in Appendix Q2 summarizes the results of PFC assessments for both planning areas. Within the monument, 18.30 miles of riparian corridor were classified as PFC. The classification *functional-at risk*, indicating that riparian areas were functioning but susceptible to degradation, was assigned to 29.49 miles of riparian corridor. Of these 29.49 miles, 16.39 were considered in an upward trend toward PFC, 8.80 miles were showing no apparent trend and the remaining 4.30 miles were considered to be in a downward trend from PFC. Management factors that influence the condition and trend of riparian areas include livestock grazing and trampling; recreation

uses, including off-highway vehicle use; roads; and mining.

Within the Bradshaw-Harquahala Planning Area, 35.14 miles of riparian corridors were classified as PFC. The classification *functional-at risk* was assigned to 54.95 miles, and 2.50 miles were classified as nonfunctional. Of those classified as *functional-at risk*, 12.36 miles were considered in an upward trend toward PFC, 9.40 miles were considered to be in a downward trend from PFC, and 33.19 miles were found to be having no apparent trend.

3.5.3 Terrestrial Games Species

BLM manages habitat for wildlife on public lands. The Arizona Game and Fish Department (AGFD) manage the wildlife populations. The AGFD administers hunting, including permitting, bag limit identification, and population tracking. Hunting categories include big game, small game, upland birds, waterfowl, and predators. Throughout the State, AGFD's management of this program is based on the numbers of animals present in game management units (GMUs). The monument falls within GMU 21, while GMUs 19A, 20A, 20B, 20C, 42, and 44 are located within the Bradshaw-Harquahala Planning Area.

Large game species within the planning areas include black bear (*Ursus americanus*), desert bighorn sheep (*Ovis canadensis*), elk (*Cervus elaphus*), javelina (*Pecari tajacu*), mountain lion (*Felis concolor*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), and white-tailed deer (*Odocoileus virginianus*). Occupied desert bighorn sheep habitat is depicted on Map 3-10. Recent drought conditions have generally affected large game population trends.

Upland bird and small game species within the planning areas include Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), white-winged dove (*Zenaida asiatica*), and desert cottontail rabbit (*Sylvilagus auduboni*). Climate and habitat conditions dictate the relative abundance of these species. Upland bird and small game populations have also been affected by the recent drought conditions.

Furbearers found within the planning areas include the raccoon (*Procyon lotor*), ringtail cat (*Bassariscus astutus*), bobcat (*Felix rufus*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), skunks (*Mephitis* sp. and *Conepatus leuconotus*), and badger (*Taxidea taxus*).

3.5.4 Aquatic Game Species

BLM also manages habitat for sport fish species. While most of the fish populations can be found in Lake Pleasant, some perennial streams and stock ponds in the planning areas also support populations. Sport fish within the planning areas are non-native, introduced species. These include largemouth bass (*Micropterus salmoides*), white bass (*Morone chrysops*), striped bass (*Morone saxatilis*), yellow bullhead (*Ameiurus natalis*), black crappie (*Pomoxis nigromaculatus*), channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictus olivaris*), common carp (*Cyprinus carpio*), bluegill (*Lepomis macrochirus*), and green sunfish (*Lepomis cyanellus*).

3.5.5 Federal Endangered, Threatened, Proposed, and Candidate Species

Federally listed endangered, threatened, and candidate species known to occur within the

planning areas include the bald eagle (*Haliaeetus leucocephalus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), southwestern willow flycatcher (*Empidonax traillii extimus*), desert pupfish (*Cyprinodon macularius*), Gila topminnow (*Poeciliopsis occidentalis occidentalis*), and Gila chub (*Gila intermedia*). Federally listed endangered, threatened, and candidate species, which are not known to presently occur within the planning areas, but have been historically recorded there or for which suitable habitat exists, are the threatened spikedace (Meda fulgida), endangered lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*), endangered brown pelican (*Pelecanus occidentalis californicus*), endangered Yuma clapper rail (*Rallus longirostris yumanensis*) and threatened mountain plover (*Charadrius montanus*).

3.5.5.1 Bald Eagle (*Haliaeetus leucocephalus*)

Previously listed as endangered, this species was down-listed to threatened status in 1995. The bald eagle averages about three-feet in length and has a six-to-seven-foot wingspan. It feeds mainly on fish; however, waterfowl, small mammals, and carrion can constitute a portion of its diet. Bald eagles winter throughout Arizona, with at least 200 to 300 individuals identified each year. There are currently 46 bald eagle breeding areas in central Arizona. In 2004, 40 of these breeding areas were occupied and 27 of the areas fledged 42 young eagles (Jacobson et al. 2004). All of these breeding areas are associated with lakes or streams. The only breeding area in the planning areas is at the north end of Lake Pleasant in the Lake Pleasant Regional Park, managed by Maricopa County. They have been nesting in this area for many years. They are occasionally observed along the portion of the Agua Fria River above Lake Pleasant as far north as Cordes Junction and within Agua Fria National Monument.

3.5.5.2 Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

A small (5.75 inches), generally olive-colored or grayish-brown, neo-tropical migratory bird, the federally listed endangered southwestern willow flycatcher is a riparian obligate species, whose range once included southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, and southwest Colorado. The flycatcher breeds in dense riparian habitats of the southwest United States along rivers, streams, or other wetlands where trees and shrubs are next to or near surface water.

Loss or modification of habitat is the main cause of the flycatcher's decline. Nesting habitats tend to be uncommon, isolated, and widely dispersed. The habitat has been historically unstable due to natural floods, fire, and drought. Increasing human demand for water from riparian systems has modified, reduced, or destroyed mechanisms that contribute to the natural production of suitable habitat. This species has been documented but is not known to nest in the Hassayampa River Preserve, south of Wickenburg and along the Agua Fria River channel below the dam at Lake Pleasant. Survey efforts have not recorded this species elsewhere in either planning areas. Most riparian areas in the planning areas are not considered suitable habitat for this species because stream gradient, channel width and flood frequency preclude the development of suitable habitat patches.

3.5.5.3 Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)

The western yellow-billed cuckoo is a brownish, medium-sized migratory bird. Adults are typically about 12 inches long

and breed in dense willow and cottonwood stands in river floodplains. This species became a candidate species under review for listing as threatened or endangered on June 13, 2002.

A total of 168 yellow-billed cuckoo pairs and 80 single birds were found in Arizona in 1999, according to the preliminary results from a statewide survey that covered 265 miles of river and creek bottoms. The loss of riparian habitat is the main reason for yellow-billed cuckoo declines in the western United States. Despite habitat loss, the cuckoo can still be found in all counties in Arizona and has been recorded along several riparian areas in both planning areas. Although comprehensive surveys have not been conducted throughout both planning areas, cuckoos have been documented along parts of the Hassayampa River, Cow Creek, Humbug Creek and the Agua Fria River in the Bradshaw-Harquahala Planning Area and along Ash Creek, Little Ash Creek, Dry Creek, Indian Creek, Sycamore Creek and the Agua Fria River on the Agua Fria National Monument.

3.5.5.4 Desert Pupfish (*Cyprinodon macularius*)

The desert pupfish is a small (less than two inches long), federally listed endangered fish with a smoothly rounded body and narrow, vertical, dark bars on its sides. Once common in desert springs, marshes, backwaters and tributaries of the Rio Sonoita, San Pedro River, Santa Cruz River, lower Gila River, and lower Colorado River drainages in Arizona, California, and Mexico; this species is now restricted to three natural populations in California, along with the human-made irrigation drains around the Salton Sea. Desert pupfish are also found in restricted locations in Sonora and Baja California, Mexico.

In 1997 pupfish were transplanted into AD Wash, which is on State Trust Land within the Bradshaw-Harquahala Planning Area;

however, the populations did not survive. Reintroduction efforts, managed jointly by Arizona Game and Fish Department, the U.S. Fish and Wildlife Service, and BLM are ongoing and may include other perennial streams within the planning area. In 2001 pupfish were transplanted into Lousy Canyon Creek, within Agua Fria National Monument. This site was supplementally stocked in 2006. In 2006 pupfish were introduced into a tributary to Larry Canyon, also in the Agua Fria National Monument.

3.5.5.5 Gila Chub (*Gila intermedia*)

The Gila chub is a small-finned, deep-bodied minnow that was listed as endangered in 2005, along with the designation of critical habitat. The critical habitat designation includes portions of Silver Creek, a tributary to Larry Canyon, Lousy Canyon, and Indian Creeks, all in the Agua Fria National Monument. The Indian Creek and silver Creek populations are natural while the populations in Lousy Canyon and the tributary to Larry Creek were introduced in 1995.

Gila chub prefer quiet pools and have a tendency to remain near cover such as terrestrial vegetation, boulders, and fallen logs in smaller streams, springs, and cienegas (desert wetlands). Livestock grazing and high levels of recreation use can degrade Gila chub habitat. Additionally, competition or predation by introduced non-native aquatic species contributes to population declines.

Naturally occurring populations of Gila chub can be found within the national monument in Indian and Silver Creeks. Additionally, in 1995 Gila chub were transplanted into Larry and Lousy Canyon Creeks within the monument; these introduced populations continue to exist.

3.5.5.6 Gila Topminnow (*Poeciliopsis occidentalis occidentalis*)

The federally listed endangered Gila topminnow is a small, guppy-like, live-bearing fish that prefers vegetated margins and backwaters of intermittent and perennial streams and rivers. Adults tend to congregate in waters of moderate current below riffles, and along the margins of flowing streams in accumulated algae mats. A decline in Gila topminnow populations has resulted from the following:

- the introduction and spread of nonindigenous predatory and competitive fishes, including the mosquitofish (*Gambusia affinis*),
- water impoundments and diversions,
- water pollution,
- groundwater pumping,
- stream channelization, and
- habitat modification.

Gila topminnows were transplanted to Tule Creek (within the Bradshaw-Harquahala Planning Area) in the early 1970s and to AD Wash on State Trust Land in the early 1990s. In 2000, this fish was transplanted into Lousy Canyon Creek within the national monument. In 2005 this species was transplanted into a tributary to Larry Canyon also on the Agua Fria National Monument. Gila topminnow populations continue to persist at all three of these locations. Reintroduction efforts are ongoing and may include perennial streams and springs within the planning areas.

3.5.5.7 Spikedace (*Meda fulgida*)

A small fish, federally listed as threatened, the spikedace is unique in that it is the only species in its genus. Spikedace were once abundant and widespread in moderate and large rivers and streams within the Gila River basin, including the Gila,

Salt, and Verde Rivers and their tributaries--the San Pedro, San Francisco, and Agua Fria Rivers. The current distribution in Arizona is restricted to Aravaipa Creek, Eagle Creek and the upper Verde River. The decline of this species has been attributed to habitat destruction or alteration and interactions with non-native fishes. The Agua Fria River is historic habitat that could still support a spikedace population with active management.

3.5.5.8 Lesser Long-nosed Bat (*Leptonycteris curasoae yerbabuena*)

The lesser long-nosed bat is a small bat that forages on the nectar, pollen and fruit of paniculate agaves and columnar cacti. This species is threatened by loss of foraging habitat and roost sites. It is a seasonal resident of southeastern and western Arizona as far north as Maricopa County. It has been collected from the Phoenix area within the planning areas, post breeding.

3.5.5.9 California Brown Pelican (*Pelecanus occidentalis californicus*)

The brown pelican is a large fish-eating bird that was threatened due to reproductive failure caused by pesticides. It is a coastal species, nesting on islands along the coast of California and Mexico. Post breeding birds are common along the Pacific coast north to Canada and along the Colorado River annually. Occasional wandering individuals are found along the Salt and Gila Rivers and at Lake Pleasant in the Bradshaw-Harquahala Planning Area.

3.5.5.10 Yuma Clapper Rail (*Rallus longirostris yumanensis*)

The Yuma clapper rail is a small wading bird that inhabits dense riparian and marsh habitat characterized by dense stands of cattail and bulrush along the shoreline. It is threatened by habitat destruction. The current distribution of the species is along the Colorado River downstream of Lake Mead and along the Salt and Gila Rivers. This species may be expanding its range to include suitable habitats within the planning areas, but has not yet done so.

3.5.5.11 Mountain Plover (*Charadrius montanus*)

The mountain plover is a small ground nesting bird. They nest on flat, sparsely vegetated ground in the Western Great Plains and Colorado plateau. This species winters in Arizona between November and March, utilizing cultivated and non-cultivated annual grasslands and sparsely vegetated valley bottoms. Within the planning areas, they have been found wintering on cultivated lands.

3.5.6 Other Special Status Species

The AGFD has a list of wildlife of special concern in Arizona. This list includes taxa that are federally listed as threatened or endangered under the Endangered Species Act as well as many that are not listed. BLM manages these species so as not to contribute to the need to list them as threatened or endangered. Within the planning areas are four bats, fourteen birds, and four reptiles or amphibians on the State list which are not federally listed. Fifteen of these species, 68 percent, either require or make use of riparian habitats.

In accordance with BLM's Manual 6840, the BLM's State Director, in coordination with staff professionals, developed a list of BLM's sensitive species. These are species that BLM believes warrant special consideration but are not on the list of wildlife of special concern in Arizona. Within the planning areas, there are three BLM's sensitive plant species, and 18 BLM sensitive wildlife species. The wildlife species include nine bats, three birds, three reptiles, or amphibians, and three native fish species. The state and BLM sensitive species are listed in Appendix U along with the occurrence and habitat.

Within the planning areas, six "conservation areas" have been identified as important to the long-term maintenance of biodiversity within the Sonoran Desert Ecoregion in An Ecological Analysis of Conservation Priorities in the Sonoran Desert Ecoregion (Marshall et al. 2000). The conservation areas identified are the Harquahala Mountains, Harcuvar Mountains, Hassayampa River south of Wickenburg, Agua Fria Watershed, Black Pearl, and El Tigre Mine.

Four additional conservation areas in the planning areas were identified in the Apache Highlands Ecoregion in An Ecoregional Analysis of Conservation Priorities in the Apache Highlands Ecoregion (Marshall et al. 2004). These conservation areas identified are the Agua Fria River/Sycamore Mesa, Castle Creek/Black Canyon, Hassayampa River/Blind Indian Creek and Kirkland Creek/Peoples Valley Grassland. Two of the conservation areas in the Apache Highlands Ecoregion are overlapped by the Agua Fria Watershed Conservation Area in the Sonoran Desert Ecoregion.

The Arizona Game and Fish Department recently completed a comprehensive wildlife conservation strategy (AGFD 2006) which identifies wildlife species and habitats with greatest conservation need, by ecoregion. This plan also identifies stressors that may

impact wildlife and wildlife habitat and describes actions to conserve the identified species and habitats.

The Agua Fria River and its tributaries designated as an Important Bird Area by the National Audubon Society (see Map 3-10), provide both breeding and wintering habitat for a number of bird species and are important bird migration routes.

3.5.6.1 Sonoran Desert Tortoise (*Gopherus agassizii*)

The Mojave population of the desert tortoise, which inhabits northern Arizona, California, Utah, and Nevada (not within the planning areas), is federally listed as threatened. The Sonoran population of the desert tortoise is not listed under the Endangered Species Act of 1973 but is considered a sensitive species by both the BLM and the AGFD.

BLM is working cooperatively with various State and Federal agencies to complete a management plan to stabilize the Sonoran population of the desert tortoise. In addition, the BLM is working with the AGFD and others on a conservation agreement specifically addressing the Sonoran population of desert tortoise.

The habitat preference for the Sonoran populations of the desert tortoise consists of paloverde-mixed cacti vegetation communities on rocky or bouldery slopes below 3,500 feet in elevation although it can be found up to 5,000 feet in elevation. Three habitat classifications, based on population, viability, size, density, trend, and manageability, were devised from BLM's inventories of desert tortoise habitat throughout the planning areas between 1989 and 1999. Map 2-92, shows tortoise distribution and habitat classification based on the inventory. The criteria used to classify the habitat areas are as follows:

- Category I – Habitat area essential for maintenance of large, viable populations. Conflicts resolvable. Medium to high density or low density contiguous with medium or high density. Increasing, stabilizing, or decreasing population.
- Category II – Habitat area may be essential to maintenance of viable populations. Most conflicts resolvable. Medium to high density or low density contiguous with medium or high density. Stable or decreasing population.
- Category III – Habitat area not essential to maintenance of viable populations. Most conflicts not resolvable. Low to medium density not contiguous with medium or high density. Stable or decreasing populations.

The planning areas contain 93,620 acres of desert tortoise habitat classified as Category I, 419,530 acres classified as Category II and 136,670 acres classified as Category III.

BLM is managing habitat for the desert tortoise under two existing plans; the Desert Tortoise Habitat Management on Public Lands: A Rangeland Plan (BLM 1988b) and Strategy for Desert Tortoise Habitat Management Plan on Public Lands in Arizona (BLM 1990a).

3.5.7 Invasive Species

Invasive species occur throughout the two planning areas and can generally be defined as “alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health” (Executive Order 13112). Invasive species, which have often been accidentally introduced into ecosystems by humans, can be detrimental to the environment because they can directly harm native species, either by predation or competition. In turn, this harm can affect general ecosystem functions.

Some of the floral invasive species known within the planning areas include African mustard (*Brassica tournefortii*), fountain grass (*Pennisetum alopecuroides*), bufflegass (*Cenchrus ciliaris*), wild oats (*Avena fatua*), saltcedar (*Tamarix ramosissima*), and Malta’s star thistle (*Centaurea melitensis*), which occurs within the monument. Invasive aquatic plants are also known to occur within some riparian areas. Other species are also likely to occur because of the presence of suitable conditions, substrates, or both.

Invasive animals, both terrestrial and aquatic, include starlings (*Sturnus vulgaris*), crawfish (*Procambarus clarkii*), bullfrogs (*Rana catesbeiana*), spiny soft-shell turtles (*Trionyx spiniferus*), mosquitofish (*Gambusia affinis*), and green sunfish (*Lepomis cyanellus*). Infestation by some of these species is so great that some native species are threatened with extirpation.

3.6 Cultural Resources

West-central Arizona has a rich and diverse cultural heritage. Native American groups have lived in the region for thousands of years. Settlers of European descent first arrived in small numbers in the late 16th century, and then in much larger numbers in the late 19th and early 20th centuries. Cultural resources represent the tangible remnants of this rich legacy; which include prehistoric and historic sites and places of traditional cultural importance. Today, portions of the planning areas are among the fastest growing regions in the United States. This growth threatens important cultural resources at an alarming rate.

BLM manages cultural resources to protect and make proper use of their important scientific, educational, and cultural heritage values. Within the planning areas, BLM’s

Phoenix District manages some of the most important and best-preserved prehistoric and historic archaeological sites in the American Southwest (Ahlstrom and Roberts 1995; North 2002; Stone 1986). Additionally, cultural resources include sites of significance to Indian tribes.

Archaeological evidence reveals that Archaic hunters and gatherers began to live in the region at least 6,000 years ago. Later, occupants included the farmers of the prehistoric Hohokam, Perry Mesa, Prescott, and Patayan traditions. These people may have been ancestors of the O'odham, Hopi, Yavapai, and Yuman Indian tribes.

Prehistoric archaeological sites include properties as diverse as pueblo ruins, agricultural terraces, hunting camps, seasonal settlements, lithic quarries, trails, and rock art. Many of the prehistoric and historic native people moved to different sites on the landscape during different seasons to gather a wide range of plant and animal resources. Therefore, many of the artifact scatters and other archaeological sites represent temporary camps or resource collection and processing areas.

This region of central Arizona played an important role in Arizona's modern history. It includes Arizona's two State capitals, Prescott and its successor Phoenix. Moreover, the region includes some of the most significant historical mining districts in the State, concentrated in the Bradshaw, Vulture, and Weaver mountain ranges. Homesteaders, ranchers, merchants, and dam builders followed the miners. Historic archaeological sites include properties as diverse as mines, mills, ghost towns, ranches, homesteads, roads, and trails.

Agua Fria National Monument was established to protect significant cultural and natural resources. The monument contains more than 400 known archaeological sites, including prehistoric pueblo ruins and spectacular rock art. The monument is

likely to contain thousands of sites, because archaeological surveys have covered less than five percent of its area. The zone north of Perry Mesa remains largely unexplored but may contain significant resources.

Perry Mesa Archaeological District is listed on the National Register of Historic Places. The district was established on BLM-administered land in 1974, when much of Perry Mesa consisted of State Trust Land. BLM and the Tonto National Forest cooperated to expand the district in 1996. Its territory of about 50,000 acres encompasses Black Mesa and Perry Mesa, including important sites in Tonto National Forest. The district represents a cultural landscape defined by a well-preserved settlement system of communities occupied between A.D. 1250 and 1450. The sites within this system include the following:

- Pueblos and other masonry structures ranging from one to more than 100 rooms,
- Hilltop sites that may have served defensive purposes,
- Agricultural terraces,
- Rock art, and
- Artifact scatters left by a wide range of temporary activities.

BLM recognized the significance of these resources in designating the Perry Mesa Area of Critical Environmental Concern in the Phoenix Resource Management Plan (BLM 1988a). Although prehistoric sites represent most of the known cultural resources, the monument also contains historic sites, including features from ranching history and the operation of the Richinbar Mine.

Under the existing management direction for the Phoenix RMP (BLM 1988a) and Agua Fria National Monument, BLM has carried out proactive management of cultural resources in the Perry Mesa ACEC and surrounding zones on Perry Mesa and Black Mesa. Since 1990 management

accomplishments have included the following:

- archaeological inventories on Perry Mesa and Black Mesa (Heuett and Long 1995, North 2002);
- documentation of rock art sites;
- coordinated efforts with Tonto National Forest to prepare a site vandalism study (Ahlstrom et al. 1992),
- an archaeological overview (Ahlstrom and Roberts 1995),
- documentation for expanding the Perry Mesa National Register District in 1996; and
- monitoring of significant sites by the Civil Air Patrol and Arizona Site Steward Program volunteers.

These actions have provided enhanced knowledge and protection of cultural resources.

Prehistoric sites on Perry and Black Mesas have suffered damage from vandalism and artifact theft over decades. In the early 1990s, BLM and Tonto National Forest produced a comprehensive study of the history and effects of these activities (Ahlstrom and others 1992). The publicity from the legal case against Jones, Jones, and Gevara, caught in 1977, vandalizing a site on Perry Mesa in Tonto

National Forest, contributed to the enactment of the Archaeological Resources Protection Act. The recent publicity surrounding the designation of the national monument attracted attention that may have put sites at greater risk. Since early 2000 BLM, has increased levels of patrol and site surveillance, and there have been no major incidents of vandalism.

The statewide AZSITE database lists more than 1,500 archaeological sites in the Bradshaw-Harquahala Planning Area, including slightly more than 200 BLM-administered sites. Also, this region has approximately a five percent level of archaeological survey coverage. Surveyed areas are clustered near urban areas and along transportation routes, utility lines, and the Central Arizona Project aqueduct. As mitigation for raising the New Waddell dam and raising the level of Lake Pleasant, the Bureau of Reclamation conducted 100 percent class III survey of the Lake Pleasant Regional Park. In addition, before preparing the Lower Gila North Management Framework Plan (BLM 1983), BLM completed a sample survey of one percent of Federal lands within the Vulture and Harcuvar Planning Units in the western desert.

Given the incomplete status of the AZSITE database and the low level of survey coverage, one can reasonably expect that

Table 3-4. Ages of Known Cultural Sites in the Planning Areas

Age	Number of Sites	Percentage of Total	Comments
Prehistoric	774	45.58	12,000 BC to AD 1500
Historic	641	37.75	AD 1500 to 1950
Unknown	196	11.54	No diagnostic information or not listed on site card
Multicomponent	53	3.12	Historic and prehistoric elements
Recent	28	1.65	AD 1950 to present
No information	6	0.35	No information or no site card available

several thousand prehistoric and historic sites remain undiscovered on public lands in the planning areas (Table 3-4). Known Cultural Sites summarizes the periods of occupation (ages) of known sites within both planning areas, regardless of land status.

Away from Agua Fria National Monument, the highest density of prehistoric sites is along the Agua Fria River and other streams north of Phoenix. These data, although incomplete, may well reflect the distribution of prehistoric populations, which tend to cluster near perennial streams and water sources. Several mountain ranges, notably the Bradshaw foothills, the White Tanks, the Harquahalas, and the Harcuvars, also appear to have relatively high densities of prehistoric sites. Sites generally are concentrated along the lower slopes and in canyons because of the presence of springs, natural tanks, and wild food resources in these zones. Additionally, many of the more productive mountain ranges were home to several regional bands of the Yavapai Tribe. The Vulture, Big Horn, and Harcuvar mountain ranges contained localized sources of high-quality materials for stone tools, sometimes transported or traded over great distances. Although people used the desert expanses west of the Hassayampa River over several thousand years, this arid zone has a relatively low density of archaeological sites. It does contain distinctive features, such as prehistoric trails potentially linked into networks extensive enough to connect villages along the Colorado and Gila Rivers.

Historic period sites tend to be concentrated near the modern towns of Prescott, Wickenburg, and Black Canyon City. Many significant mines or mining-related sites are on public lands in and around the Bradshaw foothills and the Vulture and Weaver Mountains. Among the notable historic roads and trails is the route of large-scale sheep drives through the Black Canyon corridor. Many sites reflect the critical interdependencies among mining, ranching,

homesteading, commerce, and economic development.

The Harquahala Peak Smithsonian Observatory, a unique building at the summit of the Harquahalas, supported astronomical studies by the Smithsonian Institution during the 1920s. The Harquahala Mountain Observatory Historic District listed on the National Register of Historic Places; includes the observatory building, the historic Harquahala Pack Trail, Ellison's Camp, and associated features. This observatory is the only cultural site within the planning areas that has been the focus of interpretive development for public visitation.

Interpretive signs have been installed at the observatory building and at a kiosk along the Harquahala Peak Back County Byway located at the base of the mountains.

Historically, Pima groups of the O'odham people lived in the southern portion of the Bradshaw-Harquahala Planning Area, generally south of the Bradshaw foothills and east of the Hassayampa River. These groups claim cultural ties to the prehistoric Hohokam, who ranged further north during prehistoric times. Their descendants now live in the Salt River Pima-Maricopa, Gila River, and Ak-Chin communities.

The Yavapai people occupied the remaining zones within the planning areas, including Agua Fria National Monument. The Kewevkapaya (Southeastern Yavapai) lived in the Bradshaw Mountains. The Yavepe (Central Yavapai) occupied the area around present-day Prescott, and the Tolkapaya (Western Yavapai) lived in the desert and mountains of western Arizona. The Yavapai now live in the Fort McDowell, Prescott, Middle Verde, and Clarkdale communities.

The Maricopa and Mohave tribes, who spoke Yuman languages and lived along the Gila and Colorado rivers, likely hunted or

collected natural resources in the western portion of the planning area.

The Hopi, who currently reside several hundred miles northeast of Phoenix, have oral traditions that describe extensive migrations throughout Arizona. The conspicuous presence of Hopi Yellow Ware pottery at villages in Agua Fria National Monument shows prehistoric cultural ties to the Hopi people.

Tribes have expressed concerns regarding preserving cultural heritage values of prehistoric archaeological sites. Tribes often cite special significance to rock art, springs, habitation sites, and cemeteries. Therefore, ongoing consultations are needed to determine which traditional cultural properties or other places are of singular significance.

Cultural diversity in the planning areas also encompasses the history of ethnic groups, including Mexican and Cornish miners, Chinese workers, Basque shepherds, and African-American settlers. Archaeological sites in the planning areas may hold compelling clues about their lives and challenges in the Arizona desert.

Damage and destruction from natural processes and human activities threaten cultural resources. Natural sources of damage include geological processes such as, erosion and deflation. Prehistoric and historic standing structures are in danger of collapse from the effects of weathering. Rapid population growth and urban expansion have intensified the risks of damage from development and recreation activities. Damage from trash dumping, indiscriminant off-highway vehicle use, looting, and vandalism is expected to increase as more people travel farther and more often into previously remote areas.

The Phoenix District strives to avoid or mitigate adverse effects to cultural resources in evaluating and implementing proposed

projects and activities. However, it is more difficult to manage impacts caused by unplanned and casual activities. Frequently monitoring inspections and public education can help protect archaeological sites, particularly those near the Phoenix urban area, rural towns, and transportation routes. Through a partnership with the Arizona Site Steward Program, BLM regularly monitors at least 50 sites within the planning areas. In the future, community partnerships may provide more opportunities for site monitoring, public education, and interpretive developments for cultural heritage tourism.

Most known sites represent native archaeological cultures such as the Hohokam and Sinagua. A substantial percentage of sites are Euro-American. The number of native archaeological culture sites conforms closely with the prehistoric sites, whereas the number of Euro-American sites fit closely to the number of historical period sites. Some sites were affiliated with both prehistoric and Euro-American cultures, and a small fraction represents unlisted or unidentified cultural affiliation. An even smaller portion consists of sites affiliated with extant Native American cultures, such as the Yuman or Pai groups.

3.7 Paleontological Resources

Paleontological resources, or fossils, are a nonrenewable resource that provides scientific value and clues to the geologic history of central Arizona. While a minimal amount of paleontological research has been conducted in the region, 11 paleontological sites are known to occur within, or in close proximity to the planning areas. None of the known paleontological occurrences have been found on BLM-managed land within the two planning areas.

Paleontological resources are not currently actively managed under any existing management plans for these two planning areas.

3.8 Recreation

The closeness of the planning areas to the fast-growing Phoenix metropolitan area has dramatically increased the level of recreation within the planning areas. While opportunities for developed or formalized recreation exist at relatively few locations, such as the Lake Pleasant area, open recreation opportunities abound throughout both planning areas. BLM is responsible for integrating recreation needs and demands with other uses on public lands.

BLM uses a planning tool known as the Recreation Opportunity Spectrum (ROS) to determine which areas are suitable to be managed or maintained for various types of recreation. The ROS classification system is a way to help assure that people recreate in desirable settings and opportunities exist for a broad range of users. The Recreation Opportunity Spectrum on Map 3-11, shows the ROS inventory prepared as part of the planning process.

BLM issues Special Recreation Permits (SRPs) for commercial and competitive uses, organized group events and activities, and vending operations conducted on public lands. The permits can be for one-time events, such as an OHV race or horse ride, or for on-going commercial uses such as jeep tours. BLM issues SRPs on a first-come, first-served basis. BLM issued 57 SRPs in 2004, to include 3 competitive races; 18 motorized and non-motorized special events and organized group fundraisers, and 32 commercial permits for outfitter and guide activities such as big game hunting, OHV tours and horse trail rides.

To help direct future management and planning, BLM's Phoenix District engaged Arizona State University (ASU) West to conduct a survey to better understand and quantify recreation use in the planning areas (Andereck and others 2002). Respondents said, hiking/walking were their most frequent activities, followed by four-wheel driving, sightseeing, motorcycle/all-terrain vehicle (ATV) riding, and camping. Other activities include visiting cultural sites, picnicking, photography, wildlife and bird watching, target shooting, and hunting. The demand for these types of recreation is likely to increase as the Phoenix metropolitan area experiences accelerated growth over the next several decades. Especially, with the population of Maricopa and Yavapai Counties expected to increase from 3,829,200 in 2005 to 5,923,500 in 2025. Additionally, visitation to the planning areas is expected to increase proportional or higher to the rate of population growth of the two counties, or by 55 percent, by 2025.

No reliable user-day information is available for the planning areas. But, according to the AGFD web site, OHV use increased about 1.5 times faster than the population of Arizona from 1997 to 2003. Additionally, the number of OHVs sold in Arizona increased from 7,964 vehicles in 1997 to 23,568 vehicles in 2002. A 1990 study by Arizona State Parks estimated that there were more than 500,000 OHVs in Arizona. Some of the most rapid population growth is in Maricopa County. According to data collected by Arizona State University (Andereck and others 2002), Maricopa and Yavapai Counties account for about 70 percent of the visitors to the planning areas. The projected increase of more than two million people in the two counties is expected to substantially increase recreation use, especially OHV use, in the planning areas. OHV use is a significant form of recreation on BLM-managed lands. In the Agua Fria National Monument, dispersed camping is allowed in most areas. Popular sites lie along the network of roads and off

spurs. Many sites exist throughout the monument, and all have been established through public use. Many sites exist in illegal zones such as within ¼ mile of water facilities and at archaeological sites.

The substantial environmental concerns reported in the survey were litter, trash dumping, and vandalism. Additionally, social concerns focus on use of unregulated OHVs, target shooting, and residential/commercial development in the Bradshaw-Harquahala Planning Area. Respondents commented that the following are generally insufficient:

- information on the area,
- informational signs,
- drinking water,
- law enforcement, and
- toilet facilities.

In this same ASU West study (Andereck 2003), the Agua Fria National Monument recreation visitor profile showed a greater interest in the following:

- hiking and walking,
- nature study,
- visiting historical and cultural sites,
- dispersed camping, and
- wildlife and bird watching.

There was less interest in motorized activities, mountain biking, and picnicking. However, there was a strong preference for retaining the natural character of the environmental setting while developing visitor support facilities and increasing road maintenance, interpretive programs, and visitor services.

Those surveyed ranked social concerns for the monument accordingly:

1. unregulated OHV use,
2. off-road vehicles,
3. inconsiderate people, and
4. target shooting.

Environmental concerns stated were litter, erosion, vandalism, livestock grazing, trash dumping, and vehicle damage to soils and plants.

Designating Agua Fria National Monument elevated the area, from the perspective of the general population, to a unique status, thus increasing the public interest. Recreation professionals often refer to this as a “designation effect,” which describes the increase in interest of an area once it has been recognized through legislation or executive action as an area that is “special.”

3.9 Wilderness Characteristics

In concert with Agua Fria National Monument and the Bradshaw-Harquahala RMP, BLM has considered certain public lands for the presence of wilderness characteristics, including naturalness, solitude, and opportunities for primitive and unconfined recreation. BLM evaluated lands with wilderness characteristics:

- In response to public comment obtained through scoping,
- Pursuant to Sections 201 and 202 of the Federal Land Policy and Management Act of 1976,
- In applying Washington Office Instruction Memorandum 2003-274, BLM Implementation of the Settlement of Utah v. Norton Regarding Wilderness Study and Instruction Memorandum No. 2003-275, change one, Consideration of Wilderness Characteristics in Land Use Plans (Excluding Alaska) (both of which can be found in Appendix I), and
- In reviewing the 1980 Section 603 wilderness inventory findings--these findings are the wilderness inventory for public lands in the planning areas.

Landscape features associated with the concept of wilderness may be considered in land use planning when BLM determines that those characteristics are:

- reasonably present,
- of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and
- practical to manage.

Also, what must be present are naturalness and outstanding opportunities for solitude, and/or primitive and unconfined recreation wilderness characteristics.

Agua Fria National Monument

All 70,900 acres of Agua Fria National Monument were examined for the presence of wilderness characteristics in August and September 2002. Most of these lands were acquired and placed in public ownership after completion of the 1980 inventory, and have never been examined for the presence of wilderness characteristics. A total of 33,329 acres were determined to have wilderness characteristics.

Wilderness characteristics are found in four geographic areas of the national monument (Map 3-12):

- Agua Fria River Canyon, extending south of Bloody Basin Road to the powerline and pumping station,
- Baby Canyon, extending from Bloody Basin Road to the Agua Fria River confluence,
- Silver Creek/Long Gulch drainage and uplands, including Indian Creek and
- Perry Mesa, centered on Larry, and Lousy Canyons.

The remaining AFNM lands, totaling 33,329 acres, were inventoried for wilderness character and found not to possess wilderness characteristics. The parcels were determined to be unnatural in character, or

they did not possess outstanding solitude and/or primitive or unconfined recreation opportunities.

Bradshaw-Harquahala Planning Area

Public comments and scoping supported assessments of wilderness characteristics in parts of the Harquahala Mountains, the Big Horn Mountains, the Hassayampa River Canyon and Round Mountain area, the Belmont Mountains, Baldy Mountain (west of Lake Pleasant), Black Canyon Creek, and Black Butte. A total of 186,037 acres were determined to have varying degrees of wilderness character. The following areas, formerly Section 603 Wilderness Study Area (WSA) lands, and some lands adjacent to such areas, were determined to have wilderness characteristics (Map 3-12):

- Harquahala Mountains - 56,040 acres,
- Hummingbird Springs – 44,649 acres,
- Big Horn Mountains - 1,645 acres, and
- Hassayampa River Canyon/Round Mountain areas - 13,200 acres

These areas were essentially in the same condition as reported by the Section 603 wilderness inventory in 1980. They also represented important desert tortoise and big horn sheep habitat, general wildlife habitat, and scenic open space values. They were considered landscapes at risk due to increasing OHV use, visitation, and population growth.

Parts of the Belmont Mountains (totaling 31,900 acres), the Black Butte area (totaling 14,310 acres), a public land area south of the Castle Creek Wilderness (totaling 333 acres), and a part of the Hieroglyphic Mountains near Baldy Mountain (totaling 9,080 acres) were also examined for wilderness characteristics in response to public scoping comments (Map 3-12). BLM examined these areas and determined that

they are essentially natural and have wilderness characteristics. These locales also encompass important desert tortoise habitat, big horn sheep habitat, raptor habitat, geologic values, and scenic open space opportunities and values. They were considered landscapes at risk due to increasing OHV use, visitation, and population growth.

One new area was examined for wilderness characteristics in the Black Canyon corridor near Slate Creek. Most of the public lands in this locale were not under public ownership in 1980; hence they were never examined for wilderness character. A total of 14,880 acres were determined to have wilderness character after a meticulous field assessment.

All areas considered to have some measure of wilderness character are depicted on Map 3-12. Other areas submitted by the public for management of wilderness characteristics were determined not to have wilderness character.

3.10 Visual Resources

The planning areas are generally located in the Basin and Range Physiographic Province. Scenery varies greatly. Mesas and deep canyons characterize the terrain of Agua Fria National Monument. The scenery of the Bradshaw-Harquahala Planning Area includes rugged mountains, striking cliff formations, foothills, mesas, washes, bajadas, and broad plains. Major visual intrusions include highways and other vehicle routes, evidence of mining and ranching, and utility rights-of-way.

BLM is required to manage public lands to protect their scenic values. To consistently evaluate its lands within their regional context, BLM developed the Visual

Resource Management (VRM) program. BLM uses the VRM process to manage the scenic quality of the landscape and to reduce the impact of development on the scenery.

The VRM program consists of inventory and analysis components. The inventory is a process through which BLM determines the quality, sensitivity, and management issues of the visual setting of public lands. The analysis component is used to assess the visual impacts of specific projects before they are implemented. The VRM process includes the following steps.

- Evaluate the quality of existing scenery,
- Consider the distance from which that scenery is viewed, and
- Rate the public's sensitivity to changes in the landscape.

The VRM program has not been applied to all of the lands within the planning areas. VRM classes were established in 1982 for all public lands in the Lower Gila North MFP as amended (BLM 2005) area as part of the Lower Gila North Grazing EIS (BLM 1982). A range of Class II, III, and IV classes were established, based on inventories completed in the 1970s. In 1990, Class I standards and objectives were applied to 96,820 acres within five designated wilderness areas. Other parts of the planning areas are managed under an interim Class III standard.

BLM is aware these planning areas contain a wide range of visual features needing protection from degradation in managing and implementing other land uses. Moreover, much development has occurred, and public attitudes about landscapes and open space have changed in the quarter century since the original VRM inventories were completed. BLM's lands, once remote, are now near or within growing urban and rural population centers and are crossed by new paved highways.

The wild, west landscape is rapidly being converted to housing developments as millions of people move to Arizona. This growth has resulted in a vanishing desert landscape. The people moving to Arizona are no longer mainly retired seniors. Growing job markets are attracting a diversity of people; resulting in a wide range of demographics. Phoenix is the fifth largest city in the United States with continuous growth. Because these communities back up to BLM-managed lands, maintaining scenic quality is crucial for social, psychological, and spiritual well-being.

Accordingly, as part of this planning effort, BLM has developed an updated VRM inventory to do the following:

- Examine scenic quality,
- Consider viewing distances, and
- Assess public sensitivity to landscape changes.

The inventory was prepared according to the basic methodology outlined in BLM's Manual H-8410-1. Several of the steps were performed using a geographic information system. The inventory determined that 96,820 acres fit the criteria for Visual Resource Inventory Class I, 593,450 acres fit criteria for Class II, 162,000 acres fit Class III, and 114,730 acres fit Class IV. See Map 3-13, for the results of the VRM inventory.

3.11 Rangeland Management

Grazing on BLM's land in Arizona is managed under Title 43 of the Code of Federal Regulations (CFR), Section 4100, and is based on the following:

- Taylor Grazing Act (TGA) (43 U.S.C. 315, 315a through 315r),
- FLPMA (43 U.S.C. 1701 et seq.), and

- Public Rangeland Improvement Act (43 U.S.C. 1901 et seq.), and other executive and public land orders.

Leases and permits are valid for 10 years, with use reports annually submitted by leaseholders and permittees. BLM typically changes allotment schedules, stocking rates, class of livestock, or other grazing practices if a resource concern arises. BLM evaluates allotments when leases or permits are scheduled for renewal, consistent with the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (Land Health Standards).

BLM analyzes rangeland allotments by resource characteristics, ecological potential, opportunities, and needs. Allotments are then managed by the three categories of "Maintain," "Improve," or "Custodial." Agua Fria National Monument has 10 BLM-authorized grazing allotments (11 permittees), totaling 72,587 acres (70,820 BLM acres). These allotments have a permitted carrying capacity of 13,492 animal unit months (AUMs) of forage. An AUM is the amount of forage needed to sustain one cow, or its equivalent, for 1 month. The Bradshaw-Harquahala Planning Area has 91 BLM-authorized grazing allotments, totaling 1,855,738 acres (896,000 BLM acres) and 69,568 AUMs of forage. Appendix O shows allotment names and numbers, permitted AUMs, and livestock numbers and types for the planning areas.

In 2002 a total of 36,000 head of cattle were raised in Maricopa and Yavapai Counties, the two counties that include the planning area.

Within the planning areas, grazing allotments can be classed in one of three ways according to the availability of forage: (1) perennial, (2) perennial/ephemeral, or (3) ephemeral.

Perennial allotments produce a fairly dependable amount of forage every year, and the allotment stocking rate is based on that production. Perennial allotments are at the upper elevations of the planning areas, where precipitation is higher and more dependable than at lower elevations.

In the lower deserts, allotments that produce enough perennial forage to support a small herd but periodically produce large amounts of springtime forage from annual plants can be classed as perennial/ephemeral.

Allotments that typically produce little perennial forage and where livestock use depends on forage production from springtime annuals can be classed as ephemeral.

The "Special Ephemeral Rule" was developed to determine when allotments should be classified as either Ephemeral or Perennial/Ephemeral. That rule is described in the Rangeland Management section of Management Common to Both Planning Areas in Chapter 2. There are four Ephemeral permits in the planning areas. All the rest are either Perennial or Perennial/Ephemeral. Sheep are currently authorized on three allotments (one allotment on the monument), goats are authorized on one allotment and all the rest are authorized cattle or horses.

Grazing permits or leases authorize the use of lands for grazing. A grazing permit authorizes grazing on public or other lands administered by BLM within grazing districts under Section 3 of the TGA. A grazing lease authorizes grazing use on public or other lands administered by BLM outside of grazing districts under Section 15 of the TGA.

Within allotments, seasonal grazing may be required in some pastures. Moreover, grazing practices may be managed to achieve resource or grazing objectives, as

described in the allotment grazing permit or lease.

3.12 Mineral Resources

BLM manages the minerals on many lands beyond those where BLM manages the surface. Areas where the land surface and subsurface minerals are under different ownership are referred to as split estate lands. Acreage totals in this section account for the subsurface mineral lands.

BLM administers programs that allow production of three types of minerals and energy resources on public lands. These mineral assets fit into categories of saleable, locatable, and leasable minerals. Saleable minerals include sand, gravel, and other common minerals. Locatable minerals consist of precious metals such as gold, silver, and some industrial minerals such as gypsum and some clay. Fuels such as oil, gas, coal, and certain other substances are leasable minerals.

The minerals' planning area (Map 1-2) extends far to the north and east beyond the boundaries of the planning areas. Map 2-10, provides a more detailed look at current minerals management in the immediate environs of the planning areas.

The minerals planning area is the area with federally administered minerals, where the surface rights are held by BLM, the State of Arizona, or private parties, and located within the administrative boundaries of BLM's Phoenix District but are not being planned for in the Sonoran Desert National Monument RMP and Phoenix South RMP Revision.

The planning areas sit astride three geologic provinces. The Colorado Plateau Province includes the northern third of Arizona, bounded on the south by the Mogollon Rim. Scattered BLM-

administered public lands outside the planning areas are located in this province. Nearly horizontal, stratified, eroded sedimentary rocks characterize this province.

The Transition Zone Province bisects Arizona from northwest to southeast and is present in the central portion of the planning areas. The Transition Zone is a geologically complex area where the monocline and uplift tectonic characteristics of the Colorado Plateau are developed on Precambrian basement rocks and Mesozoic granitic rocks, and complicated by extensive block faulting encompassing and/or overlain by Tertiary volcanic and sedimentary rocks.

Covering the southern portion of the planning areas, the Basin and Range Province features northwest-trending block-faulted mountain ranges separated by deep, alluvium-filled basins. Mountain ranges in the planning area generally consist of Precambrian (Proterozoic) to Tertiary igneous, or metamorphic rocks bounded by block-faulted and folded Mesozoic to Cenozoic sedimentary rocks or Tertiary volcanic rocks. The deep intermontane basins generally contain slightly altered Paleozoic and Mesozoic sedimentary rocks overlain by Tertiary sedimentary and volcanic sequences.

Geologic conditions are suitable for the potential occurrence of leasable fluid minerals, which include the energy minerals oil and gas and the nonenergy mineral carbon dioxide (CO₂). Mature petroleum source rocks are present in Tertiary evaporites in the southern portions of the planning areas. Sandstone and limestone contain reservoir-quality porosity for fluid minerals to accumulate beneath structural and within stratigraphic traps in the northern scattered lands.

Sodium and coal are leasable solid mineral resources. Sodium may be present in deep evaporite deposits in Tertiary basins

throughout the Bradshaw-Harquahala Planning Area, and is extracted near Luke. There are no reported coal resources in the planning areas.

Five areas of potential sodium exist in the planning area subsurface. There has been no significant development of those resources and no indications for future leasing and development. The absence of sodium leasing in the planning area (except in the Luke Basin) is probably due to the limited demand for sodium and the great expense of exploring and developing it. Morton Salt is solution mining salt for industrial purposes from the Luke salt deposit. BLM has one lease with Morton for solution mining on the Luke deposit.

There are no known viable sources of leasable minerals in the Bradshaw-Harquahala Planning Area, but all land in the area is now open to mineral leasing. Sites north of the planning area within the Phoenix District do have some potential for exploration.

Geothermal energy resource potential exists throughout the planning area. A high potential for occurrence exists for using low-temperature geothermal energy in 16 geothermal resource areas. Most of these resource areas are defined by multiple water well fields, but these fields have not been developed. Moderate potential for occurrence of geothermal energy is also present throughout southern Arizona, which has several isolated geothermal wells. The potential for fluid, gaseous, and solid leasables (including geothermal energy) is shown on the Map 3-14.

Five low-temperature geothermal resource regions are recognized in the Bradshaw-Harquahala Planning Area. These regions are shown as moderate potential areas on Map 3-14. There has been no significant development of geothermal resources. These low-temperature resources might be used for

small-scale space heating and for resort spas.

The Bradshaw-Harquahala Planning Area has no geothermal energy leases and no indications for future leasing. The absence of geothermal leasing probably results from the limited uses for low-temperature resources and the great expense to explore and develop them.

The potential for oil and gas leasing is low throughout the minerals planning area, the potential for leasing is low. The potential is somewhat higher in the areas north of 35 degrees north latitude.

Oil and gas exploration was active in the Bradshaw-Harquahala Planning Area from 1913 to the 1980s. No oil and gas development has occurred on public lands, and no proven reserves have been documented. There is now no leasing interest. However, areas of moderate oil and gas potential do exist (Map 3-14).

The price of crude oil was a significant driving force for increased oil and gas exploration in the 1970s. The 1980s saw active exploration in the Basin and Range Physiographic Province of Arizona to test the Laramide Overthrust Trend. There has been no drilling since the 1980s. A trend toward increasing exploration is occurring throughout the United States as the active rig count increases with rising crude oil prices. Thus, there is potential for domestic crude demand to stimulate oil and gas exploration in the mineral planning area.

Locatable minerals exist throughout the planning areas, including porphyry copper, volcanic-epithermal, placer, vein, vein/replacement, and alteration of sedimentary rocks. Past mining for metallic minerals has mainly produced gold, silver, copper, lead, zinc, tin, and uranium. There is potential for occurrence of those and other metallic minerals and a high potential for occurrence of nonmetallic minerals. There

are few active locatable mineral operations. The potential for locatable minerals is shown on Map 3-15.

Mineral districts in the Bradshaw-Harquahala Planning Area are regions of known occurrences of and high potential for locatable metallic and nonmetallic minerals (Map 3-15). Most of the mines have been inactive for many years because the cost to mine the commodity exceeds the commodity's market value. Several small-scale locatable mines now operate in the planning area. These mines generally operate on a sporadic basis, depending on market conditions and financial support. These operations focus on placer gold, lode gold, and some industrial minerals.

Saleable mineral materials are found at Precambrian to Tertiary rock outcrops and in extensive Quaternary deposits of alluvial sand and gravel, piedmont alluvium, colluvium, and eolian sand throughout the planning areas. Pits, quarries, and prospects for saleable minerals are mapped to show the potential for occurrence of saleable mineral resources. These saleable minerals have high potential to be found in the planning areas (Map 3-16).

The Bradshaw-Harquahala Planning Area has many locations for saleable mineral resources. Known occurrences (quarries and pits), prospects, and potential locations for saleable material on BLM-administered lands are shown on Map 3-16. Those locations have high potential for saleable mineral resources because they are known to occur. Most of the locations are actively used for dimension stone, decorative rock, or local construction.

BLM managed mineral resources include minerals underlying BLM-managed surface, as well as thousands of acres of mineral estate beneath land surface that is owned by others, including State and private lands.

Minerals development in the Bradshaw-Harquahala Planning Area involves mainly saleable materials, particularly because of the area's closeness to a rapidly urbanizing area that places demands on materials such as sand, gravel, and decorative rock.

3.13 Fire Management

After the devastating wildfire season of 1994, the Federal Government created a single Federal Wildland Fire Management Policy and Program Review (WFMP) (BLM 2001b), establishing uniform Federal policies and programs, which essentially are given the assumption that wildland fire respects no boundaries and firefighting resources, are relatively meager.

The development of these principles and policies, which led to the development of a National Fire Plan (NFP) in 2000, assisted the Secretaries of Agriculture and the Interior in responding to severe wildland fires, reducing fire impacts on rural communities and ensuring effective firefighting in the future.

Implementing the National Fire Plan and its 10-year comprehensive strategy requires action at the national, regional, and local levels. The National Interagency Fire Center (NIFC), in Boise, Idaho, houses seven Federal agencies that work cooperatively to support firefighting and other natural-disaster relief work across the country.

The Southwest Area is one of 11 geographic areas established by NIFC to provide regional management of wildfires. The Southwest Area is managed by the Southwest Area Coordinating Group (SWCG), which consists of Federal and State agencies, including BLM, the U.S. Forest Service, National Park Service, U.S. Fish and Wildlife Service, Bureau of Indian

Affairs, and the States of Arizona/New Mexico. The SWCG has the overall responsibility for the following:

- prioritizing resource allocations during times of multiple incidents,
- overseeing the mobilization of emergency resources as a whole,
- developing incident management teams, and
- coordinating information and intelligence within the area.

The Southwest Area is divided into zones for local management coordination and mobilization of firefighting resources. The two planning areas are within the Central West Zone.

Within both planning areas are within the Phoenix-Kingman Fire Zone. BLM's Phoenix District and the Kingman Field Offices have developed a joint wildfire management strategy, which involves delineating fire management units and devising management strategies based on whether the lands within these units are suitable for wildland fire use for resource benefit (See Map 3-17 and Appendix L, Phoenix/Kingman Zone Fire Management Plan 2004).

Areas suitable for wildland fire use for resource management benefit include, areas where wildland fire is desired, and there are few or no constraints for its use. Where conditions are suitable, unplanned and planned wildfire may be used to achieve desired objectives, such as; to improve vegetation, wildlife habitat or watershed conditions, maintain non-hazardous levels of fuels, reduce the hazardous effects of unplanned wildland fires and meet resource objectives. Where fuel loading is high but conditions are not initially suitable for wildland fire, fuel loads are reduced by mechanical, chemical or biological means to reduce hazardous fuels levels and meet resource objectives (includes WUI areas).

Areas not suitable for wildland fire use for resource benefit include areas where mitigation and suppression are required to prevent direct threats life or property. It includes areas where fire never played a large role, historically, in the development and maintenance of the ecosystem, and some areas where fire return intervals were very long. It also includes areas (including some WUI areas) where unplanned ignition could have negative effects to ecosystem unless some form of mitigation takes place. Mitigation may include mechanical, biological, chemical or prescribed fire means to maintain non-hazardous levels of fuels reducing the hazardous effects of unplanned wildland fires and meeting resource objectives. The allocation of lands is based on the Desired Future Condition of vegetation communities, ecological conditions, and ecological risks. The allocation of lands is determined by contrasting current and historical conditions and ecological risks associated with any changes (Map 3-17). The condition class concept helps describe alterations in key ecosystem components, such as species composition, structural stage, stand age, canopy closure, and fuel loadings. BLM's Fire Management Plans include the two allocations and identify areas for including fire use, mechanical, biological or chemical means to maintain non-hazardous levels of fuels, reduce the hazardous effects of unplanned wildland fires and meet resource objectives. Additionally, they identify areas for exclusion from fire (through fire suppression), chemical, mechanical, and/or biological treatments.

3.14 Wild Burros

Upon passage of the 1971 Wild Free-Roaming Horse and Burro Act, BLM became responsible for protecting wild horses and burros and their habitats. Following the act, BLM was directed to delineate herd areas (HAs) where animals were known to occur. Within the Bradshaw-Harquahala Planning Area, two herd areas

were found, ~~to~~ surrounding Lake Pleasant and ~~to occur~~ in the area spanning the Harquahala and Big Horn Mountains. Agua Fria National Monument has no wild horse and burro areas (Map 2-5.).

The Phoenix RMP (BLM 1988a) determined that the herd area around Lake Pleasant was manageable and established a herd management area (HMA). The management of wild horses and burros on public land requires the following:

- removing nuisance animals from adjacent private or State land when requested,
- preparing a herd management plan,
- maintaining a herd inventory, and
- removing and disposing of excess animals through public adoption, if possible.

BLM prepared a herd management (April 1999) plan for the Lake Pleasant HMA.

The Lake Pleasant HMA, containing 80,800 acres, lies 25 miles northwest of Phoenix, partly within the city of Peoria and partly in unincorporated Maricopa and Yavapai Counties. The HMA consists of 80,800 acres of Sonoran Desert, mainly with paloverde and mixed cacti vegetation types. The HMA's overall capacity, referred to as the appropriate management level (AML), is 208 burros. Determined using resource inventory and monitoring information, the AML is used to manage an ecological balance between a viable herd population and a healthy habitat that provides a stable source of forage.

The Harquahala HA, containing 156,255 acres, is located in western Maricopa County within the Harquahala Management Unit. It contains portions of the Harquahala Mountains, Big Horn Mountains, and Hummingbird Springs Wilderness Areas. The herd size in the HA is estimated to be less than 50 animals. Its vegetation is a mix of creosote-bursage, mixed paloverde, and

cacti communities. The Lower Gila North Management Framework Plan (BLM 1983) suggested the removal of all the burros in this herd area. A manageability analysis (Appendix G) concluded that the Harquahala burro herd is not a viable option for a herd management area over the long term because of genetic diversity, limited water sources, forage requirements that result in the animals traveling outside of the area to private farm lands and state managed lands

Both areas had a census in 1999, and herd numbers for the HMA and the HA are as follows:

- Lake Pleasant HMA 206 burros
- Harquahala HA 47 burros

In these areas, no other landowners or managers similarly manage wild horses and burros. No animals are moved from one HMA to another.

3.15 Social and Economic Conditions

3.15.1 Population and Household Characteristics

This section summarizes socioeconomic data collected for the baseline socioeconomic analysis of the planning areas prepared in January 2003, by James Kent Associates (JKA). For purposes of this analysis, Maricopa and Yavapai Counties represent the economic study areas because they include the areas where direct social or economic impacts of planning decisions would likely occur.

BLM contracted separately with JKA to develop more specific socioeconomic information. This more specific data are provided, when suitable, as part of the socioeconomic analysis of the study area. JKA developed data subdivided by human resource units (HRUs) (Map 3-18). HRUs, as defined by JKA, identify the “sense of place or community” with which local residents identify, and in which the many daily routines of everyday life take place. Correlating U.S. Census data with the local human geography (i.e. HRUs) allows for data interpretation that is more meaningful and helps to reveal a region's diversity that might not otherwise be apparent. The planning areas have five HRUs: Wickenburg, Prescott, Lake Pleasant, Phoenix, and Buckeye.

Table 3-5 highlights the changes in population and household levels in the planning areas. Between 1990 and 2000, Maricopa and Yavapai Counties experienced significant population increases.

The Lake Pleasant HRU showed the greatest increase in population of all the HRUs, with a growth rate of 148 percent. The Wickenburg HRU, at 28 percent, experienced the least amount of growth. Combined, the HRUs within the planning areas averaged a 71 percent growth rate between 1990 and 2000. This rate compares with a 40 percent growth rate for the State of Arizona, a 45 percent growth rate in Maricopa County, and a 56 percent growth rate in Yavapai County. This growth trend is also reflected in the total number of households, which increased simultaneously with the population. As shown in Table 3-6, between 1990 and 2000 total housing units increased in all HRUs, with the greatest increase again occurring in the Lake Pleasant HRU. Concurrently, the average value of these housing units increased in all HRUs, with the greatest increase in value also occurring within the Lake Pleasant and Buckeye HRUs.

3.15.2 Employment and Earnings

The U.S. Department of Commerce Bureau of Economic Analysis (BEA) estimates annual employment and earnings for counties throughout the United States. To examine trends in employment by industry over this period, data was obtained from BEA on total annual employment for each county within the study area and Arizona.

Table 3-7 and Table 3-8 on the following page, summarize, by industry, the percentage of employment and earnings for 2000 for the economic study area.

The categories of Services, Retail/Wholesale Trade, and Manufacturing provided the largest contributions to both employment and earnings. Services, Retail, and Wholesale Trade, Construction, and the combined Finance, Insurance, and Real Estate (FIRE) category showed large increases in earnings from 1990–2000.

Sector	Maricopa County	Yavapai County
Farm, Agricultural Services, Forestry, and Other	1.7	2.4
Mining	0.6	2.2
Construction	7.5	10.3
Manufacturing	9.0	5.8
Transportation and Public Utilities	4.9	2.6
Retail and Wholesale Trade	22.0	22.6
Finance, Insurance, and Real Estate	11.0	8.8
Services	33.4	33.1
Government	9.9	12.2
Total Employment	1,896,035	71,985
Source: U.S. Department of Commerce Bureau of Economic Analysis		

Farm and Agricultural-Related Services and Mining had very small increases in earnings during the same period and represented relatively low earnings during 2000.

The services category includes professional/technical services, management services, education, accommodations/food service, entertainment/recreation services, and health care/social assistance. Trade includes businesses involved directly with wholesale/retail enterprise. Both the Services/Retail and Wholesale Trade categories reflect economic activity related to growth, tourist, and visitor activity in both Maricopa and Yavapai Counties. The FIRE and Construction categories include businesses and employment that would be expected to increase as a result of the high rate of population growth experienced in both Maricopa and Yavapai Counties over the past decade.

The average earnings per job in Maricopa County increased from \$32,456 in 1970 to \$35,744 in 2000. The figures for Yavapai County showed a decline in earnings from \$28,493 in 1970 to \$22,925 in 2000 (Sonoran Institute 2003).

Earnings from mining in the two counties in the planning areas increased from \$444,623,000 in 1992 to \$727,712,000 in 2000. Mining employment has also increased by 74 percent during the same period. However, mining employment and earnings represent a relatively low percentage for the planning areas (Employment is 0.2 percent; earnings are 0.2 percent).

3.15.3 Unemployment

Changes in the labor force and unemployment rates can provide information on the status of the local economy. Average unemployment rates are shown in Table 3-9. Unemployment rates have generally declined in both counties within the study area and are consistent with rates for Arizona as a whole.

3.15.4 Property Valuation

Table 3-10 summarizes property valuations for each county. The Arizona Department of Revenue assigns values to utilities, airlines, railroads, mines, communications, and pipelines. These are referred to as "Centrally Valued Properties." Counties are responsible for assessing other classes of property, including residential, commercial, industrial, and agricultural properties, which are referred to as "Locally Assessed Properties." For tax year 2003, the net valuation of property assessed by the State of Arizona was \$7,158,828,578 for the two counties. Also, total net local assessments for tax year 2003 equaled \$19,805,829,810 for the two counties.

A source of local government revenue directly attributable to the public lands in each of the counties consists of payments in lieu of taxes (PILT). BLM administers

Sector	Maricopa County	Yavapai County
Farm, Agricultural Services, Forestry, and Other	1.0	1.9
Mining	0.1	2.7
Construction	7.7	14.6
Manufacturing	13.9	7.6
Transportation and Public	6.1	3.5
Retail and Wholesale Trade	17.6	16.9
Finance, Insurance, and	11.4	5.9
Services	31.0	28.8
Government	11.2	18.1
Total Earnings	\$67,771,606	\$1,650,234

Source: U.S. Department of Commerce Bureau of Economic Analysis

PILT payments, which are provided by the Federal Government to offset tax revenues lost because of tax-exempt Federal land in their jurisdictions. PILT payments are used for a number of purposes, to include; support community services such as firefighting and police protection, and to provide health care in rural communities.

Congress appropriates funds for PILT

		County		Human Resource Unit (HRU)				
Arizona		Maricopa	Yavapai	Wickenburg	Prescott	Lake Pleasant	Phoenix	Buckeye
1990								
Number	123,902	64,742	2,655	282	1,845	2,019	61,133	907
Percent	7.1	4	3	4	2	2	4	6
2000								
Number	133,368	70,931	3,616	175	1,614	4,651	64,567	925
Percent	3.4	3	3	2	2	2	3	3

Note: HRUs represent distinct areas and do not necessarily coincide with jurisdictional boundaries.
Source: U.S. Census Bureau and JKA.

payments to eligible units of local government each year. BLM calculates the amount of payments using a formula based on population and the amount of Federal land in a particular local jurisdiction.

These payments are in addition to Federal revenues transferred to local governments under other programs, such as income generated from timber harvests, mineral receipts, and the use of Federal land for livestock grazing.

tourism and recreation sector (American Recreation Coalition 2001). Recreation use of BLM's lands is correspondingly expected to increase at a significant rate (Cabe and Coupal 2001). Understanding the economic importance of recreation use in this area is critical to proper planning for resource protection, economic sustainability, and quality of life.

Employment provided by recreation and tourism is typically classed within the Service and Trade sectors. These sectors

Table 3-10. 2002 Primary Property Tax Levies

County	Net Assessed Valuation	State	County	Cities & Towns	Community Colleges	Schools	All Other	Total	Primary Rate
Maricopa	\$24,457,047,282	\$0	\$31,721,521	\$175,207,012	\$36,526,312	\$603,369,737	\$113,194,334	\$960,018,916	3.93
Yavapai	\$1,450,497,580	\$0	\$3,072,096	\$1,667,615	\$5,735,780	\$12,506,662	\$18,727,476	\$41,709,629	2.88

Source: Arizona Department of Revenue, 2002 Annual Report

Table 3-11 shows the PILT payments to Maricopa and Yavapai Counties from BLM during for the period of 1999-2003.

3.15.5 Recreation and Tourism

Increased interest in recreation over the past decade combined with a large increase in population in the Phoenix metropolitan area and within the planning areas; has resulted in heavy use of BLM's lands for recreation. Currently BLM collects data on visitation to BLM-managed lands through visitor registers at trailheads and recreation sites, and with vehicle counters at a few key locations. BLM's staff noted an increase in the recreation use of public lands through analysis of the data and through personal observation.

National trends in recreation and tourism show a continued expansion of the

also provide diversification to the local economy. They typically reflect the following:

- a growing population involved in retail and commercial businesses,
- a visitor population that uses local services, and
- increasing numbers of retirees as a segment of the population that brings money into the economy through transfer payments and local spending.

During 2000, total service and trade earnings in Maricopa and Yavapai Counties were \$33 billion. During 2000, about 1.1 million workers in the service and trade sectors earned an average of \$32,000. Recreation in the planning areas will continue to increase due to State and regional population growth, as well as an aging population that may demand increased opportunities for leisure and recreation.

County	1999	2000	2001	2002	2003
Maricopa	\$969,069	\$1,019,264	\$1,465,414	\$1,539,003	\$1,725,495
Yavapai	\$879,521	\$973,796	\$1,417,178	\$1,473,737	\$1,359,624
Source: U.S. Bureau of Land Management					

OHV use constitutes a rapidly growing recreation use of BLM's lands. Between 1997 and 2002, the number of OHVs sold in Arizona increased from 7,964 to 23,568 vehicles. The direct economic impact to Yavapai County from OHV recreation is an estimated \$183 million per year and to Maricopa County exceeds \$1.358 billion per year (Silberman 2003).

The following are facts concerning OHV use in Yavapai and Maricopa Counties (Arizona State Parks 2003):

- A total of 27 percent of Yavapai County households are OHV users, compared to 21 percent statewide.
- A total of 19 percent of Maricopa County households are OHV users.
- OHV use supports more than 15,000 jobs in both counties.
- OHV recreation accounts for more than two billion dollars per year in the two counties.

The equestrian industry, including self-housed, self-boarded, and commercially boarded horses, represents a significant contribution to the economic base of the planning areas. Estimated annual direct expenditures in the above activities, using calculations from "A Partial Economic Impact Analysis of Arizona's Horse Industry" (Beattie and others 2001), is \$8.5 million for the Wickenburg area alone. Impact on the broader Wickenburg area economy is about \$14 million. Equestrian use, boarding stables, and retail have strong roots throughout the greater Phoenix area and in adjacent towns and communities that use BLM's lands for recreation.

3.15.6 Ranching-Agriculture

Farming and ranching have historically been significant contributors to the Arizona economy. In recent years, extensive population growth within the planning areas have resulted in loss of agricultural land and increased conflicts with farm and ranch operations.

The United States Department of Agriculture (USDA) National Agricultural Statistics Service reports livestock production statistics for all counties. Data for Maricopa and Yavapai Counties for livestock receipts during 1999 through 2002 shows that inventories of cattle remained fairly constant during this four year period (see Figure 3-1). In 2002, a total of 36,000 head of cattle were raised in these two counties. The period from 1999 to 2002 experienced the following:

- Cattle inventories remained fairly constant,
- Cash receipts for livestock averaged \$500,000 per year, and
- Total agricultural product receipts averaged \$900,000 per year.

Cash receipts from crops were relatively low in Yavapai County (about one percent of the total for the two counties). Receipts from cattle represented a more significant portion of the receipts (nine percent of the total for the two counties).

Total net income from farming and ranching in Maricopa County rose from 1970 to 1985,

and then dropped steadily to the year 2000. In Yavapai County, net income dropped from \$9 million (1970) to \$2.8 million (1986), and then rose to \$9.7 million in 2000.

3.16 Environmental Justice

In 1994, the President of the United States issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations." The objectives of the executive order include the following:

- develop Federal agency implementation strategies,
- identify minority and low-income populations where proposed Federal actions could have disproportionately high and adverse human health and environmental effects, and
- encourage the participation of minority and low-income populations in the NEPA process.

Two types of data must be reviewed to evaluate environmental justice effects: minority populations and income levels. Minority and income level data for the HRUs were obtained from the 2000 census data.

3.16.1 Minority Populations within the Planning Areas

According to U.S. Census Bureau for 2000, the combined minority population of the planning areas averaged 23.9 percent of the population. Arizona has a similar minority population rate of 24.4 percent. Table 3-12 which is located in the additional tables sections of the document,

shows minority populations by different areas in the planning areas.

The planning areas were analyzed at a block-group level to determine where higher-than-average minority populations lived. Minority populations were identified in the Bradshaw-Harquahala Planning Area but not within Agua Fria National Monument. The largest minority population was located to the west and southwest of Wickenburg. Other portions of the Bradshaw-Harquahala Planning Area with significant minority populations included the following:

- a small parcel of tribal land just outside Prescott,
- an area extending along Interstate 60 near the towns of Circle City and Wittmann, and
- several populations scattered throughout the northwest Phoenix metropolitan area.

Using the county averages for comparisons, each Human Resource Unit (HRU) and Community Resource Unit (CRU) was evaluated to determine whether the percentage of minority population was greater than the county average. If HRU or CRU percentages exceeded the county averages, they were evaluated for environmental justice effect on the basis of their minority population and income levels.

Table 4-9 shows HRUs and CRUs whose percentage of Hispanic populations and percentage of populations living below the federally mandated poverty level exceed those of their counties. Minority populations and poverty are the two criteria for an environmental justice analysis.

The only HRU in Yavapai County with minority populations that exceed the county average is the Wickenburg HRU. The percent of Hispanics in the Wickenburg

HRU (11 percent) exceeds the Yavapai County percentage of Hispanics (10 percent) by only 1 percent. In the Wickenburg HRU, the percentage of Hispanics in the Aguila CRU (16 percent) exceeds the Yavapai County percentage of Hispanics by six percent.

The percentage of Hispanics in the Phoenix HRU (27 percent) exceeds the Maricopa County percentage of Hispanics (25 percent) by two percent. In the Phoenix HRU, the percentage of Hispanics in the community of Tolleson (78 percent) exceeds the Maricopa County percentage of Hispanics by 53 percent.

The percentage of Hispanics in the Buckeye HRU (26 percent) exceeds the Maricopa County percentage of Hispanics (25 percent) by 1 percent. In the Buckeye HRU, the percentage of Hispanics in the Buckeye

CRU (28 percent) exceeds the Maricopa County percentage of Hispanics by three

percent, and the West Tonopah CRU (32 percent) exceeds the Maricopa County percentage of Hispanics by 7 percent.

3.16.2 Low-Income Populations within the

Planning Areas

According to U.S. Census Bureau for 2000, 11.4 percent of the total population within the planning areas was below the poverty level. Within Arizona, 13.9 percent of the total population was below the poverty level. The entire population within Agua Fria National Monument was statistically below the poverty level. Additionally, most of the west, northwest, and northeast portions of the Bradshaw-Harquahala Planning Area were classified as below the poverty level. Table 3-13 shows populations below poverty level by county and HRU.

Using the county averages for comparisons, the percentage of persons living below the poverty level for each HRU and CRU was compared to the county average. If HRU or CRU percentages exceeded the county averages, they were evaluated for environmental justice effect on the basis of their income levels.

Table 4-9 shows HRUs and CRUs whose percentage of Hispanic populations and percentage of populations living below the federally mandated poverty level exceed those of their counties.

The Wickenburg HRU (14 percent) exceeds Yavapai County (12 percent) by 2 percent.

Persons Below Poverty Level (BPL)	Arizona	Maricopa County	Yavapai County	Wickenburg	Prescott	Lake Pleasant	Phoenix	Buckeye
1990 Population BPL	564,362	257,359	14,308	1,370	8,999	9,424	239,334	5,330
% of population BPL	**16	12	13	16	15	8	12	24
2000 Population BPL	698,669	355,668	19,552	1,484	9,286	13,700	332,297	6,153
% of population BPL	**14	12	12	14	10	4	12	15

Notes: ** Percentage of persons living below the poverty level was determined by dividing population below poverty level by total population of county or HRU as appropriate.

HRUs represent distinct areas and do not necessarily coincide with jurisdictional boundaries.

Source: U.S. Census Bureau and JKA.

In the Wickenburg HRU, both the Aguila CRU (20 percent) and Yarnell CRU (16 percent) exceed the county level by eight percent and four percent, respectively. While the Prescott HRU is lower than that of the county's, in the Prescott HRU, the Agua Fria CRU (15 percent) exceeds the county level by three percent.

The Phoenix HRU (13 percent) exceeds the Maricopa County level (12 percent) by one percent. The Buckeye HRU (17 percent) exceeds the Maricopa County level by 5 percent.

3.17 Health and Safety

BLM has several programs that guide management to protect public health, safety, and property. These responsibilities include such activities as identifying abandoned mine lands (AML), protecting lands from illegal dumping of solid and hazardous materials, preventing theft of Federal property or misuse of resources, and managing wildfire. The proximity of the AFNM and Bradshaw-Harquahala Planning Area to metropolitan Phoenix, along with the accelerated growth of Maricopa County over the past two decades, has put considerable user pressure on these lands, emphasizing the need for BLM to develop and implement additional strategies for protecting the health and safety of visitors.

3.17.1 Abandoned Mine Lands

Due to the high level of mining in and around the Bradshaw Mountains, thousands of abandoned mines are potentially within the planning areas. Most of these mines are unmarked, unfenced, and pose serious or fatal risks to humans who may accidentally come upon them or deliberately seek them.

In addition, hazardous materials are present at some of the abandoned mines.

Since 1992, BLM has teamed with the Arizona State Mine Inspector and Federal/State agencies, to evaluate the need for clean-up and closure of abandoned mine sites that pose safety risks to visitors; or are causing environmental damage. Since that time, about 9,000 sites throughout the State have been inventoried and mapped (Arizona State Mine Inspector 2002). Additionally, BLM has joined an aggressive program to heighten public awareness of the safety and environmental hazards of abandoned mine lands.

A total of 957 abandoned mines were documented and mapped within the the planning areas. Map 3-19 shows the distribution of these mines. Through the Abandoned Mine Lands program, the following mines were fenced (Arizona State Mine Inspector 2001):

- New River-Black Canyon Mines in June 2000,
- Mayer Shafts in Yavapai County in November 2000,
- Prescott and Humboldt Mines in March 2001, and
- King Midas and Morgan Butte Mines in June 2001.

3.17.2 Hazardous Materials

BLM's Hazardous Materials program addresses both solid and hazardous wastes, in accordance with the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). These acts provide comprehensive guidance to BLM for performing required assessments, monitoring, pollution prevention, recordkeeping, reporting, response actions, and training on a timely basis. BLM is also

inventory can be found on maps 3-21, 3-22, 3-23, 3-24 3-25, 3-26.

Upon completion of the Resource Management Plans, the route network that will continue to be managed by BLM will be determined using a structured route

evaluation process such as that described in Appendix D - Route Evaluation and Designation Process. Decisions of which specific routes will be open, closed, or somehow limited to continued vehicular use are implementation actions that will be made through a separate process.

Chapter Four



Chapter 4 - Environmental Consequences

4.1 Introduction

Chapter 4 analyzes the environmental impacts of implementing each Alternative described in Chapter 2. The affected environment described in Chapter 3 comprises the baseline used for projecting impacts. Management that could affect resources or resource uses has been analyzed, and the conclusions drawn from that analysis are described for the resource consequence section.

Resource Management Plans (RMPs) are designed to provide broad guidance and are not intended to be site or project specific. Current planning guidance allows implementation-level decisions to be made in a RMP when suitable. The impacts discussed in this chapter are general, described at a landscape or regional level. RMPs are implemented through site-specific projects and activity plans; these steps often require a separate site-specific National Environmental Policy Act (NEPA) analysis.

Many management actions are common to all Alternatives or to several Alternatives. Similarly, the impacts of implementing a given set of management actions might be common to a range of Alternatives or even to several seemingly disparate resources and uses. When a proposed activity is not addressed in a specific section, no impact is expected.

4.2 Analytical Assumptions

The following general assumptions and guidelines were used in the analysis of environmental consequences. Other assumptions specific to a particular resource are presented under that resource.

- Funding and personnel would be sufficient to implement any of the Alternatives as described for Chapter 2.
- The laws, regulations, and policies that direct Bureau of Land Management's (BLM) work would be applied consistently and as suitable across all Alternatives.
- All Alternatives would maintain vegetation resources and meet the need for water, nutrients, and energy cycling.
- The approved RMP would remain in effect for 15 to 20 years. The first year that the RMP would be in effect would be 2008. For items that were analyzed over time, the analysis was carried out to 2028.
- County populations for 2008 and 2028 would be as reported in the projections used in this RMP. Population projections for Maricopa and Yavapai Counties for 2005 were calculated by extrapolation from the year 2000 Census and the official Arizona Department of Economic Security annual population estimate for 2003. For the year 2028, this RMP uses the Maricopa Association of Governments (MAGs) interim projections by Municipal Planning Area (MPA) in Maricopa County. For the year 2028, a projection was developed for this RMP for Yavapai County from the known deviation between the 1997 population projection series for future years, the year 2000 Census (an actual county population that was 110 percent of the projected population), and the Arizona Department of Economic Security (DES) population estimate for 2003 for Yavapai County and its

incorporated places (an estimated county population that was 112 percent of the projected population).

- Short-term impacts are those expected to occur during and within one to five years of implementing the activity. Long-term impacts are those that would occur after the first five years of implementation.
- Recreational use in the planning areas would continue to increase. A visitor-use study prepared by Arizona State University West (Andereck and others 2002), lists the general themes of recreation. The study was based on meetings with focus groups for various types of recreation and on surveys of recreation users in the planning areas.
- A total of 70 percent of visitors to BLM's lands in the planning areas reside in Maricopa and Yavapai Counties. The analysis assumed that the 70 percent share would remain constant throughout the life of the plan.
- Appendix C lists the laws and regulations with which all activities must comply and that might limit the range of management actions.

4.3 Types of Effects to be Addressed

This chapter describes the direct, indirect, and cumulative impacts of implementing *Alternative A*--the No-Action Alternative--and each of the four other Alternatives.

The impacts of the planning decisions on the visitor's experience would depend on the expectations and values of the individual visitor. A particular action could benefit some users and adversely affect others. The degree of impact would also vary relative to user sensitivity. Sensitivity would vary among user types and might also differ between new users and traditional users of a particular resource.

The impact analysis presents effects that might enhance or improve a resource as well as those that might degrade a resource. Instead of analyzing every minor interaction and cause-effect relationship, the impact analyses are confined to actions that have direct, immediate, and significant effects on the planning areas. Cumulative impacts, discussed at the end of the chapter, are effects that the Alternatives could have in relation to other past, current, and reasonably foreseeable future actions in and adjacent to the planning areas.

4.4 Incomplete or Unavailable Information

Federal regulations (43 CFR 1502.22) mandate that agencies evaluating reasonably foreseeable significant adverse effects on the human environment, in an Environmental Impact Statement (EIS), must discuss incomplete or unavailable information if that information is essential to a reasoned choice among Alternatives. This EIS is based on the best available data for each resource.

4.5 Critical Elements that will not be Addressed

There would be no known adverse impacts on certain critical elements of the human environment. These elements include prime or unique farmlands, floodplains, and hazardous or solid waste. This plan has not addressed these critical elements because they are not present in the planning areas or would not be affected by the management activities under the Alternatives. These critical elements would be considered, as suitable, in site-specific project design and implementation processes. Each of these excluded elements is discussed below.

Prime and Unique Farmlands: There are no prime or unique farmlands or farmlands of statewide or local importance on public lands in the planning areas. None of the actions in the Alternatives analyzed in detail would disturb farmlands. Therefore, impacts on prime and unique farmlands are not analyzed further.

Floodplains: Although floodplains exist in the planning areas, no projects or activities resulting in permanent fills or diversions in, or placement of permanent facilities, on floodplains of major rivers are projected to occur under any of the proposed Alternatives. Therefore, impacts on floodplains are not analyzed further.

Hazardous and Solid Waste: No hazardous, toxic, or unapproved solid waste sites are known to occur on public lands in the planning areas. None of the actions, activities, and uses projected to occur with implementing the plan Alternatives would require the handling, storage, or release of significant amounts of these wastes. Therefore, impacts on or from hazardous and solid wastes are not analyzed in detail.

Indian Trust Assets: Indian trust assets are lands, natural resources, money, or other tangible assets held by the Federal Government in trust or restricted against alienation for Indian tribes and individual Indians. BLM has determined that the actions described for this land use plan would not affect Indian trust assets.

4.6 Impacts on Special Designations

This analysis covers the suitable Wild and Scenic River (WSR) segments of the Agua Fria River in Agua Fria National Monument, five existing wilderness areas, the Harquahala Mountain Summit Road Back Country Byway, proposed back country byways, and existing and proposed Areas of Critical Environmental Concern (ACEC).

The five existing wilderness areas were studied and found to have sufficient values of naturalness, solitude, and primitive and unconfined recreation opportunities to be designated by Congress. The values are somewhat diminished at the edge of the areas because of complex boundaries where different land uses occasionally affect core wilderness values.

A 1996 Colorado study found that scenic byway designation led to an increase in traffic on eight of 21 new byways. This analysis assumes that proposed byways would increase traffic on the proposed routes because the routes accentuate cultural and scenic resources in the national monument and near the Wickenburg area.

4.6.1 From Special Designations

Alternative A (No Action)

Alternative A would create no new Special Designations. No impacts are expected to proposed suitable WSR segments, ACECs, the five wilderness areas, or the Harquahala Mountain Summit Road Back Country Byway. Perry Mesa and Larry Canyon ACECs in Agua Fria National Monument would be maintained. No impacts are expected because the ACEC resources of relevance and importance are protected by the Monument Proclamation (Appendix A).

Alternative B

Designating Bloody Basin Road as a back country byway could affect the segments of the Agua Fria River suitable for WSR designation by increasing traffic and visitor access near the river crossing. More traffic and visitor use could diminish the scenic and habitat values and alter the recreation experience in the corridor. Since the road would be maintained to BLM type three standard, which would require high-clearance vehicles to traverse it, the increase in visitation is expected to be small. Byway visitors would have their recreational experience enhanced by

interpretation of Agua Fria National Monument's resources along the route.

Intensified traffic and recreation could affect the residents of the Horseshoe Ranch because of increased visitation, trespass, dust, and road maintenance needs. In turn, more visitors and traffic could impede pronghorn movement and migration.

Establishing the Constellation Mine Road Back Country Byway would increase the number of visitors along the road as well as to Hassayampa River Canyon Wilderness. Vehicular traffic would intensify along the byway, adversely affecting residents and ranchers residing in the area. Increased traffic, dust, road maintenance needs, and visitor levels would be expected. The increase in visitors could degrade the Hassayampa River Canyon wilderness experience for some visitors by reducing solitude opportunities. Conversely, byway visitors would have their recreation experience enhanced by interpretative signs placed along the byway describing resource and cultural values, including the area's ranching and mining history.

No impacts to the Harquahala Mountain Summit Road Back Country Byway are expected.

Alternative C

Impacts from designating back country byways would be similar to those described for *Alternative B*.

Finding tributary segments as eligible for designation as part of the Agua Fria WSR proposal would not affect the now protected and suitable WSR corridor in Agua Fria National Monument. Interim management protection prescriptions would be extended to other river tributary segments. This action would prevent impairment of any outstandingly remarkable values on another 6,600 acres of WSR corridor. The total area in existing and proposed corridors would be 13,100 acres or more than double the size of the existing proposed WSR corridor.

Designating four ACECs for protecting Gila chub habitat would not affect suitable or proposed WSR segments. Management actions proposed for the ACECs could be accomplished without affecting proposed WSR segments.

The Harquahala Mountain Outstanding Natural Area (ONA) ACEC maintains undeveloped lands, offers dispersed and resource-dependent recreational experiences, enhances natural quiet and dark sky conditions, and safeguards wildlife habitats and connectivity. Reduced dust from limited vehicle travel designations could maintain air quality, improving vistas from adjoining wildernesses and the Harquahala Mountain Summit Back Country Byway.

Alternative D

Designating the Agua Fria Riparian Corridor ACEC would not affect segments of the Agua Fria River suitable for WSR status. Under current WSR interim management, vehicle routes and developments might be restricted to protect outstandingly remarkable values, including riparian habitat and wildlife. Acquiring land along Indian Creek and removing the Perry Mesa and Larry Canyon ACECs would not affect the proposed ACEC or the Purpose and Significance of Agua Fria National Monument. Managing areas for wilderness characteristics would add an additional layer of protection for the monument objects within the Agua Fria National Monument.

Impacts on designated wilderness from establishing Baldy Mountain ONA ACEC would be similar to those described for Harquahala Mountain ACEC in *Alternative C*.

Alternative E (Proposed Alternative)

No impacts to the Harquahala Mountain Summit Road Back Country Byway are expected.

Acquiring land along Indian Creek and removing the Perry Mesa and Larry Canyon ACECs would have no resource impacts on

segments suitable for wild and scenic river status.

Impacts on designated wilderness from establishing the Harquahala Mountain ACEC would be similar to those described for *Alternative C*.

The determination that Agua Fria River tributaries are eligible for consideration as additions to the National Wild and Scenic Rivers System provides an additional impetus for protection of wildlife, cultural, and scenic values along these eight streams. The protection of outstandingly remarkable river values is consistent with protective management actions identified for the corresponding monument values, with the additional provision that the streams would be maintained in free-flowing condition without major impoundments or diversions of water.

4.6.2 From Lands and Realty Management

Alternatives A (No Action), B, C, D and E (Proposed Alternative)

In Agua Fria National Monument disposing of land is not an option, and acquiring private lands (inholdings) would be consistent with management effectiveness and the national monument's Purpose and Significance. Disposal of lands would not affect any existing wilderness area, ACEC, or back country byway.

Acquiring lands within wilderness areas would benefit wilderness management by consolidating management of all lands within their boundaries. This outcome would prevent future development of non-Federal lands and retain wilderness values.

The Agua Fria WSR Corridor was found suitable for designation with the existing utility corridor and utilities in place. New utilities proposed for the corridor would be subject to approval for protecting the resources of the Agua Fria National Monument and the interim

management guidelines of the WSR corridor. Facilities approved for construction under these criteria would not affect the existing WSR corridor.

Acquiring lands in the suitable segments of the WSR corridor in the national monument could benefit the segments by potentially adding more lands to the interim nonimpairment status. Such acquisitions would prevent the following:

- development on private lands, such as resumed mining on the Richinbar site,
- building new structures and range improvements, and
- installing communication towers and technological supports.

Such activities could increase ground disturbance and noise and add new structures visible from the WSR corridor. These developments could also diminish scenic values, including night skies, and disturb riparian habitat and wildlife populations on public land.

Allowing continued development of small utility distribution systems could degrade existing wilderness if development was proposed for inholdings or on property near wilderness boundaries. Developments could affect wilderness character by adding noticeable human-made elements to the landscape. Increased presence of people and activity could lead to loss of solitude in some wilderness areas and lessen the recreation experience.

Retaining an existing multi-use utility corridor extending from Yarnell along the southwest portion of Hassayampa River Canyon Wilderness could degrade the wilderness. Projects added to the corridor could alter the natural and visual character of the area and diminish the wilderness experience for some visitors. Retaining other utility corridors should not affect other wilderness areas because the wilderness values were found to exist with the corridors in place and the potential for utility development was known.

4.6.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Impacts to the WSR in Agua Fria National Monument should be prevented by (1) general guidance to maintain or improve resource conditions and (2) management to protect national monument resources. Obtaining legal entitlement of water resources could benefit the WSR segments of the Agua Fria River by securing water availability to maintain the remarkable values that led to designation. Some of these values are described in the national monument's purpose and significance statements.

Requirements to maintain compliance with local and regional dust standards could improve air quality in some ACECs and wilderness areas, and enhance vistas from wilderness and back country byways.

No impacts are expected from soil and air resource management as described for the Lower Gila North Management Framework Plan (MFP) (BLM 1983). However, ensuring the legal availability of water and maintaining adequate flows of springs in the Harquahala Mountains would protect the wilderness area by protecting special spring and riparian features, sustaining diverse wildlife habitat, and maintaining habitat quality near springs.

Inventorying and filing for water rights in the Harquahala Mountains, Big Horn Mountains, Hummingbird Springs, Hassayampa River Canyon, and Hells Canyon Wilderness Areas would protect the areas by preserving the wilderness values of water sources.

4.6.4 From Biological Resource Management

Alternative A (No Action)

Managing existing biological resources could affect the Agua Fria WSR Corridor. Opportunities to enhance wildlife habitat, species diversity, and riparian health exist in the national monument. Prescribed burning, tree planting along the river and its tributaries, and other actions to restore natural ecological conditions would enhance the values that make the river segments eligible for Wild or Scenic designation.

Transplanting populations of Gila chub would benefit the Larry Canyon and Perry Mesa ACECs by ensuring persistence of the species.

Alternative B

Impacts under *Alternative B* would be the same as described for *Alternative A* for Agua Fria National Monument except that Larry Canyon ACEC would be eliminated.

The Harquahala Mountains Wildlife Habitat Area (WHA) could affect Harquahala Mountains Wilderness by strengthening wildlife populations and maintaining more natural conditions next to the wilderness. New wildlife waters installed in wilderness areas could decrease naturalness by introducing more human developments in the wilderness. The wildlife waters would not be noticeable because they would be installed for consistency with Visual Resource Management (VRM) Class I objectives.

Alternative C

Impacts under *Alternative C* would be the same as described for *Alternative B* for Agua Fria National Monument. Managing pronghorn movement corridors could enhance the proposed suitable segments of the WSR in the Agua Fria River. Other controls on vehicle routes and recreation site development where wildlife

corridors cross the river would help retain the outstandingly remarkable values that led to the areas' suitability.

The Harquahala/Belmont/Big Horn wildlife corridor and the Belmont/Big Horn WHA would benefit Hummingbird Springs, Big Horn Mountains, and Harquahala Mountains Wilderness Areas by retaining natural open space and wildlife populations next to the wilderness and allowing wildlife movement between the wilderness areas. Protected wildlife movement areas would help sustain natural populations in the wilderness areas by providing extended habitat and maintaining the genetic diversity to assure long-term viability as individual animals move from one area to another. Healthy wildlife populations in and around the wilderness areas would increase opportunities for wildlife viewing and hunting and retain the natural character of open space. The impact of new wildlife waters installed in wilderness would be the same as for *Alternative B*.

Alternative D

Impacts from wildlife management in Agua Fria National Monument would be similar to those described for *Alternative C*.

In the Bradshaw-Harquahala Planning Area biological resources are mainly managed through ACEC designations in locations that could affect wilderness areas. These impacts are discussed in Section 4.6.1.

Alternative E (Proposed Alternative)

The Harquahala Mountains ACEC and the movement corridors would protect wildlife habitat and help maintain natural conditions, open space, and wildlife habitat/populations on public lands. Protecting and enhancing wildlife populations contributes to the naturalness of the area and to supplemental values that enhance visitor experiences, such as increased opportunities for wildlife viewing or hunting.

Impacts of new wildlife waters installed in wilderness would be the same as for *Alternative B*.

4.6.5 From Cultural Resource Management

Alternative A (No Action)

There are no impacts expected.

Alternative B

Under *Alternative B* the historic Teskey homestead near the Agua Fria River would be allocated to public use and developed for public education and visitation. Visitors might disturb wildlife or leave trash in the area. Conversely, the presence of site visitors could help to deter illegal trash dumping. Developing an interpretive site is consistent with the recommended scenic status of this river segment since the Teskey site is not visible from the river. According to BLM's Manual 8351, recreational facilities are compatible with areas that are suitable for WSR status if such facilities are unobtrusive and do not adversely affect the natural character of a WSR area.

The Badger Springs petroglyph site, next to the proposed wild segment of the Agua Fria River, would also be interpreted for public visitation. The high level of visitation in this area would enhance the effectiveness of educational exhibits. Increased awareness of the site could make it more vulnerable to vandalism, which is why BLM has completed a detailed documentation of the site. On-site facilities would be limited to a small number of unobtrusive interpretive signs. More substantial recreational facilities would be located away from the river. The increase in visitors to the site and impacts are expected to be insignificant because Badger Springs Wash is already a popular area that serves as the most accessible and easy route for hiking in the river canyon.

Conducting Class III surveys along 12 miles of the Agua Fria River would provide useful

information necessary to identify and protect cultural resources that comprise one of the outstanding values of WSR suitability.

In conducting surveys and scientific research in cultural priority areas in the Harquahala Mountains and Hassayampa River Canyon Wilderness Areas, these crews could temporarily diminish wilderness values, such as solitude. Most of these activities are expected to take place outside of wilderness areas to assess zones where cultural resources are more accessible and at greater risk of damage.

Sites developed for public use could affect the Harquahala Mountains and Hassayampa River Canyon Wilderness Areas through increased visitation and activity, leading to a diminished sense of solitude for some visitors.

Alternative C

Impacts would be similar to those described for *Alternative B*; except that the area surrounding the Badger Springs petroglyph site would be developed with fewer facilities, in accordance with the moderate public use level.

Alternative D

Potential impacts would be limited to Harquahala Mountains Wilderness and would be the same as described for *Alternative B*. The Wickenburg/Vulture Special Cultural Resource Management Area (SCRMA) would not be developed for public use under *Alternative D*.

Alternative E (Proposed Alternative)

Potential impacts would be limited to Harquahala Mountains Wilderness Area and would be the same as described for *Alternative B*.

4.6.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.6.7 From Recreation Management

Alternative A (No Action)

Current recreation uses would continue. Greater levels of visitation and motorized recreation use could lessen the values of suitable WSR segments of the Agua Fria River through increased noise, litter, and vehicular travel at several crossings. Existing vehicle routes in the national monument would remain open except for those in the WSR corridor. Increasing levels of recreation use and motorized activity on the boundaries of the five designated wilderness areas could lessen, to varying degrees, the quality of wilderness-based recreation and solitude opportunities in the interior and along wilderness boundaries. Existing ACECs would be maintained, and no impacts from recreation activities are expected.

Alternative B

The Back Country RMZ in Agua Fria National Monument would help preserve the values of the wild segment and the southern scenic segment of the Agua Fria River. A recreation setting of mainly semi-primitive non-motorized, in conjunction with VRM Class II objectives, would maintain the natural character and visual quality making the areas eligible for designation. Only dispersed camping is permitted in the Back Country RMZ, and this activity would not degrade the WSR segments.

The Front Country RMZ in the monument could affect the northern scenic segment of the Agua Fria River. Roaded natural and semi-primitive motorized recreation settings could lead to more

vehicular travel in areas near the scenic corridor and diminish the recreation experience for some users in the corridor. Developing campgrounds would lead to concentrations of visitors. If the river is easily accessible from the sites, the increase in recreation use could change the character of the corridor in certain areas by adding to noise levels and litter. Dispersed camping would continue but is not expected to significantly affect the area. Restricting target shooting near high-use areas would affect the WSR segments by enhancing the recreation experience for other users. Visitors could still target shoot in the remaining areas within the corridor, which might degrade WSR values by damaging cultural resources such as petroglyphs.

Hieroglyphic Mountains Special Recreation Management Area (SRMA) could concentrate off-highway vehicle (OHV) use, increase traffic, and increase noise at the southwest edge of the wilderness. This would diminish the sense of solitude and natural quiet for visitors in the wilderness. Greater fugitive dust could potentially enter Hells Canyon Wilderness, obscuring vistas.

No Special Recreation Permit (SRP)-related impacts are expected on wilderness areas, ACECs, or back country byways.

Alternative C

Impacts to Agua Fria National Monument would be similar to those described for *Alternative B*.

Impacts on Hells Canyon Wilderness from the Hieroglyphic Mountains SRMA would be similar to those described for *Alternative B*.

No SRP-related impacts to wilderness areas, ACECs, or back country byways are expected.

Alternative D

Impacts to Agua Fria National Monument would be similar to those described for *Alternative B*.

Managing the Hieroglyphic Mountains SRMA to phase out motorized use over a 10 to 20 year period could enhance management within the Hells Canyon wilderness. Removing the sights and sounds of OHV activities over time could reduce the degradation of wilderness values of solitude and naturalness and improve the primitive recreation experiences of visitors to wilderness users. Impacts to the Hells Canyon wilderness from motorized activities would be similar to those described under *Alternative B* until motorized use is phased out.

Managing the allocation to maintain wilderness characteristics would be compatible with managing the proposed Belmont-Big Horn Mountain ACEC. Maintaining natural conditions and providing opportunities for primitive recreation would not influence the resources within the proposed ACEC. The ACEC would contain 25,760 acres of the allocation to maintain wilderness characteristics.

No SRP-related impacts to wilderness areas, ACECs, or back country byways are expected.

Alternative E (Proposed Alternative)

Impacts to Agua Fria National Monument would be similar to those described for *Alternative B*, except the setting would be quieter, many visitors would feel safer, and visual quality would be improved through the reduction of items used as targets and spent shells.

The Hieroglyphic Mountains SRMA would also be similar to *Alternative B*.

No SRP-related impacts on wilderness areas, ACECs, or back country byways are expected.

4.6.8 From Visual Resource Management

Alternative A (No Action)

In Agua Fria National Monument, no impacts are expected to WSR suitable segments.

Within the Bradshaw-Harquahala Planning Area, proposed projects near wilderness areas could lessen the quality of the recreation setting and viewshed by allowing human intrusions into visual landscapes. Wilderness would remain VRM Class I areas and experience no visual change in their boundaries.

Alternative B

In the monument, managing the Front Country RMZ to VRM Class III objectives could degrade the WSR segments by allowing projects to more visually intrude into the landscape next to the river segments and by diminishing the scenic values that led to the determination of eligibility.

Alternative B is not expected to affect the visual resources of wilderness areas, existing or proposed back country byways, or the Tule Creek ACEC.

Alternative C

Impacts in Agua Fria National Monument would be similar to those under *Alternative B* except that they would mainly be limited to the northern WSR segment because the Back Country RMZ would be expanded and managed to VRM Class II objectives. Managing the back country byway to VRM Class II would prevent substantial visual intrusions in the byway's viewshed.

Alternative D

Impacts in Agua Fria National Monument would be similar to those under *Alternative C*.

Managing Harquahala Mountain ONA ACEC to VRM Class I objectives would benefit Harquahala Mountains Wilderness by raising the VRM class of 298,310 acres surrounding the area to the same class as the wilderness area, thus maintaining a large natural appearing landscape from within the wilderness area. Managing the ACECs to Class I objectives would benefit the Sheep Mountain Research Natural Area (RNA) and Black Butte ONA by

minimizing visual intrusions into the natural setting of both areas. No future change or impairment to the viewshed in these areas would be expected.

Alternative E (Proposed Alternative)

Impacts to Agua Fria National Monument would be similar to those under *Alternative C* on the proposed WSR segments.

Impacts to wilderness areas, which would remain VRM Class I in the Bradshaw-Harquahala Planning Area, would be the same as for *Alternative A*. No visual impacts to wilderness areas, existing back country byway, or to Tule Creek ACEC are expected.

Managing Harquahala Mountain and Black Butte ACECs to VRM Class II objectives would benefit the adjacent Harquahala Mountains, Big Horn Mountains, and Hummingbird Springs Wilderness Areas by reducing the possibility of visual intrusions into the landscape.

4.6.9 From Rangeland Management

Alternative A (No Action)

Applying the *Arizona Standards for Rangeland Health* (see Section 2.7.1.1) and *Guidelines for Grazing Administration* (see Section 2.7.1.9) would reduce impacts and improve characteristics for which Special Designations, like wilderness, were designated. Land health standards would improve upland soils and vegetation to minimize erosion and other ground disturbance produced by inadequate vegetation cover. Additionally, the standards would improve riparian areas and stream functions, which would enhance the habitat and help sustain the landscape's natural character.

Reaches of the Agua Fria River were determined to have WSR values despite grazing in the corridor. Continued grazing should not degrade values, and applying Land Health

Standards should maintain or improve habitat characteristics.

This Alternative is not expected to affect wilderness areas, ACECs, or back country byways.

Alternative B

Impacts of applying the Land Health Standards and Rangeland Management guidelines would be the same as for *Alternative A*.

In the uplands of Special Area Designations, *Alternative B* would have impacts as described in the impacts of applying Land Health Standards above. Restricting grazing of riparian areas to winter would have impacts on the Agua Fria River WSR corridor and the riparian corridor in the Hassayampa River Canyon Wilderness. Wildlife habitat would likely be improved, and wildlife and livestock would compete less for resources during the winter. Improving vegetation and forage conditions would also benefit wilderness areas by improving natural and natural-appearing ecological conditions, enhancing wilderness values and improving visitor's experience.

Alternative C

Impacts of applying the Land Health Standards and Rangeland Management guidelines would be the same as for *Alternative A*.

Impacts to the riparian corridors would be similar to those described for *Alternative B*, except that the year-round restriction of grazing should eliminate all competition between wildlife and livestock for resources in the WSR and riparian corridors. Habitat should be further improved, enhancing the wildlife and scenic values of the suitable WSR segments of the Agua Fria River and in Hassayampa River Canyon Wilderness.

Alternative D

Because *Alternative D* would eliminate grazing, impacts would be similar to those described for *Alternative C*.

Alternative E (Proposed Alternative)

Impacts would be the same as described for *Alternative B*.

4.6.10 From Minerals Management

Alternative A (No Action)

Minerals management under *Alternative A* is not expected to affect Agua Fria National Monument as the monument is closed to all forms of mineral entry, leasing, and sales except for casual use and valid existing rights on existing claims.

Mining near wilderness areas, in ACECs, and along the back country byway could reduce solitude in some areas; increase noise, dust, and traffic; and detract from the visual setting. The potential for leasable and locatable minerals is very low, and areas with locatable potential are not near wilderness areas. Areas of potential saleable minerals (e.g. sand and gravel) are near rivers and washes and are not near wilderness areas. Decorative rock and other saleable mineral operations exist in the Bradshaw-Harquahala Planning Area; however, did not affect the findings of wilderness values. Future requests for similar development near wilderness areas could have impacts as described, but potential areas for such operations are unknown.

Alternative B

As in *Alternative A*, no impacts are expected on Agua Fria National Monument.

Closing Tule Creek ACEC to all mineral development would benefit the biological and cultural resources that are relevant and important to ACEC designation by eliminating the

potential for disturbing and damaging these resources.

Impacts of mineral development on wilderness areas, back country byways, and ACECs would be the same as described for *Alternative A*.

Alternative C

No impacts are expected on Agua Fria National Monument.

Closing Tule Creek ACEC and Sheep Mountain RNA to all mineral development would have impacts similar to those described for *Alternative B*.

Alternative D

No impacts are expected on Agua Fria National Monument.

Impacts from managing Tule Creek ACEC would be similar to those described for *Alternative B*.

Closing Baldy Mountain ONA ACEC to all forms of mineral entry would benefit Hells Canyon Wilderness by reducing the potential area susceptible to ground disturbance and maintaining primitive open space. The potential for disturbance from leasable and locatable mineral development would be eliminated and the natural open space and resources of the ONA ACEC would be maintained.

Alternative E (Proposed Alternative)

Impacts would be the similar to those under *Alternative B*.

4.6.11 From Fire Management

Alternative A (No Action)

Under the No-Action Alternative, fire would be managed throughout the planning area according

to the *Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management, September 2003*.

Agua Fria National Monument grasslands are a fire-adapted ecosystem with a 0–35-year fire return frequency. As fire continues to be used as a natural process to restore ecosystem health, the national monument's grasslands would continue to be subject to prescribed burning. The burning would affect the WSR corridor through vegetation mortality and blackening of the landscape in grasslands that extend into the corridor. Prescribed burning would reduce the visual values in the corridor over the short term, until vegetation regenerates. Air quality and visibility would also decline during the burn period, and the decline could temporarily diminish the visual setting and character of the corridor.

As stated in the Statewide LUP Amendment for Fire, Fuels and Air Quality Management, fire management would try to avoid altering the natural character of Special Area Designations. Should a prescribed fire escape containment, however, more damage to riparian vegetation could occur in the WSR corridor. The damage could further degrade the visual character and habitat in the corridor and diminish the remarkable values that led to WSR eligibility.

Use of prescribed fire could affect the WSR corridor by initially increasing runoff and erosion along the Agua Fria River in the national monument. This outcome could temporarily decrease water clarity, increase sedimentation, and diminish the corridor's visual character.

Over the long term, use of fire as a natural process in the national monument should lead to increased ecosystem health and enhanced habitat that would maintain the remarkable visual and habitat values of the corridor that led to WSR eligibility.

Fire suppression could degrade wilderness areas by using mechanized equipment and aircraft. Impacts would include the temporary increase in noise that would diminish opportunities for

solitude in other areas of the affected wilderness area. Use of mechanized equipment would leave visible ground disturbance that could remain for long periods. Retardant use could leave visible residue on the landscape for several years. The same impacts could alter the setting and character of the landscape near the Harquahala Mountain Summit Road Scenic Byway and temporarily diminish the scenic quality of the byway travel experience.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts from fire management would be similar to *Alternative A*, including temporary impacts at the northwest and eastern end of Hassayampa River Canyon Wilderness. Visitors would be restricted from parts of the wilderness during prescribed burns. The fire damage would detract from the visual setting for users until the vegetation recovers.

4.6.12 From Wild Horse and Burro Management

Alternative A (No Action)

Current conditions would be maintained. Sufficient wilderness values were found to designate the Hummingbird Springs, Harquahala Mountains, Big Horn Mountains, and Hells Canyon Wilderness Areas, with burros present in the existing Herd Areas (HAs) that encompass parts of these areas. While management in the *Lower Gila North Management Framework Plan* (BLM 1983) called for the herd level in the Harquahala HA to be zero, the action was not completed. The current impacts of vegetation damage, soil and vegetation trampling in gathering areas, and trailing (or creating multiple new paths across the landscape) would continue to diminish the natural setting in localized parts of the wilderness areas, especially near water sources and in canyons. Natural landscape settings would continue to exist in most portions of the wilderness areas.

Alternative B

The impacts of retaining the current burro herd level would be the same as under *Alternative A* for all wilderness areas.

Alternatives C, D, and E (Proposed Alternative)

Removing burros from the Harquahala HA would eliminate impacts to the Harquahala Mountains, Hummingbird Springs, and Big Horn Mountains Wilderness Areas. Trailing and vegetation impacts now occurring in Hells Canyon Wilderness would continue.

4.6.13 From Management of Travel Management

Alternative A (No Action)

No impacts are expected from current management of travel management on existing ACECs, the five wilderness areas, or the Harquahala Mountain Summit Road Back Country Byway.

Under current WSR interim management, vehicle routes and developments are currently restricted to protect outstandingly remarkable values, including riparian habitat and wildlife. Therefore, no impacts are anticipated on the proposed suitable WSR segments within the Agua Fria National Monument

Alternatives B and C

The effects from travel management route designations associated with establishing the Hieroglyphic Mountains Special Recreation Management Area (SRMA) could concentrate off-highway vehicle (OHV) use, increase traffic, and increase noise at the southwest edge of the Hells Canyon wilderness. These effects could diminish the sense of solitude and natural quiet for wilderness visitors. Greater levels of fugitive dust could potentially enter Hells Canyon Wilderness, obscuring vistas.

Impacts on suitable WSR segments would be the same as for *Alternative A*.

Alternative D

Managing the Hieroglyphic Mountains SRMA to facilitate phasing out and restricting motorized recreation and motorized trails over a 10 to 20 year period could enhance the non-motorized recreation settings and opportunities within the Hells Canyon wilderness. The sights and sounds of motorized activities and fugitive dust entering the wilderness from vehicle travel would be lessened or eliminated when SRMA motorized routes are closed or use is restricted. In the interim time period (less than 20 years), impacts to the Hells Canyon wilderness from motorized activities would be similar to those described under *Alternative B*.

Impacts on suitable WSR segments would be the same as for *Alternative A*.

Alternative E (Proposed Alternative)

Impacts on Special Designations from management of travel management would be similar to those described for *Alternatives B* and *C*.

4.6.14 From Management of Wilderness Characteristics

Alternatives B, C, D, and E (Proposed Alternative)

The management of certain lands to maintain wilderness characteristics would have no direct effects on existing Special Area Designations. The social, physical, and managerial conditions and settings desired on lands managed for wilderness characteristics are compatible with public lands currently managed as the Agua Fria National Monument, Areas of Critical Environmental Concern, Back Country Byways, and Wilderness Areas. Indirect benefits from management of wilderness characteristics could indirectly influence lands with Special Area Designations

as the allocation maintains undeveloped settings, offers dispersed non-motorized recreation experiences, enhances natural quiet and dark sky conditions, potentially reduces fugitive dust emissions, safeguards intact scenery and landscape vistas, and secures more intact wildlife habitats.

4.7 Impacts on Lands and Realty Management

This analysis addresses both the entire current inventory of BLM's surface lands in the planning areas and lands in the planning areas considered for acquisition because of their resources. These lands include 967,000 surface acres, with 896,100 acres of BLM-managed land in the Bradshaw-Harquahala Planning Area and 70,900 acres of BLM's land in Agua Fria National Monument. Interspersed in the Federal lands are parcels that might be available for acquisition from a willing seller. For the Bradshaw-Harquahala area, demands on Federal land management in and around the Phoenix metropolitan area resulting from rapid urbanization would be fulfilled by the following:

- land tenure management prescriptions, (including disposal and acquisition),
- Recreation and Public Purposes (R&PP) leases or patents,
- right-of-way authorizations, and
- land use permit management prescriptions.

Each of the large tracts of BLM-managed land is next to large tracts of State land. Because the future legislative framework governing State land transactions is uncertain (including the potential for the exchange of land between the Arizona State Land Department (ASLD) and the Federal Government, State land is assumed for this analysis to be ineligible for development.

The impact analysis employed land use modeling completed for BLM for the planning

area to show the distribution of residential growth between the years 2000 and 2025 (Appendix M). The land use model is consistent with the undeveloped land base shown in the general and comprehensive plans of each city or town and both counties.

The model was run four times, once each for the four Alternatives for BLM-managed land available for disposal. The model assumes that all BLM's land eligible for disposal would change from Federal to private ownership during the planning period 2005 to 2025, and then would undergo residential development. Other than BLM-managed land, the model assumes that the amount of suitable vacant land available for residential growth for Maricopa and Yavapai Counties would be the same under all of the Alternatives.

The model uses one set of assumptions about such factors as follows:

- persons per household,
- lot sizes, and
- the tendency for new housing to be attracted to areas next to areas that already have housing.

The model assumes that the availability of BLM-managed land for development would not induce growth countywide or increase the total population projected for the two counties in 2025. Both counties are already undergoing rapid growth, yet both counties already have a vacant residential land capacity that would meet the need for growth beyond 2025. Therefore, the availability of BLM-managed land for development would affect the phasing of land development on the vacant residential land, rather than the development projected for 2025.

For Agua Fria National Monument the land tenure management prescriptions, (acquisition only) right-of-way authorizations, and land use permit management prescriptions would fulfill the protective purposes of the national monument.

The broad categories of land uses requiring right-of-way grants are the following:

- electrical generation,
- transmission, and distribution systems,
- oil and gas related systems,
- telecommunication transmission and reception systems,
- transportation systems, and
- water-related systems.

The common land uses requiring permits are commercial photography, apiaries, geological and hydrological testing, and some military activities. The recipients of R&PP leases or patents are State and local governments and qualified non-profit organizations.

This analysis also addresses the impacts on designated right-of-way corridors on BLM-managed land in the planning areas.

The resolution of mining claims has a bearing on the sequence of land disposal. When someone expresses an interest in acquiring land that BLM has proposed for disposal, under the Federal Land Transaction Facilitation Act (FLTFA) the land is temporarily closed to the filing of mining claims. Typically, the prospective new owner purchases any claims and relinquishes them to BLM, at which point the mining claim is resolved. Generally, BLM prefers to dispose of the surface and subsurface mineral rights to the same new owner, and the above-described relinquishing of mining claims typically results in such disposal of surface and subsurface.

Occasionally, BLM keeps the subsurface in Federal ownership when it is deemed to be in the public interest for BLM to continue to control the potential for future mining.

Issuing rights-of-way where there are active mining claims is routine and covered by legislation and regulation. The right-of-way purchaser or permittee is informed of the rights of the mining claimant. Mining might intermittently or temporarily obstruct the right-of-way.

4.7.1 From Special Designations

Alternative A (No Action)

Wilderness areas would remain closed to rights-of-way and land use authorizations. BLM would try to acquire non-Federal wilderness in-holdings when there are willing sellers or the potential for a land exchange. Acquiring in-holdings would block up Federal ownership in sensitive resource areas.

Alternative B

Special Designations generally constrain lands and realty activities in the following ways:

- limiting the lands open to exchange or disposal in any zone,
- reducing the demand for the number and type of realty use authorizations,
- restricting the ability to build or relocate roads for legal access, and
- eliminating options of authorization or conveyance of land to resolve a trespass.

Special Designations might require mitigating or relocating an activity. For example, mitigation for conflicts is permissible to achieve no net loss in amount or quality of desert tortoise habitat while accommodating requests for rights-of-way, easements, withdrawals, or other land tenure actions. At the most, the activity might be prohibited altogether.

None of the proposed Special Designations are located in areas slated for development between 2005 and 2025 in Maricopa, Yavapai, or La Paz Counties. None of the Special Designations are in a location that would otherwise be a part of the most direct route for workers to commute to work. In addition, the Special Designations are generally a part of the open space designated in the general plans of the counties and municipalities. Therefore, the Special Designations would not preclude developing a typical urban transportation network in the planning area.

Tule Creek ACEC (640 acres) is proposed for designation in the Bradshaw-Harquahala Planning Area, and stipulations consistent with its protection would be written into any future land use authorizations in the ACEC. The locations could be affected, or the terms of use of access easements and rights-of-way could be restricted to protect Tule Creek.

The effects of wilderness areas would be the same as in *Alternative A*.

Alternative C

Lands adjoining Harquahala Mountains ACEC would be of higher priority for acquisition than other lands because of their biological and cultural values. Therefore, these lands might be acquired instead of other lands.

Black Mesa ACEC would be established to protect significant cultural resources. To the west of Interstate 17, the utility corridor width of two miles would allow for flexibility in planning and designing transmission facilities to avoid impacts to archaeological sites. The presence of the interstate highway provides some protection by limiting public access to these sites. In coordination with the Arizona Department of Transportation (ADOT), BLM would implement measures to mitigate the effects to archaeological sites of widening and maintaining the highway.

The effects of wilderness areas would be the same as *Alternative A*.

The impacts from Tule Creek on lands actions would be the same as those under *Alternative B*.

Alternative D

Designating the Agua Fria Riparian Corridor ACEC in Agua Fria National Monument would constrain the location of rights-of-way in the Black Canyon corridor. In the Bradshaw-Harquahala Planning Area acquiring private and State in-holdings and adjacent lands (provided the seller is willing) to protect biological resources in the Belmont-Big Horn Mountains

would give these lands a higher priority area for acquisition than in-holdings without similarly high biological values. As such, BLM might acquire these lands instead of the other lands.

As in *Alternative B*, lands adjoining Harquahala Mountains ONA would also be of higher priority for acquisition than other lands because of biological and cultural values.

The impacts on lands and realty management of designating Tule Creek ACEC would also be the same as under *Alternative B*.

The effects of wilderness areas would be the same as in *Alternative A*.

No new rights-of-way would be permitted in the Baldy Mountain ONA, so private interests needing vehicular or utility access to private lands could have to use a more circuitous and potentially more expensive route.

Alternative E (Proposed Alternative)

Impacts are similar to those described under *Alternative B*.

4.7.2 From Lands and Realty Management

Alternative A (No Action)

In Agua Fria National Monument public land ownership would not change. These retained lands would be managed according to the guidelines set forth in the proclamation designating the monument (Appendix A).

BLM could issue no leases or patents in the monument to local governments or non-profit organizations under the R&PP Act.

Since no communication sites would be designated within the monument, industry would rely on existing sites, which might not meet suitable industry needs. Industry would also rely on current transportation corridors,

which might not be adequate to meet future demand needs.

Land ownership in the Bradshaw-Harquahala Planning Area would remain unchanged from existing management practices.

Lands suitable for R&PP use would be issued on a case-by-case basis to local governments and non-profit organizations under the R&PP Act.

Alternative A would continue Lands and Realty management as it is now occurring. As a result, no impacts would be expected.

Alternative B

Impacts in Agua Fria National Monument would be similar to *Alternative A*, except that the existing corridor would be narrowed so that the eastern boundary of the utility corridor would follow the easternmost boundaries of any existing rights-of-way in the corridor. The corridor boundary in the Bradshaw-Harquahala Planning Area would compensate for the monument boundary narrowing by widening the corridor 1 mile to the west of Interstate 17. Future utility uses would then be forced to locate in undisturbed areas, resulting in possible increased costs for industry.

The total acreage of public land ownership in the Bradshaw-Harquahala Planning Area would depend on whether all lands recommended for acquisition are acquired. The lands consolidated in the five Management Units (MUs) would improve management efficiency and would likely reduce management costs.

Impacts of land leases and patents for R&PP would be the same as *Alternative A*.

Impacts of major rights-of-way and communication sites would be similar to *Alternative A*, except no new communication sites could be designated, and these facilities could not proliferate. This situation would allow for the orderly development of these facilities in designated sites, eliminating user conflicts. As technology continues to advance, BLM might

have to review its decisions to determine if its plan is meeting industry needs. Multiple new utility corridors, including all State route highway systems (including the proposed Wickenburg Bypass), would be designated as corridors across public lands. Designating corridors would prevent the proliferation of major utility systems across public lands.

Land use authorizations would be precluded or restricted on lands in the MUs, decreasing the location flexibility for rights-of-way and increasing construction costs for utility rights-of-way.

Alternative C

The impacts of public land ownership and R&PPs in the national monument would be the same as *Alternative A*.

BLM would issue no leases or patents for land within the monument to local governments or non-profit organizations under the R&PP Act.

Rights-of-way and communication sites in the monument would be similar to *Alternative B*, except that the existing corridor would be eliminated from the monument. The corridor boundary in the Bradshaw-Harquahala Planning Area would be adjusted to make up for the loss of the corridor in the monument boundary by being widened 2 miles to the west of Interstate 17. Future utility uses would then be forced to locate in undisturbed areas, possibly increasing costs for industry.

Public land ownership in the Bradshaw-Harquahala Planning Area would be similar to *Alternative B*, except that the lands would be consolidated into six MUs

Impacts of land leases and patents for R&PP use would be the same as *Alternative A*.

Land use authorizations (including rights-of-way, communication site leases, and utility corridors) would be the same as *Alternative B*.

Alternative D

The impacts of public land ownership and R&PPs in the national monument would be the same as *Alternative A*.

Impacts of new rights-of-way within the monument would be similar to *Alternative B*, except that the corridor in the Bradshaw-Harquahala Planning Area would be extended, not widened so that it would be continuous north and south on BLM's lands. Any future need to locate utilities in the corridor would not be met, creating a need to locate elsewhere and increasing industry costs. This limitation could also restrict any future attempts to widen Interstate 17 as potential growth warrants.

Public land ownership in the Bradshaw-Harquahala Planning Area would be similar to *Alternative B*, except that the lands would be consolidated into seven MUs.

Impacts of land leases and patents for R&PP use would be the same as *Alternative A*.

Land use authorizations (including rights-of-way, communication site leases, and utility corridors) would be similar to *Alternative B*, except that no new electric or gas corridors would be designated. As the potential demand for electricity and gas increases, the supply would not be sufficient. Costs might increase because of a lack of resources.

Alternative E (Proposed Alternative)

The impacts of public land ownership and R&PPs in the national monument would be the same as *Alternative A*.

Impacts of new rights-of-way within the monument would be the same as *Alternative B*.

Public land ownership in the Bradshaw-Harquahala Planning Area would be the same as *Alternative C*.

Impacts of land leases and patents for R&PP use would be the same as *Alternative A*.

Land use authorizations (including rights-of-way, communication site leases, and utility corridors) would be similar to that described for *Alternative B*; however, the Black Canyon MU corridor represents an improved location to long term management of major rights-of-way. The corridor allows for further development of utility projects to meet the demand of the large and rapidly growing Phoenix Greater Metropolitan Area, while confining those utility projects to an area where environmental impacts can be minimized.

4.7.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

In all Alternatives, efforts to minimize impacts to soils, water, and air would result in increased project costs and may result in project redesign or a shifted location. All permitted activities within air quality nonattainment areas would be required to meet county standards and incorporate county stipulations into their project proposal. For qualifying projects, meeting air quality standards may increase project costs.

4.7.4 From Biological Resource Management

Alternatives A (No Action), B, C, D and E (Proposed Alternative)

Acquisition of lands to enhance BLM's management of habitat critical to threatened or endangered species as well as habitat for other sensitive species is given a high priority and would result in acquisition of those areas in preference to other areas. Biological resource management would otherwise not affect lands and realty management in either planning area.

4.7.5 From Cultural Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

The potential discovery of cultural and historical sites across public lands could cause BLM to restrict land use authorizations. Land use authorizations might have to be relocated/rerouted, or a treatment plan might have to be developed to include mitigation measures, such as scientific data recovery. Such measures could prove to be expensive, resulting in projects that are uneconomical to complete.

4.7.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Since no known areas with paleontological resources occur within the planning areas, no impact is expected.

Should paleontological resources be discovered, BLM could restrict land use authorizations. Land use authorizations might have to be relocated/rerouted, or a treatment plan might have to be developed to include mitigation measures, such as scientific data recovery. Such measures could prove to be expensive, resulting in projects that are uneconomical to complete.

4.7.7 From Recreation Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Recreation management would not affect lands and realty management under any of the Alternatives.

4.7.8 From Visual Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

VRM would only slightly affect lands and realty management under any of the Alternatives. In VRM Class I and II areas, rights-of-way would be buried, relocated as needed, or otherwise designated to be compatible with their surroundings to ensure scenic integrity. BLM would not approve land use authorizations that are inconsistent with VRM Class I and Class II, thus creating the need to select a more suitable location. Such a situation could prove to be costly to certain project proposals.

4.7.9 From Rangeland Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Rangeland management would not have any expected impacts on lands and realty management under any of the Alternatives

4.7.10 From Minerals Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Minerals management would not have any expected impacts on lands and realty management under any of the Alternatives.

4.7.11 From Fire Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Fire management would not have any expected impacts on lands and realty management under any of the Alternatives.

4.7.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Wild horse and burro management would not have any expected impacts on lands and realty management under any of the Alternatives.

4.7.13 From Management of Travel Management

Alternative A (No Action), B, C, D and E (Proposed Alternative)

There are no impacts expected in this area.

4.7.14 From Management of Wilderness Characteristics

Alternative A (No Action)

Currently, there are no areas specifically managed for wilderness characteristics; therefore, there are no expected impacts.

Alternatives B, C, D and E (Proposed Alternative)

In any proposed Alternative, the allocations to maintain wilderness characteristics would be closed to rights-of-way and inconsistent land use authorizations. Future utilities and private requestors for access would be required to find other alternative routes through these areas. Land use authorizations in these areas would only be slightly affected.

4.8 Impacts on Soil Resources

4.8.1 From Special Designations

Alternative A (No Action)

Under current management of Agua Fria National Monument, soil resources in the Perry Mesa ACEC (9,580 acres) would likely be protected from increased erosion and soil loss; and from decreased soil moisture and productivity by limiting motor vehicle use. However, current management would not affect soil resources there because of the inaccessibility of the Larry Canyon ACEC to both livestock and motor vehicles. Similar to Larry Canyon ACEC, most of the suitable WSR corridors (6,030 acres) are in narrow, inaccessible canyons where there are few conflicts with the nonimpairment provisions of current interim management. Some places in the northern reaches of the Agua Fria River are accessible by vehicles. Restrictions on vehicular use of interim management should maintain or improve soil productivity and reduce soil loss. All of the Special Management Areas (SMAs) in the national monument are in areas of moderate potential soil erodibility with some small areas of severe and extremely severe potential soil erodibility.

Existing management of Congressionally Designated Wilderness (96,820 acres) would maintain current soil productivity by imposing management restrictions on activities.

Alternative B

In Agua Fria National Monument, interim management of the eligible WSR corridor under *Alternative B*, would be the same as described for *Alternative A*. Removing the ACEC designation in Larry Canyon and on Perry Mesa would not affect the soil because the same activities limited by the ACEC designation

would be limited under the national monument designation. Removal of these ACECs would not affect soils.

In the Bradshaw-Harquahala Planning Area closing the fenced area of the Tule Creek ACEC to motorized vehicles and grazing could benefit soil resources by reducing soil disturbance and compaction. Therefore, this area is rated to have slight potential soil erodibility. Reduced soil disturbance would result in slightly reduced erosion and increased soil infiltration and productivity.

Alternative C

In Agua Fria National Monument, the four designated ACECs are all in areas with moderate to very severe potential soil erodibility. Management actions for these ACECs would only negligibly affect soil resources beyond protections afforded by the National Monument Proclamation (Appendix A). Interim management of the eligible WSR corridor would be the same as described for *Alternative A*.

In the Bradshaw-Harquahala Planning Area, the protective measures of designating six ACECs, totaling 55,710 acres would reduce soil erosion and improve soil moisture and productivity. These areas are rated to have slight potential soil erodibility.

Alternative D

Impacts from the ACECs and suitable WSR corridors in Agua Fria National Monument would be the same as those described for *Alternative C*. In the Bradshaw-Harquahala Planning Area eight ACECs, totaling 192,800 acres are proposed; impacts to soil resources would be similar to those under *Alternative C*.

Alternative E (Proposed Alternative)

Impacts from the Special Designations in Agua Fria National Monument would be the same as those described for *Alternative C*. In the Bradshaw-Harquahala Planning Area four ACECs, totaling 89,970 acres are proposed;

impacts to soil resources would be similar to those under *Alternative C*.

4.8.2 From Lands and Realty Management

Alternative A (No Action)

Activities subject to valid existing rights in the national monument might continue, and applications, proposals, and future use requests that were pending when the national monument was created are subject to the terms of the Monument Proclamation (Appendix A). These activities could degrade soil resources if construction-related erosion, soil disturbance, or compaction occurs. These disturbances are temporary; therefore, long-term changes to soil resources would not be probable.

Impacts to soil resources from utility and transportation corridors, and communication sites are not expected under the current management of Agua Fria National Monument.

In the Bradshaw-Harquahala Planning Area disposal and consequential development of lands could result in long-term reductions in soil productivity. Acquiring lands would not be expected to affect soil resources.

Building small utility distribution systems could affect soil resources if construction-related erosion, soil disturbance, or compaction occurs. These disturbances are temporary; therefore, long-term changes to soil resources might not be probable.

Building major utility lines in existing corridors could affect soil resources, mainly from development, service roads, and increased traffic. Additionally, road building could degrade soil resources by erosion, soil disturbance, or compaction.

Development of utilities within utility corridors could disturb soils by creating increased erosion and reduced productivity mainly from construction activities, service roads,

and increased traffic. Mitigations could include (but not be limited to) avoidance of soils with high erosion potential, avoidance of steep slopes, construction of water control features, maintenance of as much vegetation as possible, and reclamation to suitable vegetation in a reasonable time.

Alternatives B, C, D, and E (Proposed Alternative)

In Agua Fria National Monument no impacts are expected from land tenure adjustments, utility and transportation corridors, or communication sites.

In the Bradshaw-Harquahala Planning Area impacts to soil resources from utility and transportation corridors and communication sites would be similar to those discussed for *Alternative A*. Impacts to soil resources from utility and transportation corridors, and telecommunication sites would also be similar to those discussed for *Alternative A*.

4.8.3 From Management of Soil, Air, and Water Resources

Alternative A (No Action)

Impacts to soil resources in Agua Fria National Monument are expected from the following:

- maintaining and improving soil cover and productivity through erosion preventative measures and land treatments;
- implementing activity plans to maintain or increase ground cover that would improve infiltration, permeability, soil moisture storage, and soil stability; and
- implementing watershed improvement projects to increase ground cover and reduce erosion.

Under the current management of the Bradshaw-Harquahala Planning Area no impacts are expected on soil resources.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts to soil resources are expected to be similar to those in *Alternative A*.

4.8.4 From Biological Resource Management

Alternative A (No Action)

In Agua Fria National Monument improvements to soil resources are expected from the following:

- improving the Agua Fria River riparian corridor by mitigating past impacts and implementing management actions to protect soils,
- reducing soil erosion by planting cottonwood and willow along the Agua Fria River and its tributaries, and
- discontinuing the use of vegetation chaining and other vegetation manipulation methods that substantially disturb the surface.

In the Bradshaw-Harquahala Planning Area impacts to soil resources are expected from the following:

- developing projects, including springs, seeps, and other features affecting water;
- maintaining or enhancing spring/riparian habitats in the planning unit. Sites would be determined in the Habitat Management Plan (HMP) to meet the plan's goals; and
- reducing competition for cover, water, and space among big game, livestock, and burros by reducing livestock aggregations and removing all burros at waters in the Big Horn, Granite Wash, and Harquahala Mountains.

Soil resources might slightly improve from all of these activities.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts would be similar to those described in *Alternative A*.

4.8.5 From Cultural Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected to soil resources from cultural resource activities under any alternative.

4.8.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected to soil resources from managing paleontological resources under any alternative.

4.8.7 From Recreation Management

Alternative A (No Action)

Under the current management of Agua Fria National Monument, areas of concentrated recreation could result in the loss or reduction of vegetation cover, compaction of soils, and streambank instability in riparian areas, thus decreasing soil moisture and productivity.

OHV use designations vary between the east and west parts of the Bradshaw-Harquahala Planning Area. In the area covered by the Phoenix RMP (BLM 1988a), vehicle travel is limited to existing roads and trails except for areas closed

or restricted to designated roads and trails. West of Highway 93, unlimited cross-country OHV use is allowed except in wilderness and other designated areas.

Increasing visitor use and vehicle travel in the area addressed by the Phoenix RMP would intensify soil erosion due to increasing numbers of OHV users and poorly engineered or non-engineered trails and routes. Despite users being confined to existing routes, erosion could increase on OHV trails ascending steep terrain and crossing unstable soils on hillsides. Overall, impacts from OHV use on soils are expected to be less than in other parts of the Bradshaw-Harquahala Planning Area as users are now restricted to using existing routes.

West of Highway 93, increased soil erosion is expected from increased visitation, multiplying numbers of routes, and greater use of OHVs on steep slopes. Bank washes would be broken down and made unstable in wash “play” areas. Soil damage and erosion could result from surface disruption, soil compaction, and damage to soil-holding plants. Furthermore, soils could be permanently damaged on steep slopes and across loosely graveled gentle slopes. Vehicle tracks on the lands here, especially desert pavement surfaces and hillsides, could last for 60 years or perhaps centuries, from evidence of Native American artwork and tread marks from World War II desert training exercises.

Under the current management of the areas west of Highway 93 and north of Wickenburg, areas of concentrated recreation and OHV use could result in the loss of or reduced vegetation cover, soil compaction, and streambank instability in riparian and wash areas, thus reducing soil moisture and soil productivity.

Moreover, the lack of OHV-related management facilities and amenities would contribute to increasing damage to soils across the Bradshaw-Harquahala Planning Area. Vegetation and infiltration could decrease, wash bank and riparian area stability would decline throughout the area, and increased amounts of soil would be exposed to erosion and compaction.

All new routes would be built in ways intended to minimize soil disturbance, erosion, and compaction.

Cross-country non-motorized travel by foot, horse or mountain bike could lead to the creation of permanent trails, sometimes called “social” trails that braid across the landscape. These user-created and non-engineered trails are subject to hardening or erosion and may cross and impact fragile or unstable desert soils. Most social trailing is a result of intense public use near residential properties, trailheads, target shooting areas, dispersed campsites, campgrounds, and motorized staging areas. Cross-country use by OHVs has similar, but more severe impacts.

The impact from cross-country non-motorized travel in heavy use areas includes increased hardening of the soils from repeated trampling and reduced vegetation. Ribbons of trails may develop from users choosing different paths to walk. Cryptogamic (black crusty soil) soils in some desert locales and desert pavement areas in others are easily damaged. These soils show signs of footprints or hoof prints for many years. Loss of these surface protections can lead to increased soil erosion, especially on slopes and where these trails allow water to run for long stretches. Erosion can lead to more loss of plant life and reduced soil productivity.

Alternative B

In Agua Fria National Monument 57,900 acres of Front Country, 12,700 acres of Back Country, and 300 acres of Passage RMZs would be established, and recreation uses and opportunities in the zones would be managed for protecting natural resources. Impacts to soil resources, including increased surface disturbance and erosion, might occur in the Front Country and Passage RMZ as recreation use increases. However, impacts are not expected in the Back Country RMZ.

In the Bradshaw-Harquahala Planning Area route, closures in Tule Creek ACEC and allocations to maintain wilderness characteristics within the Castle Hot Springs and Harquahala

Management Units, would slightly reduce soil disturbance, erosion, and compaction by OHV use. Some of these routes are in soil mapping units with moderate potential soil erodibility, but most are in slight potential erodibility.

Soil erosion from improper events and OHV use would be lessened by implementing vehicle route designations throughout the Bradshaw-Harquahala Planning Area, along with well-planned, sited, and signed special recreation management areas (SRMAs) addressing intensive recreation. Included would be both motorized and non-motorized uses in the Table Mesa, the Hieroglyphic Mountains, Stanton, Wickenburg, San Domingo Wash, and Vulture Mine SRMAs. Facilities and outreach/education would lessen improper OHV activities, further decreasing soil erosion, disruption, and compaction. Soil loss or damage by non-motorized cross-country travel would be the same as described under *Alternative A*.

Alternative C

Impacts on the national monument would be similar to those discussed for *Alternative B* and would occur on moderate to very severe soil erodibility areas on 42,000 acres of Front Country RMZ and 700 acres of Passage RMZ.

In the Bradshaw-Harquahala Planning Area impacts from recreation management would be similar to those discussed for *Alternative B*. Reducing vehicle travel routes and use in Harquahala Mountains ONA, and the allocations to maintain wilderness characteristics within the Black Canyon MU, the Hassayampa MU, and the Harquahala MU, would reduce recreation and OHV-related erosion, compaction, and surface disruption of soils. Some of these routes are in soil mapping units with moderate potential erodibility areas, but most are in slight potential erodibility.

Implementing well-planned, sited, and managed SRMAs addressing intensive recreation, including both motorized and non-motorized use, and vehicle route designation throughout the planning area would lessen soil erosion from

improper events and intensive OHV use. Associated facilities and outreach/education efforts would lessen improper OHV activities, further decreasing soil damage. Soil loss or damage by non-motorized cross-country travel would be the same as described under *Alternative A*.

Alternative D

Impacts on the national monument would be similar to those discussed for *Alternative C* and would occur on moderate to very severe soil erodibility areas on 1,530 acres of the Front Country RMZ and 990 acres of the Passage RMZ.

Phasing out OHV use of the Hieroglyphic Mountains SRMA would eventually reduce the potential for soil disturbance, compaction, and erosion caused by motorized activities on 16,510 acres. The overall management of the Castle Hot Springs Management Unit (MU) as a regional recreation management area would reduce soils impacts in the southern portion of the MU by phasing out motorized uses. As routes are reclaimed or are reduced in width for non-motorized use, cover vegetation would increase, increasing infiltration and reducing the amount of soil exposed to erosion and compaction.

The specified management of special recreation management areas (SRMAs) and restricting vehicle use to designated routes would further reduce soil impacts in all other parts of the planning area. Increased BLM signing, OHV route development and connectivity, public education, and better managed motorized and non-motorized recreation under *Alternative D* would lessen motorized impacts to soils over the long term. As routes are designated, reclaimed, or reduced in width for non-motorized use, cover vegetation would increase, increasing infiltration and reducing the amount of soil exposed to erosion and compaction. Soil loss or damage by nodes of intense non-motorized cross-country travel would be the same as described under *Alternative A*.

Alternative E (Proposed Alternative)

In this Alternative, 57,650 acres would be allocated to Back Country, 11,900 to Front Country, and 1,350 acres to Passage RMZs. Impacts on the national monument would be similar to those discussed for *Alternative C* and *D*, except that 52 miles of route would be closed. The net reduction of routes would be 69 miles. These route closures would likely reduce soil disturbance, erosion, and compaction by OHV use. All of the routes that would be closed or opened are located in moderate to very severe potential soil erodibility areas.

The overall management of the planning areas, along with the allocation of recreational vehicle use to designated routes only, would reduce impacts to soils in all parts of the planning area. Increased BLM signing, route development, route connectivity, and better managed motorized and non-motorized recreation would lessen potential impacts to soils over the short and long term. As routes are designated, reclaimed, or reduced in width for non-motorized use, cover vegetation would increase, increasing infiltration and lessening the amount of soil exposed to erosion and compaction. Soil loss or damage by localized areas with intense cross-country travel would be the same as described under *Alternative A*.

4.8.7.1 From Special Recreation Permit Program

Alternative A (No Action)

The predominant impacts to soils from the SRP program are soil compaction and accelerated erosion from concentrating activities in certain areas. Broken soil crusts and decreased vegetation cover exposes more soil to potential erosion and reduce infiltration. Most SRPs are issued for activities, such as jeep tours, horse events, and guided big game hunts, which occur on existing routes or disturbed areas and create minimal soil impacts. It is standard operating procedure to conduct environmental analysis before any SRP is authorized. Consequently,

any permitted activities that could cause adverse impacts to soils are mitigated to minimize those impacts and rehabilitation is required when necessary.

Within the national monument, few SRPs are currently issued; for instances, those permitted have been for commercial tour groups and for hunting guides. These permits use areas where similar activities have been taking place for many years and have been determined to have little or no impact.

In the Bradshaw-Harquahala Planning Area, the permitted recreation activities that cause the most disturbances to soils are the three motorized, competitive races that are held annually. Currently, the soil impacts from these races are closely monitored and the soils are rehabilitated as close to pre-race conditions as possible. However, under *Alternative A*, an unlimited number of competitive races could be authorized between October 15 and March 31, and in areas currently not used for such activities. Thus, without any set limitations on the number of races and the areas in which they can occur, this increased vehicle activity would inevitably lead to unacceptable cumulative soil impacts, perhaps most notably in previously undisturbed areas.

Limited staffing would make it difficult to adequately manage and mitigate the effects from such use including increased soil compaction and vegetation disturbance in camping and staging areas. Moreover, depressions, holes, rills, and deep ruts would become more visible and larger gullies would form due to poor drainage during heavy rains. Routes used for the racing activities would be impacted from the racing vehicles churning up the soils on the routes, and breaking soil crusts due to vehicle passing, accidents or course cutting. More soil berms would be created at curves and corners which would lead to increased wind and water erosion. Areas with finer soils would be especially affected and difficult to rehabilitate. Even with close monitoring and rehabilitation efforts, due to the arid desert conditions, once

soil crusts are disturbed and barren soil is exposed they can take a long time to recover.

Alternative B

In the Agua Fria National Monument, BLM would issue up to 12 special recreation permits per year. This is a 400 percent increase over the current situation and could lead to additional soil disturbance in new areas as permittees seek new locations for activities to avoid crowding. However, due to the Monument Proclamation requiring the protection of monument objects, permit requests would be scrutinized and permitted activities would be closely monitored. Therefore, soil impacts are expected to be slight.

For the Bradshaw-Harquahala Planning Area, impacts to soil resources from SRPs other than the competitive races would be similar to those discussed in *Alternative A*, except that the number of permits would be expected to increase. However, due to continuing implementation of mitigation measures, the impacts to soils from most of the permitted activities would be expected to increase only slightly.

For competitive races, the number of races each year would be limited to 14 and additional limits would be established for the Hieroglyphic Mountains, Vulture Mountains, Stanton, San Domingo, and Table Mesa SRMAs. Races would be prohibited in the Wickenburg SRMA and in the ERMAs. However, the allowable number of races is still a substantial increase from current conditions and therefore soil impacts would be much higher. It is anticipated that these impacts could be difficult to mitigate, manage, and rehabilitate to acceptable levels if the upper end of the allowed number of races is reached.

Alternative C

For the Agua Fria National Monument, impacts to soils from SRPs would be less than those discussed for *Alternative B* as only six permits per year could be issued. While still a 200 percent increase over current conditions, this

would lead to a slight, if any, increase in soil disturbance.

In the Bradshaw-Harquahala Planning Area impacts to soils from SRPs other than races would be the same as those described for *Alternative B*.

For competitive races, the number would be limited to six per year and no races would be allowed in the Table Mesa SRMA in addition to the SRMA limits identified in *Alternative B*. Further, set limits for Hieroglyphic Mountains and Vulture Mountains SRMA would keep the number of races near current levels thereby keeping soil impacts at existing conditions. Other SRMAs that would allow races include Stanton and San Domingo. Only one new race would be allowed in the Stanton and San Domingo SRMAs making management of the activities more feasible in keeping soil impacts to a minimum.

Alternative D

Under *Alternative D*, BLM would not issue SRPs for the national monument; therefore, eliminating any potential impacts to soils.

In the Bradshaw-Harquahala Planning Area impacts to soils from SRPs, other than competitive races, would be the same as those described for *Alternative B*.

No competitive races would be allowed. This would eliminate any continued impacts to soils from this activity, and soils would be allowed to recover from previous races.

Alternative E (Proposed Alternative)

Impacts in the national monument are expected to be similar to those described in *Alternative A*.

In the Bradshaw-Harquahala Planning Area, no permit levels would be established for SRPs other than competitive races. Permit numbers would be expected to rise over current conditions for both planning areas and soil

impacts would be similar to those discussed in *Alternative B*.

Competitive races would be limited to eight per year which is slightly higher than current conditions. Impacts would be similar to those addressed in *Alternative C*, except that the number of races could increase to four per year in the Vulture Mountains SRMA. However, the soil types in this SRMA are more resilient so impacts would be expected to be slight.

4.8.8 From Visual Resource Management

Alternative A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected to soils from management for Visual Resources.

4.8.9 From Rangeland Management

Alternative A (No Action)

In both planning areas, implementing the guidelines adopted in *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (Land Health Standards) would increase ground cover, which would provide for infiltration, permeability, soil moisture storage, and soil stability suitable for the ecological sites in the MUs. Implementation would also maintain or promote enough vegetation to maintain, improve, or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge, and streambank stability, thus promoting stream channel morphology (e.g. gradient, width/depth ratio, channel roughness, and sinuosity) and functions suitable for climate and landform.

Alternative B

Expected impacts to soil resources from rangeland/grazing management in uplands of the Agua Fria National Monument would be similar

to those described for *Alternative A*. However, limiting grazing in riparian areas to the winter would encourage more rapid recovery of riparian vegetation and reduce impacts to soils from grazing.

In the Bradshaw-Harquahala Planning grazing in riparian areas would also be limited to the winter. Winter-only grazing in riparian areas would encourage more rapid recovery of riparian vegetation and reduce impacts to soils from grazing.

Alternative C

In both planning areas impacts to soils from grazing in uplands would be similar to those discussed for *Alternative B*. Some reduction in upland grazing could occur. Grazing in riparian areas would be eliminated, increasing soil cover and reducing streambank damage from grazing under *Alternative B*. For grazing allotments that lack adequate fencing, the entire pasture would be closed to grazing. *Alternative C* would substantially reduce upland grazing as well as the use of riparian areas. This adjustment could be substantial in pastures or allotments that cannot be fenced in riparian areas from the upland areas. In these cases, the whole pasture could be closed from grazing.

Alternative D

In both planning areas soils would benefit from closing livestock grazing allotments, canceling livestock authorizations for the duration of the plan, and installing fencing to control livestock use of unfenced public lands.

Alternative D would result in the greatest improvement of the current impacts from livestock grazing on soil. Soil disturbance, soil compaction, and erosion would be lower than under any of the other Alternatives.

Alternative E (Proposed Alternative)

Impacts for both areas would be similar to those described for *Alternative B*.

For the Agua Fria National Monument impacts would be similar to those described in Alternative B.

In the Bradshaw-Harquahala Planning expected impacts to soil resources from rangeland/grazing management in uplands would be similar to those described for *Alternative A*. Grazing management changes would be implemented as needed to produce riparian areas that are making progress toward proper functioning condition. Management actions could include, but are not limited to, winter-only grazing in riparian areas. This would encourage recovery of riparian vegetation and reduce impacts to soils from grazing.

4.8.10 From Minerals Management

Alternative A (No Action)

In the Agua Fria National Monument, minerals management is not expected to affect soil resources. Existing mining claims are limited to casual use and valid existing rights. Impacts to soils, such as erosion and vegetation disturbance, would be limited to small areas under casual use.

Under the current management of the Bradshaw-Harquahala Planning Area, mining that involves building access roads, is likely to disturb soils. Road building would increase soil erosion, disturbance, and compaction.

Should exploration or development of locatable, saleable, and/or leasable minerals be pursued, special stipulations would be included in the mining plan of operations after the results of site-specific EAs for each action are known. Impacts cannot be projected before preparing such assessments, which would include methods, mitigation, and rehabilitation plans to meet the conditions required to protect soil. Therefore, such measures could minimize effects on soils.

Locatable Minerals

Mining itself might disturb soils and potentially result in accelerated erosion and loss of soil productivity. These effects to soils could be mitigated under 43 CFR 3715 and 43 CFR 3809, the regulations that implement the Federal Land Policy and Management Acts (FLPMA) mandate to prevent unnecessary or undue degradation from the surface disturbance of mining under the Mining Law of 1872.

Saleable Minerals

Extracting mineral materials would result in loss of soils and vegetation cover in mining areas and could lead to increased soil erosion.

Leasable Minerals

Mining that could occur in areas remaining open to leasable minerals development could degrade soils through compaction and increased erosion. From the RFD scenario described for the section of Chapter 4, Impacts on Minerals and Energy Resources, the likely scope of leasable mineral development is small. Therefore, impacts to soil are also likely to be small.

Alternative B

Impacts of minerals management on soil would be similar to those discussed for *Alternative A*.

Alternative C

Impacts to soils in Agua Fria National Monument would be similar to those discussed for *Alternative A*.

In the Bradshaw-Harquahala Planning Area impacts to soil resources from minerals management would be similar to those discussed for *Alternative A*, but the closure of many areas to mineral entry, mineral material disposal, and mineral leasing under *Alternative C* would reduce potential soil disturbance from mining.

Alternative D

In Agua Fria National Monument impacts to soil from minerals management would be similar to those discussed for *Alternative A*.

In the Bradshaw-Harquahala Planning Area impacts to soil resources would be similar to those discussed for *Alternative A*, but the closure of many areas to mineral entry, mineral material disposal, and mineral leasing under *Alternative D* would even further reduce potential soil disturbance from mining.

Alternative E (Proposed Alternative)

In both planning areas soil impacts from mining are expected to be similar to those under *Alternative A*.

4.8.11 From Fire Management

Alternative A (No Action)

Where prescribed burning is conducted in Agua Fria National Monument, the use of heavy equipment and mechanical thinning of trees could affect soils, increasing the potential for soil erosion. Soil moisture and productivity could be reduced in the short term, but increased in the long term. Prescribed burning would offer the following benefits:

- increasing vegetation diversity,
- moving vegetation communities in target areas toward a natural desert grassland community, and
- reducing the risk of catastrophic fires.

These benefits would result in more vegetation cover that would reduce soil erosion.

Full suppression in interior chaparral or desert grassland communities, which are Fire-adapted vegetation types, would limit the natural beneficial affects of fire, encouraging vegetation type conversions towards higher proportions of woody species. As a result, herbaceous cover on

the soil surface would likely decline with related soil effects, including decreased infiltration and increased runoff and erosion. The use of heavy equipment during suppression could also increase soil disturbance and potentially increase erosion.

Under the current management of both planning areas, full suppression of wildfires is needed to maintain healthy Sonoran Desert communities, which are highly sensitive to fire with potentially devastating loss of native plants including species such as; saguaro cactus, palo verde and ironwood trees.

Alternatives B, C, D, and E (Proposed Alternative)

For fire adapted ecosystems an appropriate management response would be implemented to achieve the Desired Future Condition for the area. This response would provide for a variety of strategies and tactics for the incident commander and fire resources on site. These strategies could have a wide spectrum of actions that could include a range of alternatives from full suppression to no action including fire-use.

When lightning fires occur, a fire-use strategy could be implemented resulting in larger acreage that is burned. This increased acreage would result in short term increases in soil loss and depending on rainfall and re-vegetation of the burn area a large increase in soil loss and sediment deposit could occur. The long term recovery of natural fire adapted vegetation communities that respond rapidly to post fire conditions should make this a very short period.

Management actions of full suppression would continue in Sonoran Desert vegetation communities and in Wildland-Urban Interface (WUI) areas. In these areas, full wildfire suppression would have impacts similar to those described for *Alternative A*.

4.8.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

No wild horses or burros inhabit Agua Fria National Monument.

Under the current and alternative management of the Bradshaw-Harquahala Planning Area maintaining herd numbers at current levels in the Lake Pleasant Herd Management Area (HMA) would minimize impacts to soil from wild burros. In the Harquahala HA, removal of nuisance burros and burros from sensitive habitats would improve soil stability and productivity in the Harquahala MU.

4.8.13 From Management of Travel Management

Alternative A (No Action)

Increasing visitor use and vehicle travel in the area addressed by the Phoenix RMP would intensify soil erosion due to increasing numbers of OHV users and poorly engineered or non-engineered trails and routes. Despite users being confined to existing routes, erosion could increase on OHV trails ascending steep terrain and crossing unstable soils on hillsides. Overall, impacts from OHV use on soils are expected to be less than in other parts of the Bradshaw-Harquahala Planning Area as users are now restricted to using existing routes.

West of Highway 93, increased soil erosion is expected from increased visitation, multiplying numbers of routes, and greater use of OHVs on steep slopes. Bank washes would be broken down and made unstable in wash “play” areas. Soil damage and erosion could result from surface disruption, soil compaction, and damage to soil-holding plants. Soils could be permanently damaged on steep slopes and across loosely graveled gentle slopes. Vehicle tracks on the lands here, especially desert pavement

surfaces and hillsides, could last for 60 years or more— as evidenced with Native American artwork and tread marks from World War II desert training exercises.

Under the current management of the areas west of Highway 93 and north of Wickenburg, areas of concentrated recreation and OHV use could result in the loss of or reduced vegetation cover, soil compaction, and streambank instability in riparian and wash areas, thus reducing soil moisture and soil productivity.

The lack of OHV-related management facilities and amenities would contribute to increasing damage to soils across the Bradshaw-Harquahala Planning Area. Vegetation and infiltration could decrease, wash bank and riparian area stability would decline throughout the area and increased amounts of soil would be exposed to erosion and compaction. All new routes would be built in ways intended to minimize soil disturbance, erosion, and compaction.

Alternative B

In Agua Fria National Monument, impacts to soil resources, including increased surface disturbance and erosion, might occur in the Front Country and Passage Zones due to increased transportation and public visitation. In the monument, 37 miles of route would be closed and five miles of route would be built. The net reduction of 33 route miles would likely reduce soil disturbance, erosion, and compaction by OHV use. All of the routes that would be closed or opened are located in moderate to very severe potential soil erodibility areas.

In the Bradshaw-Harquahala Planning Area route closures in Tule Creek ACEC and allocations to maintain wilderness characteristics within the Castle Hot Springs and Harquahala Management Units would slightly reduce soil disturbance, erosion, and compaction by OHV use. Some of these routes are in soil mapping units with moderate potential soil erodibility, but most are in slight potential erodibility areas.

Alternative C

Impacts on the national monument would be similar to those discussed for *Alternative B*. In the monument, 48 miles of route would be closed and six miles of new route would be built. Moreover, this net reduction of 43 miles of route would marginally protect more soil resources than *Alternative B*.

Reducing vehicle travel routes and use in Harquahala Mountains ONA, and the allocations to maintain wilderness characteristics within the Black Canyon MU, the Hassayampa MU, and the Harquahala MU, would reduce recreation and OHV-related erosion, compaction, and surface disruption of soils. Some of these routes are in soil mapping units with moderate potential soil erodibility, but most are in slight potential erodibility areas.

Alternative D

Impacts on the national monument would be similar to those discussed in *Alternative C*. In the monument, 123 miles of route would be closed and no new routes would be built. Consequently, this alternative would provide the most protection to soil resources due to route closures.

Soil erosion resulting from vehicular travel would be curtailed by eliminating or mitigating recreation vehicle use in the allocations to maintain wilderness characteristics within the Black Canyon MU, the Hassayampa MU, and the Harquahala MU.

Restricting vehicle use to designated routes would further reduce soil impacts in all other parts of the planning area. As routes are designated, reclaimed, or reduced in width for non-motorized use, cover vegetation would increase, increasing infiltration and reducing the amount of soil exposed to erosion and compaction.

Alternative E (Proposed Alternative)

Impacts on the national monument would be similar to those discussed for *Alternative C* and *D*, except that 70 miles of route would be closed. This reduction in route mileage would reduce soil disturbance more than *Alternatives B* and *C*, but less than *Alternative D*.

Soil erosion caused by vehicular travel would be curtailed by eliminating vehicle use in Tule Creek ACEC, and by reducing vehicle routes and cross-country travel in allocations to maintain wilderness characteristics and the Harquahala Mountains and Black Butte ACECs. Curtailing or reducing vehicle use in the above areas would benefit soil resources by eventually reducing the potential for soil disturbance, compaction, and erosion caused by motorized activities.

4.8.14 From Management of Wilderness Characteristics

Alternative A (No Action)

There are no impacts expected.

Alternative B

For the management of wilderness characteristics 56,040 acres would be allocated. Soil disturbances, compaction, and erosion caused by human induced activities would be reduced in these areas.

Alternative C

Impacts would be the same as *Alternative B* except that 107,843 acres would be allocated for the management of wilderness characteristics. Protection from soil disturbing activities would be greatest under this alternative.

Alternative D

Impacts would be same as *Alternative B* and *Alternative C* except that 140,235 acres would be allocated for the management of wilderness characteristics. This would include 37,571 acres within the Agua Fria National Monument.

Alternative E (Proposed Alternative)

Impacts would be the same as *Alternative B* except that 88,179 acres would be allocated for the management of wilderness characteristics. As a result of this allocation, soil protection would be more than *Alternatives A* and *B*, but less than *Alternatives C* and *D*.

4.9 Impacts on Air Quality

Air Quality Impacts from OHVs

Most of the air emissions generated in both planning areas are generated by OHVs. OHV

use is an important recreation activity for residents of Maricopa and Yavapai Counties. On a countywide basis, OHVs generate fugitive dust and tailpipe emissions.

Table 4-1 shows estimated current countywide emission rates for fugitive dust and nitrogen oxides (NO_x) generated by countywide OHV use in the two counties. Table 4-1 also compares the OHV emission rates to the regional emissions generated inside the densely populated Phoenix nonattainment areas. Although no estimates were made to apportion OHV use in both planning areas, only a fraction of the countywide use listed in Table 4-1 is likely to affect the planning areas. Countywide emissions generated by OHVs are only a small fraction of the overall regional emissions, and most of the countywide OHV use occurs in remote rural areas. To the extent that OHVs cause elevated air pollutant concentrations immediately near the routes on which they operate, OHV use in remote rural areas is unlikely to contribute to any meaningful regional air quality impacts that would affect the

Table 4-1. Estimated Emissions from Countywide OHV Use

County	Annual OHV Trips	PM ₁₀ Emissions		Nitrogen Oxides (NO _x) Emissions	
		Emission Factor (lbs/trip)	Annual Countywide Emissions (tons/yr)	Emission Factor (lbs/trip)	Annual Countywide Emissions (tons/yr)
Maricopa	2,087,000 ⁽¹⁾	4 ⁽³⁾	4,200	0.14 ⁽⁴⁾	146
Yavapai	1,195,000 ⁽²⁾	4 ⁽³⁾	2,400	0.14 ⁽⁴⁾	84
Total Emissions From All Sources In Phoenix Nonattainment Areas		Total Phoenix PM ₁₀ Emissions (tons) (Year 2001)	79,500 ⁽⁵⁾	Total Phoenix NO _x Emissions (tons) (Year 1999)	81,000 ⁽⁶⁾
<u>Example calculation (NO_x emissions within Maricopa County)</u>					
NO _x emission factor = 0.14 lbs per 25-mile OHV trip					
Maricopa County OHV usage = 2,087,000 trips/year					
Annual OHV NO _x emissions = (2,087,000 trips/year) x (0.14 lbs/trip) / (2000 lbs/ton) = 146 tons per year of NO _x					
Data Sources:					
(1) Arizona State Parks, 2003					
(2) Arizona State Parks, 2003					
(3) Emission factor from Imperial Sand Dunes Recreation Area EIS (BLM 2003), assuming 25 miles per OHV trip					
(4) NO _x emission factor from Imperial Sand Dunes Recreation Area EIS (BLM 2003)					
(5) Maricopa Association of Governments (MAG) 2000					
(6) MAG 2002					

Phoenix nonattainment area.

Note that the current countywide OHV emission rates shown in Table 4-1 might increase in the future. The population of both Maricopa and Yavapai Counties are forecast to increase dramatically, and historical per-capita OHV use has increased faster than the rate of population growth. Thus, future emissions of fugitive dust would likely be higher than the current rates listed in Table 4-1. As a consequence, stricter measures may be warranted for the Phoenix area, and it is possible that OHV use might be among the new sources regulated to control dust emissions. Recently enacted Federal emission limits for OHVs will lead to reductions in tailpipe emissions from individual OHVs.

General Conformity Regulatory Requirements

During plan implementation, the General Conformity rule requires an applicability determination by the BLM for all emissions generated within nonattainment or maintenance areas, that are reasonably foreseeable, and that BLM can practicably control due to a continuing program responsibility. In order to quantify the contribution of off-road fugitive dust and other dust-generating activities, the BLM plans to prepare an emissions inventory as part of developing an Air Quality General Conformity analysis and determination. It will comply with applicable County and State air quality rules that are currently going through rule changes. Therefore, the conformity analysis and determination may be completed after the Records of Decision are signed, but before additional off-road vehicle activities are authorized in non-attainment areas. No activities that may contribute to or inhibit the County from reaching attainment will be authorized, except for those actions that may be typically excluded by regulation (such as at 40 CFR 93.158) until the conformity determination process is completed.

Land disposal is a type of action that is exempt from the General Conformity rule (regardless of projected population increases), so long as the applicable Federal agency has no practicable

control, nor continuing program responsibility, over the land subsequent to its transfer.

Table 4-2 lists the Year 2025 population and air pollutant emissions that would be generated by land disposal parcels in the ozone and PM₁₀ nonattainment areas. The table assumes that each parcel would be developed to a residential density based on that parcel's Regional Analysis Zone (RAZ) designation. For perspective, the table compares emissions from the land disposal parcels with the overall emissions from the entire nonattainment area. Note that in the majority of cases of land disposal, involving land sales or exchanges, the BLM would retain no practicable control, nor continuing program responsibility, over these lands subsequent to their transfer out of Federal ownership.

Air Quality Issues of Utility Corridors

Each of the Alternatives specifies a different set of utility access corridors, related mainly to the width of each corridor. At this time none of the utilities have filed permits to build new pipelines or transmissions lines through any of the available corridors. If new utilities were permitted in the future and were built in the narrower corridor, then building and maintaining the new utility would generate temporary, localized fugitive dust impacts immediately nearby. In those cases, EAs or, as suitable, Environmental Impact Statements (EISs) would be required for each new utility. The EA or EIS for each action would specify required fugitive dust controls. Any construction in nonattainment areas would have to comply with county dust control requirements. Typical dust control measures include the following:

- watering unpaved roads and staging areas,
- prohibiting work during high winds,
- covering or watering temporary stockpiles,
- washing trucks entering public streets from construction zones,
- sweeping paved areas, including public streets, and
- promptly revegetating disturbed areas.

4.9.1 From Special Designations

Alternative A (No Action)

Under its current management, two areas in Agua Fria National Monument have Special Designations: Larry Canyon ACEC (80 acres) and Perry Mesa ACEC (9,580 acres). Larry Canyon ACEC would continue to be closed to motorized vehicles under *Alternative A*. Motorized vehicles in Perry Mesa ACEC are limited to designated roads and trails. Since Larry Canyon ACEC is inaccessible to vehicles, fugitive dust and emissions do not occur there. Restricting motorized vehicles to designated roads and trails in Perry Mesa ACEC would allow the continued generation of fugitive dust and tailpipe emissions.

Emissions from OHV use at the RCA and two MRMAs, would likely increase as a result of regional population growth and increased regional OHV use. OHV emissions might cause localized, temporary air quality impacts along the roads and trails, but would be likely to contribute little to regional air quality impacts when compared to the much larger emissions generated by the densely populated Phoenix metropolitan area.

Under the current management of the Bradshaw-Harquahala Planning Area BLM would continue to prohibit OHV use in five wilderness areas (96,820 acres) and encourage OHV use on one back country byway (Harquahala Mountain Summit Road).

Increased visitor use travel along the 10.5 mile Harquahala Mountain Summit Road Back Country Byway would increase fugitive dust in the immediate area of Blue Tank Wash and the Harquahala Mountains Wilderness, but this increase is not considered of more than local significance. Motorized vehicles are prohibited in wilderness areas and so designation of wilderness areas would not contribute to air emissions.

Alternative B

Site-specific recreation prescriptions in ACECs, RNAs and SRMAs would likely shift OHV users away from these areas to sites where OHV recreation is allowed and intensify vehicle travel and OHV use in the remaining accessible areas long designated routes. The result would be (1) reduced localized air quality impacts in the new restricted areas and (2) increased temporary and localized, degraded air quality in the remaining OHV areas.

Alternative C

The existing Harquahala Mountain Summit Road Back Country Byway, designating the Constellation Mine Road and Bloody Basin Roads as back country byways and later use of these roadways could attract more regional OHV users, drawing them away from other OHV areas. This shift in location is not expected to increase regional OHV use or regional fugitive dust emissions. The shift would concentrate more emissions onto each byway, thereby increasing localized air quality impacts.

In the Bradshaw-Harquahala Planning Area, BLM's designation of seven ACECs would further shift OHV use and possible air quality impacts.

Reducing vehicle travel routes and use in Harquahala Mountains ONA would reduce fugitive dust emissions in the immediate area of these land use designations.

Alternative D

Impacts from designating either of the two new ACECs would be similar to *Alternative B*. The relative shift in air quality impacts between newly restricted areas and the remaining accessible areas would be greatest under *Alternative D* because it would apply new restrictions on the most land.

Air quality effects and fugitive dust emissions from vehicular travel and OHV use would be

curtailed by eliminating or mitigating recreation vehicle use in the Sheep Mountain RNA.

Alternative E (Proposed Alternative)

Site-Specific prescriptions and restrictions applied on ACECs along with cultural and wildlife management prescriptions would shift the locations of increases in OHV use and resulting fugitive dust and emissions. These actions would probably not affect the total future amounts of either OHV use or fugitive dust emissions throughout Agua Fria National Monument or the Bradshaw-Harquahala Planning Area.

4.9.2 From Lands and Realty Management

Alternative A (No Action)

Most of the air quality issues from Lands and Realty Management are related to population growth and emissions involving land disposal, as described previously in Section 4.9. From these sections one can conclude that BLM's actions are exempt from the General Conformity requirements and that land disposal actions would not delay the region's compliance with the air quality standards.

New residential development on previously rural BLM's land would have a minor effect on air quality immediately downwind from each new development. The ambient concentrations near each residential development would be less than allowable State and Federal limits. MAG's air quality modeling shows that regional air quality would continue to improve even after accounting for future population growth.

Impacts on air quality would occur in two distinct phases and intensities. The first construction (or reconstruction) phase would contribute to elevated levels of criteria pollutants and fugitive dust, but generally over a limited area and only for short periods. Long-term impacts would result from continuing maintenance operations but generally at a much

lower level of production of pollutants. All utility construction proposals would be subject to air quality restrictions (e.g. fugitive dust best management practices), procedures, and stipulations defined in site-specific environmental analysis of the project.

Air Quality Issues of Utility Corridors

Existing utility rights-of-way in the monument would be modified, removed, or maintained in accordance with BLM's agreements with utility providers for as long as the demand exists for the utility. Within the Bradshaw-Harquahala Planning Area, all major utilities would be routed through designated corridors. If new utilities were permitted in the future, construction activities associated with development of utilities could degrade air quality by contributing pollutants to the air and increasing the emission of fugitive dust. Removal of vegetation and exposure of the soil surface to wind erosion can also contribute to air quality degradation. Mitigation measures could include (but are not limited to) application of water or other dust abatement during construction activities, maintenance of as much vegetation as possible, and reclamation to suitable vegetation in a reasonable time. Implementing available dust-control Best Management Practices (BMPs) would ensure that any air quality impacts would be temporary and would be limited to the immediate area of the construction.

Air Quality Impacts Caused by Ongoing Maintenance

Under the current management of both planning areas, ongoing maintenance and improvement of facilities and roadways would require continued use of construction equipment. This use would continue and could generate fugitive dust and tailpipe emissions by earthmoving and the use of heavy equipment. Each construction or maintenance action would cause a temporary, localized increase in ambient pollutant concentrations for the duration of the activity.

Alternative B

Alternative B would narrow the existing utility corridor in Agua Fria National Monument. This change is not expected to alter existing utility maintenance in the corridor and new utility construction could be permitted, subject to air quality procedures and stipulations defined in site-specific environmental analysis of the project. Thus, narrowing the existing utility corridor is not expected to affect air quality, but it would shift the location of future air quality emissions into a smaller area.

In the Bradshaw-Harquahala Planning Area new utility corridors would be designated for future expected demands. These designations would respond to the demand for the intensification of the power grid and would be consistent with the utility regulations of the Arizona Corporation Commission. Designating new utility corridors and widening the Black Canyon corridor for utility development might result in new pipelines or transmission lines being built through the area. Any such construction would likely generate fugitive dust and tailpipe emissions through earthmoving and the use of heavy equipment.

Impacts from ongoing maintenance and improvement of facilities and roadways would be the same as *Alternative A*.

Alternative C

Under *Alternative C* the Black Canyon utility corridor would be eliminated from Agua Fria National Monument. This action would maintain current emissions of criteria pollutants and fugitive dust. Though the utility corridor would be eliminated, BLM would continue to authorize existing utilities. Air quality impacts from ongoing maintenance would be the same as *Alternative A*.

In the Bradshaw-Harquahala Planning Area impacts would be the same as *Alternative B*.

Right-of-way applications in corridors would precipitate site-specific environmental analysis that would address air quality and actions to minimize impacts. Any construction in nonattainment areas would be subject to comply with county air quality rules.

Alternative D

Impacts in Agua Fria National Monument would be similar to those described for *Alternative C*.

In the Bradshaw-Harquahala Planning Area no new electric and gas corridors would be designated. The portion of the Black Canyon Multi-Use corridor would be extended so that it would be continuous north and south on BLM's land. If utilities elect to use this corridor in the future, they would generate criteria pollutants and fugitive dust through earthmoving and the use of heavy equipment. All utility construction in the planning area would be subject to air quality restrictions, procedures, and stipulations defined in site-specific environmental analysis for the project.

Alternative E (Proposed Alternative)

Impacts under *Alternative E* would be similar to those described for *Alternative C*.

4.9.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Under the current management of both planning areas, soil, water, and air management would promote soils and ground cover and implement preventive erosion measures. This approach would reduce localized emissions of naturally occurring windblown fugitive dust.

Increased unpaved surface management in PM₁₀ Non-attainment areas will reduce fugitive dust and PM₁₀ emissions.

4.9.4 From Biological Resource Management

Alternative A (No Action)

In the Agua Fria National Monument, continued measures to protect biological resources, including the use of prescribed fire and mechanical vegetation treatment, may result in small amounts of temporary, localized emissions as discussed in Section 4.9.11.

In the Bradshaw-Harquahala Planning Area, continued measures to protect ground cover, biological areas, and habitats would minimize emissions of criteria pollutants and windblown fugitive dust. Implementation of Land Health Standards is expected to result in progressive increases in ground cover, which would result in reduced production of windblown fugitive dust not related to roads. In addition, measures designed to improve wildlife habitat would limit disturbance from building construction, land clearing, removal of downed wood, or woodcutting, which would also reduce emissions of criteria pollutants.

Alternative B

Impacts would be similar to those under *Alternative A*.

Alternative C

In Agua Fria National Monument two new Wildlife Habitat Areas would be allocated for enhancing pronghorn habitat. Four new ACECs would be designated for managing biological resources. This action would limit vehicle routes and prohibit new recreational site developments in pronghorn movement corridors, improving air quality in the newly designated areas. However, emissions might increase in the remaining areas where OHV use and recreational site developments are allowed.

The use of prescribed fire to improve habitat for pronghorn would have the same impacts as those discussed for *Alternative A*.

In the Bradshaw-Harquahala Planning Area BLM would designate seven ACECs. This would increase the acreage under strict management for motorized recreation and result in fewer cultural resource areas devoted to intensive public use. Localized air quality impacts would be reduced in the newly restricted areas while increasing the temporary, localized air quality impacts at the remaining OHV and public use areas.

Alternative D

In Agua Fria National Monument two wildlife habitat areas and one ACEC would be designated for managing biological resources. Motor vehicle routes that fragment pronghorn habitat and cross known pronghorn movement corridors would be closed, limited, or mitigated.

Alternative D would redesignate the most land subject to OHV restrictions. The impacts of this action would be similar to *Alternative C*, except that the relative shift in air quality impacts between newly restricted areas and the remaining accessible areas would be greatest under *Alternative D*.

All fences in the national monument would be removed. Removing fences would generate small amounts of localized, temporary emissions of criteria pollutants and fugitive dust.

The use of prescribed fire would have the same impacts as those discussed for *Alternative A*.

In the Bradshaw-Harquahala Planning Area impacts would be similar to those under *Alternative A*.

Alternative E (Proposed Alternative)

Air quality impacts under *Alternative E* would be similar to those under *Alternative C*.

4.9.5 From Cultural Resource Management

Alternative A (No Action)

There no impacts on air quality expected from existing Cultural Resource Management (CRM) in either planning area.

Alternative B

Developing access, interpretive facilities, and interpretive media at selected sites would result in more vehicle trips as visitors in both planning areas. Five sites in the Agua Fria National Monument would be developed for high public use standards, which allows for the building of parking areas. Eight areas in the Bradshaw-Harquahala Planning Area would be managed as Special Recreation Management Areas (SCRMA) with sites developed for public visitation. The result would be increased emissions of criteria pollutants and fugitive dust.

Alternative C

In Agua Fria National Monument impacts would be similar to those discussed for *Alternative B*. However, impacts would be of lower magnitude because only one site would be developed to High Public Use standards and nine sites would be developed to Moderate Public Use standards.

In the Bradshaw-Harquahala Planning Area impacts would be similar to those discussed for *Alternative B*, except the impacts would be of lower magnitude because only four areas would be managed as SCRMA.

Alternative D

In Agua Fria National Monument only the Pueblo la Plata site complex would be developed for public visitation. Air quality impacts from vehicle traffic would be limited to Bloody Basin Road and the Pueblo la Plata area. Therefore, the levels of airborne pollutants under

Alternative D would be lower than under *Alternatives B* or *C*.

In the Bradshaw-Harquahala Planning Area levels of pollutants generated by site visits would be lower than under *Alternatives B* or *C* because only two areas would be managed as SCRMA with sites developed for public visitation.

Alternative E (Proposed Alternative)

In Agua Fria National Monument two sites would be developed for public visitation under High Public Use Actions, and six sites would be developed in accordance with Moderate Public Use Actions. The projected impacts on air quality would be lower than expected under *Alternative B* and greater than expected under *Alternatives C* and *D*.

In the Bradshaw-Harquahala Planning Area, six areas would be managed as SCRMA with sites developed for public visitation. The projected impacts on air quality would likely be lower than expected under *Alternative B* and greater than expected under *Alternatives C* and *D*.

4.9.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts to air quality expected as a result of paleontological resource management in either planning area.

4.9.7 From Recreation Management

Each of the Alternatives would impose new restrictions on motorized recreation in portions of the planning areas. These restrictions would shift OHV users away from the newly restricted areas but might increase OHV uses in the remaining areas. Adverse air quality impacts would be reduced in the newly restricted areas,

but there could be temporary, localized increases in emissions in the remaining areas accessible to OHVs.

Alternative A (No Action)

Prohibiting cross-country OHV use in Agua Fria National Monument would reduce levels of criteria pollutants and fugitive dust. In the Bradshaw-Harquahala Planning Area OHV travel would generate increased emissions of criteria pollutants and fugitive dust.

The current recreation uses (hiking, target shooting, viewing prehistoric sites, and dispersed camping with a 14-day limit) could generate emissions of criteria pollutants and fugitive dust from OHV travel, as well as emissions and smoke from campfires and stoves. Over time, as these uses continue to increase, so would the emission of criteria pollutants associated with them. Under *Alternative A*, an unlimited number of competitive races could be authorized between October 15 and March 31, and in areas currently not used for such activities. This increased activity would potentially increase the amount of fugitive dust. However, all proposed races would be required to comply with county air quality standards thereby significantly reducing the potential for any noticeable increase of airborne emissions.

Areas open to camping would generate criteria pollutants and fugitive dust from OHV travel, as well as small amounts of emissions and smoke from campfires and stoves. The use of roadways and trails by motor vehicles would result in tailpipe emissions and fugitive dust from vehicular travel. Building and maintaining recreation-related roadways, trails, and facilities would generate temporary and short-lived emissions of criteria pollutants and fugitive dust from heavy equipment and earthmoving.

Cross-country non motorized travel by foot, horse or mountain bike can lead to the creation of permanent trails, sometimes called “social” trails that braid across the landscape. These user-created and non-engineered trails are subject to

hardening or erosion and may cross and impact fragile desert soils. Cryptogamic (black crusty soil) soils in some desert locales and desert pavement areas in others are easily damaged and may then easily become air borne under high wind conditions if the damage is severe enough. Horses and mountain bikes can create small amounts of fugitive dust.

Alternative B

In Agua Fria National Monument, the emphasis in the Back Country RMZ would be on managing and maintaining the character of the natural landscape. In the Front Country RMZ, more focus could be placed on recreation and interpretation. OHV use in the portions of the national monument accessible to OHVs would generate emissions of criteria pollutants and fugitive dust.

Site-specific recreation prescriptions in ACECs, ONAs, RNAs, SRMAs, allocations to maintain wilderness characteristics, RMZs, and other allocations would likely shift OHV users away from these areas to areas where OHV recreation is allowed and intensify vehicle travel and OHV use in the remaining accessible areas along designated routes. The result would be (1) reduced localized air quality impacts in the newly restricted areas and (2) increased temporary and localized, degraded air quality in the remaining OHV areas.

Thus, new and displaced OHV users would increase criteria pollutants and fugitive dust concentrations in and immediately near designated routes. The number of competitive races would be limited to 14 (significantly higher than current conditions). However emissions of particulate matter are not expected to be considerable due to mitigation measures placed on these races to comply with county air quality standards. In addition, countywide OHV emissions are only a small fraction of the total emissions generated by the Phoenix metropolitan area. They are unlikely to contribute any regional air quality impacts that would affect the metropolitan area or any sensitive areas downwind of Phoenix.

Emissions of criteria pollutants and fugitive dust in the planning areas would be reduced in some areas by route closures or restrictions. In the Bradshaw-Harquahala Planning Area net dirt roads would be reduced by 82 miles, and there would be 24 fewer miles of dirt road in Agua Fria National Monument. These route closures would likely reduce fugitive dust emissions in the immediate area along the routes. Regionally, these closures would not decrease vehicle use or emissions and fugitive dust.

Building and maintaining roadways, trails, and recreation facilities would generate temporary and short-lived emissions of criteria pollutants and fugitive dust from heavy equipment and earthmoving. BLM's development activities would comply with local and county dust control ordinances to limit emissions and fugitive dust. Impacts on air quality resources from cross-country travel by non-motorized visitors are considered to be similar to those described under *Alternative A*.

Alternative C

In Agua Fria National Monument impacts from recreation on air quality would be similar to *Alternative B*, except that more vehicle routes would be closed or limited to motorized vehicles.

In the Bradshaw-Harquahala Planning Area, impacts of OHV use would be similar to *Alternative B*, except BLM would designate seven ACECs, further shifting OHV use and possible air quality impacts. Impacts on air quality resources from cross-country travel by non-motorized visitors are considered to be similar to those described under *Alternative A*.

Alternative C would implement well planned, sited, and managed SRMAs and address intensive recreation and OHV use and vehicle route designations at Table Mesa, the Hieroglyphic Mountains, Stanton, Wickenburg, San Domingo Wash, and Vulture Mine locales. The SRMAs would reduce air quality effects and fugitive dust emitted by improper activity, scheduled OHV events, and intensive OHV use.

The number of competitive races would be limited to six per year which is slightly higher than current conditions. Air quality emissions from these activities would remain the same or lessen over time due to management actions.

Alternative D

Vehicular access would be limited under *Alternative D*, and a Back Country RMZ would be established throughout most of Agua Fria National Monument to preserve natural landscapes. Most Cultural Resource Management areas would be designated for limited public use. No other areas for intensive public use would be developed to replace the areas that would become restricted. Larger areas would be managed for more primitive recreation. This approach is not expected to reduce overall regional emissions, but it would (1) shift air quality impacts away from newly restricted areas and (2) intensify localized air quality impacts in the remaining areas where OHV recreation remains accessible. The relative shift in air quality impacts between newly restricted areas and the remaining accessible areas would be greatest under *Alternative D* because it would apply new restrictions on the most land. Localized air quality impacts from non-motorized visitors would be similar to those described under *Alternative A*.

In Agua Fria National Monument BLM would issue no Special Recreation Permits. The decrease in visitors to the area from reduced recreation would lead to fewer vehicle trips, which would decrease emissions of criteria pollutants. Camping would generate criteria pollutants and fugitive dust from OHV travel, as well as small amounts of emissions and smoke from campfires and stoves. Building and maintaining roadways, trails, and facilities would generate emissions of criteria pollutants and fugitive dust from heavy equipment and earthmoving.

In the Bradshaw-Harquahala Planning Area, new restrictions on OHV use would be enacted

on more land under *Alternative D* than under any of the other Alternatives.

In the Bradshaw-Harquahala Planning Area 723 miles of routes would be closed. The route closures would reduce air quality emissions and fugitive dust. Phasing out the use of the Hieroglyphic Mountains SRMA for OHV use would improve air quality and lessen dust emissions by eventually reducing and ending motorized activities on 16,510 acres.

Alternative D would implement well-planned, sited, and managed SRMAs addressing intensive recreation and OHV use and vehicle route designation at Table Mesa, the Hieroglyphic Mountains, Stanton, Wickenburg, San Domingo Wash, and the Vulture Mine areas. The result would be reduced air quality effects and fugitive dust emitted by improper activity, scheduled OHV events, and intensive OHV use. Under this alternative, no competitive races would be allowed. Therefore, air quality emissions from these activities would be expected to be reduced over time due to management actions.

Alternative E (Proposed Action)

Impacts of site-specific prescriptions and restrictions within the Agua Fria National Monument and the Bradshaw-Harquahala Planning Area would be similar to *Alternative C*.

The impacts of SRMAs would be similar to *Alternative C*.

The number of competitive races in this alternative would be limited to eight. Air quality effects and fugitive dust emissions would be negligible due to mitigation measures placed on these races to comply with county air quality standards. Therefore, air quality emissions from these activities would remain the same or be reduced over time due to management actions.

Localized impacts on air quality resources from cross-country travel by non-motorized visitors are considered to be similar to those described under *Alternative A*. The BLM would implement dust control measures to ensure

compliance with new rules being developed by Maricopa County. Such measures could include prohibiting OHV use in the non-attainment area on days the Arizona Department of Environmental Quality forecasts high pollution levels in its dust forecasts. Other measures could include the use of dust suppressants and the use of gates or other barriers to exclude use on high pollution days.

4.9.8 From Visual Resource Management

Alternative A (No Action)

No policy standards are now directed toward visual resources.

Alternatives B, C, D, and E (Proposed Alternative)

The managing of areas under Class I, II, and III standards could contribute to restrictions on some kinds of land development and use. The overall regional levels of construction-related pollutants and fugitive dust would be reduced if projects are modified or prohibited to satisfy VRM objectives.

4.9.9 From Rangeland Management

Alternative A (No Action)

Under current grazing management, proper grazing practices should maintain adequate vegetation cover to keep windblown dust levels to near natural conditions. In areas of livestock concentration (such as around waters, salt grounds, and corrals) vegetation cover would be greatly reduced, thereby increasing potential windblown dust emissions. The affect of this windblown dust is generally localized near the source. Implementing the *Standards for Rangeland Health* (Land Health Standards) and the *Guidelines for Grazing Management* (Rangeland Management) would allow regular evaluation of grazing practices and remediation

of problems that might lead to reduced air quality.

Alternatives B

Air quality impacts of *Alternative B* would be similar to those described for *Alternative A*, except that winter-only grazing of riparian areas would lead to higher vegetation densities in those areas. These higher densities would slightly reduce the potential for windblown dust.

Alternative C

Impacts of *Alternative C* would be similar to those under *Alternative B*, except that higher vegetation densities in riparian areas would be achieved more quickly with no grazing than with winter-only grazing.

Alternative D

In both planning areas existing livestock grazing allotments would be closed and any current livestock authorizations would be cancelled for the duration of the plan. This approach would decrease the amount of fugitive dust generated by livestock removing forage and ground litter. In addition, places livestock concentrate would slowly revegetate, reducing dust emissions even more.

Alternative E (Proposed Alternative)

For the Agua Fria National Monument impacts would be the same as those described for *Alternative B*.

In the Bradshaw-Harquahala Planning expected impacts from riparian areas that are improving with increased vegetation would reduce the potential for windblown particulates. This impact would be so small that it could be discounted at a factor in the total particulate levels within the airshed of the planning area.

4.9.10 From Minerals Management

Alternative A (No Action)

There are no impacts expected in Agua Fria National Monument.

In the Bradshaw-Harquahala Planning Area locatable, saleable, and leasable mineral development could create short-term and periodic increased emissions of criteria pollutants and fugitive dust from construction, vehicular traffic, and other activities. Federal mineral rights on scattered lands that are outside the planning area and designated open to location, entry, and patenting could create short-term and periodic increased emissions of criteria pollutants and fugitive dust from construction, vehicular traffic, and other activities. In areas that would remain open to mineral exploration and development, continued mining would result in long-term increases in emissions. However, these increases would likely be localized and are subject to Federal and State emission regulations designed to mitigate impacts to air quality. For facilities in nonattainment areas, such regulations could result in off-sets or other facility-specific mitigation that would reduce air quality impacts.

Each of the Alternatives specifies a different set of areas where mining would or would not be allowed. From the Reasonable Foreseeable Development Scenarios described for Section 4.17, one can estimate the following mineral development:

- two oil and gas exploratory wells, which could disturb as much as 20 acres;
- 60 to 100 small locatable mines and 1 or two large mines, which could disturb 1400 to 2400 acres;
- as many as 20 saleable mineral pits, which could disturb as much as 800 acres, over the next 20 years.

Air quality impacts from such mining would be mainly fugitive dust from equipment at the mine

site, in addition to dust and exhaust from haul trucks. Any mining in the PM₁₀ nonattainment area would have to comply with Maricopa County dust abatement and air quality rules. The impact of these operations would be mainly local (within 1/2 mile of the mine and haul road) and would contribute to the PM₁₀ particulate count in the nonattainment area.

Alternatives B and C

In the Bradshaw-Harquahala Planning Area impacts would be the same as those discussed for *Alternative A*.

Alternative D

In the Bradshaw-Harquahala Planning Area reconveyed lands would be closed per public land order. *Alternative D* would also reduce the amount of land open to location, entry, and patent of locatable, saleable, and leasable minerals. This action would reduce emissions of criteria pollutants and fugitive dust.

Alternative E (Proposed Alternative)

Impacts of *Alternative E* would be similar to those described for *Alternative A*.

4.9.11 From Fire Management

Alternative A (No Action)

The use of prescribed fire and mechanical vegetation treatment in the Agua Fria National Monument would result in short-term, localized episodes of smoke and reduced visibility. Burning prescriptions account for smoke and contain smoke management plans. These plans require burning conditions that encourage rapid smoke dispersal and discourage smoke drift into either highly populated areas or ADEQ Class I or II airsheds. ADEQ would continue to require that BLM obtain prescribed burning approvals before each event to ensure that prescribed burns are conducted only during favorable weather to reduce air quality impacts. In this way, air

quality impacts from prescribed burning are minimized.

When wildfires strike wilderness areas, suppression strategies are selected on a case-by-case basis in considering fire control opportunities, environmental impacts, and risks to public health and safety. Smoke might degrade local and regional air quality during these wildfires. The degree of smoke production and air quality impact depends on the suppression approach employed and the weather at the time of the fire.

Wildfires both on and off the national monument would also increase levels of smoke and reduce visibility during the fire. Weather conditions might cause high smoke columns and smoke drift into both high population areas and over ADEQ Class I and II airsheds. In most years, these events are of short duration (1 week or less) but might persist for longer periods. Multiple fire incidents, either simultaneously or sequentially, could increase the effects from smoke, or could increase the duration of the smoke impact. Typically, the fire season is from April through July. The use of heavy equipment and the mechanical thinning of trees would generate small amounts of temporary, localized emissions of fugitive dust and tailpipe exhaust.

Alternatives B, C, D, and E (Proposed Alternative)

Air quality impacts would be the same as described for *Alternative A*, except that naturally occurring wildfires could be managed to meet resource objectives in fire adapted ecosystems if conditions are favorable. Smoke management would be a consideration in making the decision to manage a wildfire, similar to the process applied for prescribed fires. The opportunity for smoke drift into populated areas and/or Class I or II airsheds would be increased over that described for *Alternative A*.

4.9.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.9.13 From Management of Travel Management

Alternative A (No Action)

Prohibiting cross-country OHV would reduce levels of criteria pollutants and fugitive dust. In the Bradshaw-Harquahala Planning Area OHV travel would generate increased emissions of criteria pollutants and fugitive dust.

Any potential opening of new routes would increase fugitive dust during construction as well as increase emissions created by vehicles once the route is opened.

Alternative B

The net amount of roads closed or opened in the Agua Fria National Monument could have impacts on emissions and fugitive dust. In Agua Fria National Monument 134 miles of route would be left open and 32 net miles of route would be closed. Route closures could reduce fugitive dust created by construction as well as reduce emission of vehicles that used the route.

In the Bradshaw-Harquahala Planning Area net number of dirt roads would be reduced by 82 miles, and there would be 24 fewer miles of dirt road in Agua Fria National Monument. These route closures would likely reduce fugitive dust emissions in the immediate area along the routes. Regionally, these closures would not decrease vehicle use or emissions and fugitive dust. Route closures would concentrate more vehicles on remaining roads and thereby increase localized air quality impacts and fugitive dust levels.

Building and maintaining roadways, trails, and recreation facilities would generate temporary and short-lived emissions of criteria pollutants and fugitive dust from heavy equipment and earthmoving. BLM development activities would comply with local and county dust control ordinances to limit emissions and fugitive dust.

Alternative C

In Agua Fria National Monument, impacts on air quality would be similar to *Alternative B*, except that more vehicle routes would be closed or limited to motorized vehicles (48 miles).

In the Bradshaw-Harquahala Planning Area, impacts of OHV use would be similar to *Alternative B* except BLM would designate seven ACECs, further shifting OHV use and possible air quality impacts.

Alternative D

In Agua Fria National Monument, negative impacts to air quality would be the least due to the highest amount of route closures over other Alternatives (123 miles).

In the Bradshaw-Harquahala Planning Area 1,645 miles of routes would be closed. The route closures would reduce opportunities for air quality emissions and fugitive dust.

Alternative E (Proposed Alternative)

In the Agua Fria National Monument, impacts would be the same as *Alternative B*, except that more net route miles would be closed (52 miles).

Impacts in the Bradshaw Harquahala Planning Area would be similar to those described under *Alternative B*, except that routes would be designated through the route evaluation/designation process.

4.9.14 From Management of Wilderness Characteristics

Alternative A (No Action)

There are no impacts expected.

Alternative B

Under this Alternative, 56,040 acres would be allocated to the management of wilderness characteristics. Allocations to manage wilderness characteristics, which would limit or restrict vehicle use, could intensify vehicle travel to remaining and nearby accessible areas. Wilderness character management could also limit, restrict or prohibit other surfacing disturbing activities. These actions could improve air quality within areas managed for wilderness characteristics. On-the-other-hand, these actions could result in temporary and localized degradation of air quality in other areas subject to increased vehicle use from displaced OHV users and surface disturbance from authorized activities.

Alternative C

Lands allocated to the management of wilderness characteristics under Alternative C (107,843 acres) would limit, restrict or prohibit surfacing disturbing activities and further constrain vehicle use across a larger area than described under Alternative B. Otherwise, impacts would be the same as described in *Alternative B*.

Alternative D

Impacts would be the same as described in *Alternative C*, except that there would be 140,235 acres allocated for management of wilderness characteristics, including 37,571 acres within the Agua Fria National Monument.

Alternative E (Proposed Alternative)

Impacts would be the same as described in *Alternative B* except that more area would be

allocated to the management of wilderness characteristics (88,179 acres). This alternative would afford less protection than *Alternatives C* and *D*.

4.10 Impacts on Water Resources

Impacts to water resources include effects on watershed resources such as soils, groundwater, vegetation cover, and surface water quality and quantity. These factors contribute to the riparian functional condition. Riparian system proper functioning condition, as defined in BLM's Riparian-Wetland initiative, is also included. The functioning condition of riparian-wetland areas is a result of interaction among geology, soil, water, and vegetation. Riparian-wetland areas are in proper functioning condition under the following conditions:

- Adequate vegetation, landform, or large woody debris is present to dissipate stream energy from high water flows, thereby reducing erosion and improving water quality.
- Sediments are filtered, bed-load is captured, and floodplains develop.
- Flood water retention and groundwater recharge are improved, root masses that stabilize streambanks against cutting action develop; and diverse ponding and channel characteristics are created to provide the habitat and the water depth, duration, and temperature needed for fish production, waterfowl breeding, and other uses.
- Greater biodiversity is supported.

This analysis focuses on management actions that could change the hydrologic functions of the planning areas. The functions of most concern are soil compaction and vegetation removal, which lead to increased runoff, erosion, and later sediment deposition downslope or into a stream. Please review Section 4.8 for the discussion of impacts on soils.

Soil compaction along roads that traverse slopes can create an impermeable barrier to downslope subsurface water flow. This barrier can convert subsurface runoff to surface runoff. They can then route surface runoff to stream channels, and increase peak flows and sediment delivery to streams (Megan and Kidd 1972). Therefore, watersheds with higher road densities, especially roads close to streams, have a higher probability of increased peak flows and sediment yield.

4.10.1 From Special Designations

Alternative A (No Action)

Under the current management of Agua Fria National Monument, Perry Mesa ACEC is likely to continue to experience minor degradation of water quality. The degradation occurs from disturbances created by vehicle and OHVs entering stream channels near road crossings and the effects of delivery of sediment from

roadways into stream channels.

The national monument's suitable Wild and Scenic River (WSR) segments would continue to be managed for nonimpairment to WSR values. Management actions to preserve these values would limit or preclude development or vehicular activities that would disturb soil and vegetation. Moreover, no new disturbance and the recovery of existing disturbance would likely reduce erosion and sedimentation, improving the river's hydrologic functions.

Current management of the Bradshaw-Harquahala Planning Area has designated five wilderness areas: Hells Canyon (9,900 acres), Hassayampa River Canyon (11,840 acres), Harquahala Mountains (22,880 acres), Hummingbird Springs (31,200 acres), and Big Horn Mountains (21,000 acres). Under current management in these wilderness areas, erosion and sedimentation of streams would be reduced, and hydrologic function of the areas is likely to improve because of restrictions on motorized

ACEC	Alternative A (Current)	Alternative B	Alternative C	Alternative D	Alternative E (Proposed)
Agua Fria National Monument					
Agua Fria Riparian Corridor				13,070	
Indian Creek			330		
Larry Canyon	80		50		
Lousy Canyon			80		
Perry Mesa	9,580				
Silver Creek			350		
Subtotal:	9,660		810	13,070	
Bradshaw-Harquahala Planning Area					
Baldy Mountain ONA				9,080	
Belmont-Big Horn Mountain				77,730	
Black Mesa			5,540	5,540	
Black Butte Raptor Area /ONA			800	14,480	8,260
Harquahala Mountain /ONA			41,670	74,940	74,950
Sheep Mountain RNA			4,270	4,270	
Tule Creek		640	640	640	640
Vulture Mountain Raptor Area			2,790	6,120	6,120
Subtotal:		640	55,710	192,800	89,970
Total Acres:	9,660	640	56,520	205,870	89,970

vehicles. Managing other uses to minimize disturbance would also improve hydrologic function.

Alternative B

Under *Alternative B* the impacts of Special Area Designations on water resources in the national monument would be the same as those described for *Alternative A*.

In the Bradshaw-Harquahala Planning Area managing Tule Creek ACEC would include its closure from mineral development (withdrawal from mineral entry). Withdrawal would eliminate the potential for disturbance to streambanks, soils, and ground cover from mining equipment/vehicle use and other related activities. In the lands closed to vehicles, former routes would revegetate, improving hydrologic function.

Alternative C

Designation of four ACECs in Agua Fria National Monument (Silver Creek, Indian Creek, Larry Creek, and Lousy Canyon) would impact water resources by closing the areas to grazing and vehicles. This would encourage revegetation of disturbed areas and would improve hydrologic function.

In the Bradshaw-Harquahala Planning Area six ACECs are proposed under *Alternative C* (Table 4-3).

The following management actions would improve hydrologic function by encouraging revegetation of disturbed areas and reducing erosion and downstream sedimentation:

- mineral entry withdrawal,
- changes or elimination of livestock grazing, and
- closure or mitigation of motorized vehicle routes.

Alternative D

In Agua Fria National Monument, the designation of the Agua Fria River Riparian Corridor ACEC, which would include the ACECs proposed by *Alternative C*, would have impacts similar to *Alternative C*. Management actions include closing, limiting, or mitigating vehicle routes and planned land acquisitions along Indian Creek. These actions would reduce OHV impacts to native vegetation, streambanks, and water quality. This ACEC is unlikely; however, to result in any measure of protection for water resources beyond that provided by the proclamation (Appendix A).

In the Bradshaw-Harquahala Planning Area, impacts under *Alternative D* would be similar to those described for *Alternative C*, but *Alternative D* would close more areas to mineral entry.

Alternative E (Proposed Alternative)

Alternative E proposes to evaluate eight eligible tributaries of the Agua Fria River in Agua Fria National Monument for suitability as additions to the National Wild and Scenic Rivers System. Impacts to water resources would be similar to those described for *Alternative A*, with extra emphasis on protecting the free-flowing character and outstanding wildlife, cultural, and scenic values along these eight streams until such time as they are designated as Wild and Scenic rivers or Congress rejects designation. It is expected that protective actions would maintain or improve water quality.

In the Bradshaw-Harquahala Planning Area management prescriptions for four ACECs (89,970 acres) would result in impacts similar to those described for *Alternative C*.

4.10.2 From Lands and Realty Management

Alternative A (No Action)

Under the current management of Agua Fria National Monument, lands and realty management is subject to valid existing rights granted before the national monument's designation. Activities might continue if they are not precluded by the proclamation (Appendix A) and do not conflict with the established purpose.

In Agua Fria National Monument, actions for managing valid existing rights could lower water quality under the following conditions:

- construction-related delivery of pollutants and sediment occurs near surface drainages, or
- areas of groundwater recharge or natural processes of wetland or riparian function (e.g. runoff rate, soil erosion rate, water infiltration rate) are compromised.

Disturbances would be temporary, so hydrologic function would probably not change in the long-term.

In the Bradshaw-Harquahala Planning Area, impacts from disposal of as much as 54,370 acres outside MUs, include the potential loss of vegetation from developing those lands and possible increased erosion and sediment yield. Eventual development of the disposal lands in the Upper Agua Fria River watershed could also increase sediment yield in the upstream tributaries of the Agua Fria River and lower the water quality in Agua Fria National Monument. An increase in development could include an increase in the number of wells and increased groundwater use, which could lower groundwater levels and decrease contributions of groundwater to surface flows in the monument.

Acquiring privately owned and State-held lands in the Black Canyon and Lake Pleasant RCAs would create two large blocks of federally

managed lands. These acquisitions would consolidate management and help develop healthy native plant communities in the upland and the riparian communities. This outcome, in turn, might affect water resources by increasing ground cover and potentially reducing sediment yield.

Similarly, acquiring lands in the Cordes Junction, Bumble Bee/Williams Mesa MRMAs, and the four-mile reach of State land along the Hassayampa River would help BLM institute the land health standards that would protect and potentially improve the vegetation and might reduce sediment yield.

Building and maintaining facilities in planned transportation/utility corridors and at communication sites could degrade water quality as construction and operation create ground disturbance that could lead to increased soil erosion and result in increased stream turbidity. Construction could also disturb riparian vegetation and change the proper functioning condition over limited areas of construction. Mitigation actions to minimize water quality degradation would be the same as for minimizing soil loss.

Alternative B

The Black Canyon utility corridor would be maintained but narrowed. This narrowing would affect water resources by reducing potential impacts from building and operating utilities in the corridor. Controls on development would minimize runoff into streams and route disturbance in such a way as to minimize impacts to water resources.

In the Bradshaw-Harquahala Planning Area impacts from disposal of land would be similar to *Alternative A*, except as much as 58,400 acres are available for disposal.

Building and maintaining planned transportation/utility corridors and communication sites would have impacts similar to those described for *Alternative A*.

Alternative C

Impacts on water resources in the Agua Fria National Monument would potentially be lower from the elimination of the Black Canyon utility corridor which would prohibit more utility right-of-way allocations. Impacts from operating and maintaining current facilities with prior existing rights would be similar to *Alternative A*.

The impacts of disposing of 49,100 acres of BLM-managed Federal lands would be similar to those for the disposal of lands under *Alternative B*.

Building and maintaining planned transportation/utility corridors and communication sites would have impacts similar to those described for *Alternative A*.

Alternative D

Impacts in Agua Fria National Monument would be the same as those described for *Alternative C*.

The impacts on water resources from acquiring private or State lands would be similar to those described for *Alternative B*.

Building and maintaining planned transportation/utility corridors and communication sites would have impacts similar to those described for *Alternative A*.

Alternative E (Proposed Alternative)

Impacts in both planning areas would be similar to *Alternative B*.

4.10.3 From Management of Soil, Air, and Water Resources

Alternative A (No Action)

In Agua Fria National Monument water resources are generally expected to improve through applying erosion prevention measures

such as (1) limits on grazing access along streams and (2) control of OHV use in the river corridor. Management would focus on maintaining and improving riparian vegetation cover, which would reduce streambank erosion and sediment yield and generally contribute to the proper functioning condition of riparian areas. In the Bradshaw-Harquahala Planning Area water resources would benefit from incorporating salinity control measures (such as runoff controls and drainage routing) into erosion prevention strategies and rehabilitation treatments. Water resources would also benefit from implementing strategies for assuring spring flows. These actions would increase riparian and upland vegetation cover, which would reduce erosion and sediment yield.

Alternatives B, C, D, and E (Proposed Alternative)

In both planning areas, management prescriptions for soil, air, and water resources would protect water quality to meet Federal and State standards for designated uses. Moreover, all land tenure decisions (such as land sales or exchanges) would be reviewed for their impacts to water resources (including protection of instream flows).

The alternatives progress in their protection of soils, air, and water resources with *Alternative A* being the least protective and *Alternative D* being the most protective. Therefore, *Alternative E* is similar to the protections of *Alternative C*.

4.10.4 From Biological Resource Management

Alternative A (No Action), B, C, D, and E (Proposed Alternative)

In Agua Fria National Monument impacts to water resources are expected from designating the Agua Fria River riparian corridor, which includes management actions, such as planting cottonwood and willow along the Agua Fria River and its tributaries. These changes in

riparian vegetation would improve functional condition of the riparian zone.

In the Bradshaw-Harquahala Planning Area impacts to water resources are expected from acquiring water rights to maintain or enhance spring/riparian habitats in the planning unit, which would improve the hydrologic functioning condition of those systems. Additionally, removing all burros at water sources in the Big Horn, Granite Wash, and Harquahala Mountains would reduce soil disturbance and potential soil erosion near those locations, and would promote growth of riparian vegetation at springs, seeps, and streams throughout the planning areas.

Management prescriptions for biological resources would benefit water resources by conserving, enhancing, and restoring water bodies and by increasing native grasses on upland sites and streambanks. These grasses would protect soil, increase infiltration, and reduce sediment yield. BLM would monitor water quality to ensure compliance with Federal and State standards.

4.10.5 From Cultural Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.10.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.10.7 From Recreation Management

Alternative A (No Action)

Under the current management of both planning areas, sites with concentrated recreation could lose vegetation cover (both in riparian and upland vegetation communities) and undergo soil compaction. In riparian areas streambank stability could decrease. Decreased streambank stability could increase soil erosion, sediment yield, and sediment deposition.

Special Recreation Permits (SRPs) would have conditions and stipulations in place to prevent damage to active or seasonal water courses. Authorized SRPs would not greatly affect current watershed conditions.

Under the current management of the Bradshaw-Harquahala Planning Area unlimited cross-country OHV use on the public lands west of Highway 93 could increase soil erosion, sediment yield, damage to banks of drainages, and sediment deposition. Limiting vehicles to existing routes would maintain current conditions.

Also, in the Bradshaw-Harquahala Planning Area, impacts to water resources from recreation management are expected from the increased water use by visitors and the proliferation of unplanned and unmanaged recreational trails and facilities. Increased water use includes the need to secure legal entitlement to water for recreation and domestic uses (e.g. equestrian trails, campgrounds) and possibly drilling wells or developing spring sources to provide water for visitors.

Impacts from recreation management include the following:

- soil compaction from visitor use and OHV traffic,
- erosion due to vegetation loss,
- increased sediment yield due to concentrated use in and near water,

- decreased water quality by leaking OHV engine oil, and
- degradation of air quality by OHV engine emissions.

Alternative B

In the Front Country (57,900 acres) and Passage (300 acres) RMZs within Agua Fria National Monument sediment would continue to move from roadways into stream channels in certain areas open to OHV use. OHVs crossing streams would continue to increase turbidity in stream channels. OHVs crossing streams could degrade water quality by leaking engine oil. In *Alternative B* there would be 134 miles of open motorized route.

In the Bradshaw-Harquahala Planning Area, allocating eight SRMAs and two areas to maintain wilderness characteristics for management of recreation use could reduce soil erosion and sediment yield into drainages due to (1) building new facilities, such as parking lots and staging areas, and (2) maintaining a diverse network of motorized vehicle routes. These actions would harden some of the heavily used areas and would require motorized vehicles to stay on designated trails. Some activities that degrade water resources, as described in *Alternative A*, would continue.

Alternative C

In the Agua Fria National Monument, impacts would be similar to those described for *Alternative B*; except the Front Country RMZ would be reduced to 42,000 acres and the Passage RMZ would be reduced to 700 acres. Open motorized routes would also be reduced to 123 miles.

Impacts under *Alternative C* are expected to be similar to those described for *Alternative B*, but to a lesser degree due to (1) an increase in closed miles of motorized routes (Appendix N) and (2) the addition of more-restrictive motorized and non-motorized recreation prescriptions in nine SRMAs, six areas allocated to maintain

wilderness characteristics, three ONA ACECs, one RNA ACEC, and nine other ACECs.

Alternative D

In the Agua Fria National Monument, impacts would be similar to those described for *Alternative C*; except the Front Country RMZ would be reduced to 1,530 acres and the Passage RMZ would be 990 acres. Open motorized routes would also be reduced to a total of 48 miles.

In the Bradshaw-Harquahala Planning Area impacts are expected to be similar to those described for *Alternative C*, but to a significantly lesser degree. *Alternative D* proposes a greater net closure of motorized travel routes and the addition of more-restrictive motorized and non-motorized recreation travel prescriptions in nine SRMAs.

Alternative E (Proposed Alternative)

In the national monument, impacts would be similar to *Alternative B*, while there would be moderately restrictive limitations on vehicular access and visitor use in a Back Country Zone of 57,650 acres. Riparian and upland vegetation would benefit from decreased access, resulting in improved functional condition of riparian zones. As a result, improvements would occur in streams from increased riparian zone health and streambank stabilization, enhancing stream morphology.

Impacts in the Bradshaw-Harquahala Planning Area are expected to be similar to those described for *Alternative C*. As modeled in Appendix N, the net closure of motorized travel routes would be similar to those in *Alternative B*. Application of motorized and non-motorized recreation travel prescriptions would occur in three large SRMAs and six Recreation Management Zones (RMZs).

4.10.8 From Visual Resource Management

Alternative A (No Action)

There are no impacts expected.

Alternatives B, C, D, and E (Proposed Alternative)

Applying VRM Class I, II, and III standards and objectives to all new projects and land use authorizations could result in restrictions on some kinds of land development and use in the national monument and in all management units. Streams and drainages would experience decreased delivery of sediment due to limitations on construction projects and OHV use.

4.10.9 From Rangeland Management

Alternative A (No Action)

Except for the Larry Canyon ACEC, livestock grazing would continue under the terms of existing permits and leases. Impacts to water resources would include trampling and reduced vegetation, resulting in increased soil erosion in riparian areas (see Section 4.8). Livestock grazing in riparian areas can also reduce streambank stability by reducing vegetation cover. This can lead to increased sediment yield, sediment deposition in streams, and possible changes in stream morphology, which reduces the functional condition of the riparian system.

In the Bradshaw-Harquahala Planning Area, applying rangeland health standards to livestock grazing would decrease soil disturbance, compaction, and erosion. Water resources would benefit from reduced sediment yield and deposition in streams, as well as from enhanced overall riparian functional condition. In both planning areas the guidelines adopted in Arizona Guidelines for Grazing Administration (see

Rangeland Management) would benefit water resources by:

- maintaining or promoting ground cover that would provide for infiltration, permeability, soil moisture storage, and soil stability suitable for the ecological sites in management units; and
- maintaining or promoting sufficient vegetation to maintain sediment capture, groundwater recharge, and streambank stability, thus promoting stream channel morphology (e.g. gradient, width/depth ratio, channel roughness, and sinuosity) and functions suitable to climate and landform.

With the implementing of these guidelines, hydrologic function would improve with decreases in soil erosion, sediment yield, and sediment deposition in streams.

Alternative B

In both planning areas, impacts to water resources from rangeland/grazing management in uplands would be similar to those described for *Alternative A* except that grazing in riparian areas would be limited to winter, which would further reduce impacts to riparian hydrologic functions. This practice would reduce impacts to riparian vegetation and provide enhanced stabilization of stream morphology and decreased stream erosion.

Alternative C

In both planning areas, impacts to water resources from grazing in uplands would be similar to those described for *Alternative A*, except that upland grazing would be greatly reduced and grazing in riparian areas would be eliminated. This would further reducing impacts to hydrologic functions and significantly improve riparian vegetation and stream morphology.

Alternative D

In both planning areas water resources would benefit from the following:

- closing existing livestock grazing allotments,
- canceling all current livestock authorizations for the duration of the plan, and
- building fencing to control livestock use of the unfenced public lands.

Of all the alternatives, *Alternative D* would cause the greatest improvement in water resources and riparian zone vegetation. Soil disturbance, sediment yield, and sediment deposition in streams would be lower than under any other alternative.

Alternative E (Proposed Alternative)

For the national monument, impacts would be the same as those under *Alternative B*, under which livestock would only graze in riparian areas during winter. Vehicular access would also be limited in the Back Country RMZ, which would benefit both riparian and upland vegetation to some extent by lessening damage to riparian areas, thus improving the overall functional condition of hydrologic processes in the riparian zones. Decreased erosion and sediment loading in streams would result.

For the Harquahala-Bradshaw Planning Area, impacts would be similar to *Alternative A*. management actions would focus on improving proper functioning condition; although, no specific restrictions are prescribed at this time. Restrictions such as seasonal grazing limitations could be implemented if monitoring finds deteriorating functional conditions.

4.10.10 From Minerals Management

Alternative A (No Action)

For the national monument all Federal minerals would be withdrawn from all forms of mineral entry, including exploration. Thus, no impacts to water resources are expected from new mining claims. Valid existing mining claims might be developed, which could degrade water resources. These claims are gold placer claims. They could affect water resources if they are developed, because stream gravels are processed by suction dredge and washed and screened to concentrate the gold particles. Impacts from placer mining could include the following:

- increasing sediment and turbidity in the stream,
- disrupting the streambed,
- changing stream morphology, and
- altering streamflow patterns and possibly riparian areas.

In the Bradshaw-Harquahala Planning Area, should exploration or development of mineral resources be pursued, special stipulations would be incorporated into the operating plan after the results of site-specific environmental assessments for each action are known. Impacts cannot be projected before preparing such assessments, which would include methods, mitigation, and rehabilitation plans to meet the required conditions established in aquifer protection permits, Section 404 permits, and other permits for protecting water quality. Adverse effects to water resources from minerals management would then be minimized.

Locatable Minerals

The planning area would generally be left open to mineral location and development. Exploration for and development of locatable minerals are likely to somewhat degrade water resources and could result in increased soil erosion, sediment yield, and sediment deposition in streams, and changes in stream

morphology. BLM would continue to administer mining in the Bradshaw-Harquahala Planning Area on a case-by-case basis and comply with regulations to prevent unnecessary and undue degradation of the environment (43 CFR 3715 and 43 CFR 3809).

Saleable Minerals

BLM-administered mineral estate serves as a major source of aggregate. Removing aggregate from floodplains could impair floodplain hydrologic function by destabilizing streambanks and contributing to increased erosion and sedimentation. Increased soil erosion, sediment yield, and sediment deposition in streams could also result.

Leasable Minerals

Areas open to leasable mineral development under current management could become a potential source of water quality degradation, if they are mined.

Alternative B

Impacts to Agua Fria National Monument would be the same as for *Alternative A*.

In the Bradshaw-Harquahala Planning Area, potential impacts on water resources are related to the amount of land open to mineral development (see Table 4-4). All Federal lands would be open to mineral entry except for areas legislatively withdrawn and other specially segregated areas. Impacts for this Alternative would be similar to *Alternative A*.

Alternative C

Impacts to Agua Fria National Monument would be the same as for *Alternative A*.

As in *Alternative B*, potential impacts in the Bradshaw-Harquahala Planning Area are related to the amount of land open to mineral development. Under this Alternative, the impacts would be substantially lower than those

under *Alternative B* because more land would be removed from mineral development.

Alternative D

Impacts to Agua Fria National Monument would be the same as for *Alternative A*.

Impacts in the Bradshaw-Harquahala Planning Area would be lowest under this Alternative since the most amount of land would be removed from mineral development.

Alternative E (Proposed Alternative)

Impacts to Agua Fria National Monument would be the same as for *Alternative A*.

In the Bradshaw-Harquahala Planning Area under *Alternative E*, impacts would be similar to those under *Alternative A*, except that riparian areas in the Black Canyon corridor would be closed to mineral material disposal, which would keep activity that could reduce water quality from occurring in those areas.

For the Bradshaw-Harquahala Planning Area impacts to mining would be the same as those under *Alternative B*.

4.10.11 From Fire Management

Alternative A (No Action)

Where prescribed burning is conducted in the planning areas the use of heavy equipment could disturb soil cover, thereby increasing soil erosion and stream sedimentation. The benefits of prescribed burning would greatly outweigh the potential harm from the use of heavy equipment.

Prescribed burning would allow fire to create a natural mosaic and establish vegetation communities of uneven age classes. Species diversity would be maintained, desirable perennial grasses would increase, and brush

would decrease. This would increase ground cover, which results in increased infiltration and reduced runoff, erosion, and sedimentation. Because fire-related disturbances are temporary, long-term impacts to water resources would be unlikely.

For both planning areas, fire suppression will use the appropriate management response based on assessments of case-specific conditions. The effectiveness of the resultant strategies will determine the amount of acreage that is burned. Depending on the severity and extent of the fire and the suppression tactics implemented, there could be impacts on soil repellency to water that could affect the potential for successful revegetation of an area.

Typically there is a mosaic effect within the burn area, short term impacts from the increase in bare ground will include a substantial increase in runoff, and corresponding sediment loads carried by these increased flows. Long term impacts could include altered channel morphology from greater peak flood events. The planning areas have substantial rock and gravels that slow flow that moderate the effects from the large runoff events.

Alternatives B, C, D, and E (Proposed Alternative)

In both planning areas, fire use, including natural starts, prescribed burning and mechanical treatments, would have impacts similar to those described in *Alternative A* for the Agua Fria National Monument.

4.10.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

No wild horses or burros are present in Agua Fria National Monument, so no impacts would occur.

In the Bradshaw-Harquahala Planning Area removing burros that damage sensitive areas, such as Browns Canyon, would allow those areas to recover from intense use, leading to improved vegetation conditions on streambanks and improved hydrologic function.

4.10.13 From Management of Travel Management

Alternative A (No Action)

Proliferation of unplanned and unmanaged routes could continue to degrade stream bank stability and water resources.

Under the current management of the Bradshaw-Harquahala Planning Area unlimited cross-country OHV use on the public lands west of Highway 93 could increase soil erosion, sediment yield, damage to banks of drainages, and sediment deposition. Limiting vehicles to existing routes would maintain current conditions.

Alternative B

In Agua Fria National Monument, sediment would continue to move from roadways into stream channels in certain areas open to OHV use. OHVs crossing streams would continue to increase turbidity in stream channels. OHVs crossing streams could degrade water quality by leaking engine oil.

Closing routes would reduce the above described impacts. Riparian and upland vegetation would benefit from decreased access, resulting in improved functional condition of riparian zones.

In the Bradshaw-Harquahala Planning Area, maintaining a diverse network of motorized vehicle routes would harden some of the heavily used areas and would require motorized vehicles to stay on designated trails.

Alternative C

Impacts under *Alternative C* are expected to be similar to those described for *Alternative B*, but to a lesser degree due to an increase in closed miles of motorized routes.

Alternative D

Impacts are expected to be similar to those described for *Alternative C*, but to a significantly lesser degree. *Alternative D* proposes a greater net closure of motorized travel routes.

Alternative E (Proposed Alternative)

In the national monument, impacts would be similar to those under *Alternative C* and *D* because of moderately restrictive limitations on vehicular access and visitor use.

Impacts in the Bradshaw-Harquahala Planning Area are expected to be similar to those described for *Alternative C*.

4.10.14 From Management of Wilderness Characteristics

Alternative A (No Action)

Currently no areas are allocated for the management of wilderness characteristics. As a result, no impacts are expected.

Alternative B

In the Agua Fria National Monument no impacts are expected.

In the Bradshaw-Harquahala Planning Area, 56,040 acres would be allocated for the management of wilderness characteristics. These management areas could reduce soil erosion and sediment yield into drainages caused by human activity.

Alternative C

Impacts would be the same as *Alternative B*, except that a larger area would be allocated for management of wilderness characteristics (107,843 acres).

Alternative D

Impacts would be the same as *Alternative B* except that 140,235 acres would be allocated for management of wilderness characteristics. This allocation would include 37,571 acres within the Agua Fria National Monument.

Alternative E (Proposed Alternative)

Impacts would be the same as *Alternative B* except that 88,179 acres would be allocated for management of wilderness characteristics.

4.11 Impacts on Biological Resources

Data Summary/Analytical Assumptions

All activities undertaken or authorized by the BLM are subject to standard policy and guidance for the implementation of the Endangered Species Act and the National Environmental Policy Act. These policies and procedures should be fundamental considerations when evaluating the impacts of management actions and decisions on listed species.

4.11.1 From Special Designations

The designation of special areas like ACECs and wild and scenic rivers generally benefit most wildlife species and their habitats by limiting or restricting activities and uses that can degrade habitat. While these types of designations can restrict some kinds of conflicting uses, they may also restrict some types of wildlife management activities and can result in increased visitor use

depending on the specific management prescriptions for an area. The increased visitor use can disturb some species and can degrade habitat quality in high-use areas. Other types of designations like back country byways can result in increased visitor use and have little or no direct benefit to biological resources but can provide the opportunity for public information and education about biological issues.

Alternative A (No Action)

According to the current management guidance for Agua Fria National Monument, designating Larry Canyon and Perry Mesa ACECs are decisions that would remain in place following the implementing of this RMP. The 80-acre Larry Canyon ACEC was designated to protect pristine riparian habitat. As a result, motor vehicles and mineral entry are prohibited. However, Larry Canyon ACEC is located entirely within a steep canyon inaccessible to cattle and without any vehicle routes. Because the National Monument Proclamation withdrew the area from mineral entry, retaining the ACEC designation provides no measure of protection not otherwise provided by the proclamation (Appendix A).

Perry Mesa ACEC would provide the same level of protection from OHV impacts as provided by the proclamation.

In the suitable WSR segments of the Agua Fria River and eight tributaries, wildlife habitat would benefit from actions taken to protect values that define suitability for designation. Vehicle restrictions would reduce streambank erosion, water quality degradation, and adverse impacts to riparian vegetation and wildlife habitat.

Retaining the Harquahala Mountain Summit Scenic Road, which is an unpaved OHV route, would harm wildlife. Vehicle traffic along the route would occasionally disturb bighorn sheep and occasionally kill desert tortoises.

Management actions in designated wilderness areas (Hells Canyon, Hassayampa River

Canyon, Harquahala Mountains, Hummingbird Springs, and Big Horn Mountains) would protect vegetation and wildlife habitat by continuing to restrict OHV use of these areas.

Alternative B

As in *Alternative A*, in Agua Fria National Monument continued management of the areas suitable for Wild and Scenic River corridors would protect sensitive riparian habitat. Designating Bloody Basin Road as a back country byway would likely increase recreation use of the area, thereby increasing ground disturbance from vehicular use and periodic maintenance. Wildlife deaths might occur as vehicular use increases. Bloody Basin Road crosses both arms of the pronghorn antelope movement corridor, near the Horseshoe Ranch and west of Badger Springs Wash, connecting habitat in Agua Fria National Monument to habitat in the Prescott and Tonto National Forests. Increased recreational use of the Bloody Basin Road Back Country Byway might impede pronghorn movement in the corridor and potentially alter behavior, including breeding.

In the Bradshaw-Harquahala Planning Area, designating Tule Creek ACEC would protect 1.3 miles of riparian habitat for the endangered Gila topminnow and other riparian and aquatic species by focusing conservation management on the area's regionally important deciduous riparian vegetation. Closing the stream channel to vehicle use and livestock grazing and withdrawing this area from mineral entry would do the following:

- protect streambanks,
- reduce soil erosion, and
- limit riparian habitat damage from mining equipment/vehicle use and other mining.

The management actions would benefit 640 acres of Category II desert tortoise habitat by providing more protection and management emphasis to the area.

Designating the Constellation Mine Road as a Back Country byway could increase recreational use of the roadway and could increase human disturbance of wildlife populations and vehicle-related wildlife mortality.

Impacts from wilderness management would be the same as described for Alternative A.

Alternative C

Four new ACECs would be created in the national monument to protect 810 acres of rare riparian deciduous forest and habitat that supports the Gila chub, yellow-billed cuckoo, and several other priority species. Limiting vehicular travel in the Silver Creek (350 acres), Indian Creek (330 acres), Larry Creek (50 acres), and Lousy Canyon (80 acres) ACECs would have little effect on wildlife because only Silver Creek has any vehicular access which is only a single ford. As in *Alternative A*, these ACECs are unlikely to result in any measure of wildlife habitat protection beyond that currently provided by the Monument Proclamation (Appendix A), the Endangered Species Act (ESA), and Land Health Standards.

In the Bradshaw-Harquahala Planning Area six ACECs are proposed for designation under *Alternative C*: Harquahala Mountains (41,670 acres), Vulture Mountains (2,790 acres), Black Butte Raptor (800 acres), Sheep Mountain RNA (4,270 acres), Black Mesa (5,540 acres), and Tule Creek (640 acres).

The management actions for designating the Harquahala Mountain ACEC would (1) increase

forage for bighorn sheep by reducing livestock competition during lambing season and (2) protect unique vegetation communities. Banning new vehicle routes would reduce impacts to vegetation and the likelihood of habitat fragmentation. Spring sources would be protected from livestock impacts, increasing riparian vegetation, wildlife cover, and forage. Management actions would better protect desert tortoise habitat from conflicting human activities. Some temporary impacts to vegetation and wildlife habitat might occur during fence building to exclude livestock from springs.

Management actions related to designating the Vulture Mountains and Black Butte ACECs would benefit nesting raptors by reducing the potential for human harassment within 1/2 mile of nest sites during the nesting season and providing added protection against disturbance of adjacent foraging areas. The actions would also provide more protection for desert tortoise habitat from conflicting human activities.

Management actions related to designating the Sheep Mountain RNA ACEC would benefit wildlife, including desert tortoises, by reducing human harassment and providing some protection of habitat from ground disturbances, including mining.

Impacts related to designating Tule Creek ACEC would be similar to those described for *Alternative B*. Impacts related to designating Constellation Mine Road as a back country byway would be similar to those described for *Alternative B*. Designating Black Mesa ACEC,

Desert Tortoise Habitat	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E
<i>ACEC (Total Acres)</i>	9,660	640	56,520	205,870	89,970
Category I (ac)	0	0	60,420	114,500	51,570
Category II (ac)	0	640	15,310	106,030	19,040
Category III (ac)	0	0	2,050	15,510	7,750
Riparian (mi)	15.50	1.30	10.40	49.50	1.70
<i>WHA (Total Acres)</i>	0	64,220	196,510	57,530	179,640
Category I (ac)	0	60,420	6,520	0	3,610
Category II (ac)	0	1,710	129,590	2,850	129,340
Category III (ac)	0	2,050	7,840	3,630	4,040
Riparian (mi)	0	0.40	14.70	5.00	14.70

while not specifically for biological resources, would provide management emphasis and some degree of habitat protection from mining disturbances. Wilderness management would have the same impacts as described for *Alternative A*.

The designation of these ten total ACECs in the planning areas would add additional protection to 60,420 acres of Category I desert tortoise habitat, 15,310 acres of Category II habitat and 2,050 acres of Category III habitat as well as emphasize protection of 10.4 miles of riparian habitat. See Table 4-5 for comparisons of tortoise and riparian habitats protected in ACECs and Wildlife Habitat Areas (WHAs) by alternative.

Alternative D

In Agua Fria National Monument the Agua Fria River Riparian Corridor ACEC (13,070 acres) would include the ACECs proposed by *Alternative C* but would also incorporate much more riparian habitat. Management actions include closing, limiting, or mitigating vehicle routes and prioritizing land acquisitions along Indian Creek. These actions would benefit wildlife species and habitat, including the Gila chub, yellow-billed cuckoo, and several other priority species in a few areas. OHV impacts to native vegetation, streambanks, and water quality would be reduced. However, this ACEC is unlikely to result in any measure of wildlife habitat protection beyond that provided by the Monument Proclamation (Appendix A), the Endangered Species Act, and Land Health Standards.

In the Bradshaw-Harquahala Planning Area eight ACECs are proposed for designation under *Alternative D*: the Baldy Mountain ONA (9,080 acres), Sheep Mountain RNA (4,270 acres), Vulture Mountains (6,120 acres), Harquahala Mountains ONA (74,940 acres), Belmont-Big Horn Mountains (77,730 acres), Black Butte Raptor ONA (2,580 acres), Black Mesa (5,540 acres), and Tule Creek (640 acres).

Management actions and impacts related to designating Sheep Mountain RNA ACEC would be similar to those described for *Alternative C*, but would also include removing all fencing, which would allow unimpaired movement of wildlife with large home ranges.

Fencing would be removed because grazing would be eliminated on BLM's lands.

The Vulture Mountains ACEC would expand the ACEC from 2,790 acres to 6,120 acres, protecting raptor nest sites from disturbances and raptor foraging habitat within 1 mile of the cliffs. Closure of the area to mineral entry, would protect nesting raptors and desert tortoise habitat from a wider range of potential threats over a larger area than *Alternative C*.

Black Butte Raptor ONA ACEC would be expanded to 14,480 acres to protect a larger area. The impacts would include the closure of the area to mineral entry, protecting nesting raptors and desert tortoise habitat from a wider range of potential threats over a larger area than *Alternative C*.

Management actions in Harquahala Mountains ACEC would be similar to those described for *Alternative C* but would include prohibiting the building of new livestock fences and removing all fencing, which would facilitate wildlife movement throughout the area. Closing the ACEC to all forms of mineral entry would result in minimal human intrusion and less ground disturbance from mining. These management actions would benefit the resident bighorn sheep population, desert tortoises, and other wildlife by reducing mining impacts to vegetation.

Designating Belmont-Big Horn Mountains ACEC would benefit wildlife populations and habitat by doing the following:

- reducing or limiting vegetation disturbance and harassment from some activities,
- potentially acquiring important habitat, and

- eliminating fences that hinder deer and bighorn sheep movement.

Management actions would add management emphasis and protection to desert tortoise habitat.

Designating Baldy Mountain ACEC would benefit wildlife, including desert tortoises, by reducing human harassment and providing some protection of habitat from ground disturbances, including mining.

Impacts of designating Tule Creek ACEC would be similar to those described for *Alternative B* but would include protecting more area from vehicle disturbances, which affect upland wildlife, including desert tortoises.

Impacts from wilderness management would be the same as described for *Alternative A*.

The designation of these nine ACECs would add additional protection to 66,940 acres of Category I desert tortoise habitat, 167,710 acres of Category II habitat and 6,000 acres of Category III habitat as well as emphasize protection of 49.5 miles of riparian habitat. See Table 4-5 for comparisons of tortoise and riparian habitats protected in ACECs and WHAs by Alternative.

Alternative E (Proposed Alternative)

In Agua Fria National Monument impacts of designating Bloody Basin Road as a Back Country byway would not occur therefore it would not have the impacts described in *Alternative B*.

In the Bradshaw-Harquahala Planning Area four ACECs are proposed for designation: Harquahala Mountains ACEC (74,950 acres), Vulture Mountains ACEC (6,120 acres), Black Butte ACEC (8,260 acres), and Tule Creek ACEC (640 acres).

Impacts of designating Tule Creek ACEC would be similar to those described for *Alternative B*.

Management actions for designating the Vulture Mountains ACEC would benefit nesting raptors by reducing the potential for human harassment within 1 mile of nest sites during the nesting season and by providing added protection against disturbance of adjacent foraging areas. The actions would better protect desert tortoise habitat from conflicting human activities.

Designating and managing the Harquahala Mountains ACEC would reduce motor vehicle disturbances to bighorn sheep, desert tortoises, and other wildlife. It would also set a high priority on restoring and maintaining vegetation diversity, spring sources, and healthy wildlife populations. Limiting the building of new roads and fences would facilitate wildlife movement throughout the area. Allocating the area as VRM Class II may affect wildlife management activities (see Section 4.11.8 From Visual Resource Management). Developing visitor facilities might alter wildlife movement through and around those facilities.

Management actions for designating the Black Butte ACEC would benefit nesting raptors (1) by reducing the potential for human harassment within 1 mile of nest sites during the nesting season and (2) by providing added protection against disturbance of adjacent foraging areas. The actions would better protect desert tortoise habitat from conflicting human activities. Allocating the area as VRM Class II may affect wildlife management activities (see Section 4.11.8 From Visual Resource Management).

The designation of these four ACECs would add additional protection to 74,490 acres of Category I desert tortoise habitat, 19,040 acres of Category II habitat and 7,780 acres of Category III habitat as well as emphasize protection of 1.7 miles of riparian habitat. See Table 4-5 for comparisons of tortoise and riparian habitats protected in ACECs and WHAs by Alternative.

Impacts from wilderness management would be the same as described for *Alternative A*.

4.11.2 From Lands and Realty Management

Lands and realty authorizations and activities, with the exception of land acquisitions, can be detrimental to biological resources and can result in a loss of habitat quantity or quality. The effects of these types of activities and actions are described in more detail in the following section.

Building more utilities, transportation corridors, and communications sites can disturb vegetation in the facility footprint and could encourage the establishment of invasive weeds in or next to the disturbed areas. The designation of transportation and utility corridors and communication sites can allow these types of facilities to be placed in locations where the adverse impacts to biological resources are minimized or reduced.

Linear features normally authorized by right-of-way can have the following affects:

- fragment habitat,
- prevent wildlife movement,
- result in loss of habitat
- result in wildlife collisions,
- increase human presence and harassment,
- displace individual animals,
- degrade habitat quality, and
- facilitate long-term human population growth.

Land disposals remove lands from Federal ownership and administration thus removing protections afforded by some Federal environmental regulations including NEPA and Section 7 of the ESA. Land acquisitions have the opposite effects.

Alternative A (No Action)

In Agua Fria National Monument, continued use of the existing utility right-of-way is expected to temporarily harm vegetation because of ground disturbance during operation and maintenance.

These activities can also encourage the establishment of invasive weeds in or next to the disturbed areas.

Acquiring privately owned and State-held lands in the Black Canyon and the Lake Pleasant RCAs would create two large blocks of federally managed lands. These blocks would consolidate management and help develop healthy native plant communities in upland and riparian communities. Healthy native plant communities, in turn, would benefit wildlife, including special status species; such as desert tortoise, by providing adequate forage, cover, and breeding habitat.

Similarly, acquiring lands in the Cordes Junction, Bumble Bee, and Williams Mesa MRMAs and the four-mile reach of State land along the Hassayampa River would help BLM institute the Land Health Standards that would protect and restore wildlife habitat in these areas.

Building and operating facilities in the Meade-Phoenix and Parker-Liberty transportation corridors, the Central Arizona Project corridor, the future gas line corridor, and the El Paso Natural Gas Company's No. 1104 corridor could create barriers to wildlife movement and disturb Category I, II, and III tortoise habitat.

Decisions contained in the recently finalized amendment to the Lower Gila North MFP allow for disposal of lands containing threatened or endangered species habitat if other public uses outweigh the value of the federal lands as endangered species habitat. While there is currently no endangered species habitat in the area covered by these decisions, should a species occurring in the area be listed in the future, disposal would likely adversely affect the species.

Acquiring high resource value lands in the MFP area would allow consolidation and federal protection of priority species and priority habitats.

Mitigation actions could include (but would not be limited to) avoidance of sensitive habitat, remediation of disturbance to habitat, or compensation for lost habitat.

Alternative B

In Agua Fria National Monument narrowing the Black Canyon utility corridor would reduce potential impacts to vegetation and wildlife habitat during the building and operating of utilities.

Impacts from disposing of up to 58,400 acres of land outside the MUs would include the potential loss of vegetation and wildlife habitat on those lands.

Acquiring lands meeting the criteria described for Management Common to All Action Alternatives would benefit vegetation and wildlife by consolidating management under Federal ownership and reducing the potential for habitat disturbance from non-Federal projects.

Building and maintaining facilities in planned transportation and utility corridors and communication sites would have similar impacts to those described for *Alternative A*. The Black Canyon Corridor would be expanded one mile west of its current western boundary to accommodate future utilities outside the national monument. There are no current plans by industry to construct additional utility lines through that corridor within the life of this plan. Proposals for utility development would be confined to the expanded corridor and impacts would be addressed in an Environmental Assessment or Environmental Impact Analysis conducted when a project is proposed.

Alternative C

Eliminating the Black Canyon utility corridor would prohibit more utility rights-of-way in Agua Fria National Monument. No other utility impacts to vegetation or wildlife habitat are expected beyond operating and maintaining the existing facilities with prior existing rights.

In the Bradshaw-Harquahala Planning Area, the impacts on biological resources from acquiring non-Federal lands and disposing of up to 49,100 acres of BLM-managed Federal land would be similar to those described for *Alternative B*.

Building and maintaining planned transportation and utility corridors and communication sites would have similar impacts to those described for *Alternative A*. The Black Canyon Corridor would be expanded two miles west of its current western boundary to accommodate future utilities outside the national monument. There are no current plans by industry to construct additional utility lines through that corridor within the life of this plan. Proposals for utility development would be confined to the expanded corridor and impacts would be addressed in an Environmental Assessment or Environmental Impact Analysis conducted when a project is proposed.

Alternative D

In Agua Fria National Monument, eliminating the Black Canyon utility corridor would have impacts similar to those described for *Alternative C*.

In the Bradshaw-Harquahala Planning Area, building and maintaining facilities in planned transportation and utility corridors and at communication sites would have impacts similar to those described for *Alternative A*. The portion of the Black Canyon corridor west of Interstate 17 would remain the same as it is currently, but the corridor would be expanded south to include BLM's land past Black Canyon City and across Table Mesa. This would create a couple of very narrow places in the corridor which may make it impractical for future utility development, or which would limit placement of facilities, increasing the possibility of having power line towers impacting sensitive resources.

The impacts on biological resources from acquiring private or State lands would be similar to those described for *Alternative B*.

Alternative E (Proposed Alternative)

In Agua Fria National Monument, narrowing the Black Canyon utility corridor would have impacts similar to those described for *Alternative B*.

In the Bradshaw-Harquahala Planning Area the impacts on biological resources from acquiring non-Federal lands and disposing of up to 38,755 acres of BLM-managed lands would be similar to those described for *Alternative B* except fewer acres are available for potential disposal.

In the Bradshaw-Harquahala Planning Area, building and maintaining facilities in planned transportation and utility corridors and at communication sites would have impacts similar to those described for *Alternative A*, but the portion of the Black Canyon corridor west of Interstate 17 would be expanded westward one mile from the Bumblebee area south, and one miles from Bumblebee north. The impacts of the corridor expansion would be similar to those describe in *Alternative B*.

The impacts on biological resources from acquiring private or State lands would be similar to those described for *Alternative B*.

4.11.3 From Management of Soil, Air, and Water Resources

Soil, air, and water resource management activities are all designed to restore or maintain resource conditions which also enhance the conservation of species and habitats. These activities may allow some level of loss or degradation associated with multiple use, but overall BLM would strive to achieve the long-term conservation of the resources.

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Implementing activity plans to maintain or improve watershed conditions, soil cover, and

water flows would benefit biological resources by maintaining or improving riparian vegetation quality, species diversity, and water quality in select drainages.

4.11.4 From Biological Resource Management

Biological resource management allocations, objectives and management actions are all designed to enhance the conservation of species and/or habitats. These activities may allow some level of habitat loss or degradation associated with multiple use, but BLM would strive to achieve the long-term conservation of biological resources with emphasis on priority species and priority habitats.

Alternative A (No Action)

In Agua Fria National Monument, proposed landscape improvements, such as cottonwood and willow plantings along the Agua Fria River and its tributaries, would increase the density and quality of the riparian plant communities and improve the quality of wildlife habitat.

Firewood collection within the monument would be prohibited where it affects wildlife habitat, so no impact to biological resources is expected.

Continued stocking of federally listed sensitive native fish such as the Gila chub, Gila topminnow, and desert pupfish, into suitable habitat in the Agua Fria watershed could increase the population size, geographic distribution, and overall viability of these native fishes.

Modifying livestock fencing would facilitate pronghorn antelope movement between lambing and foraging areas.

Protecting Arrastre Creek, Antelope Creek, Weaver Creek, and the Harquahala Mountains would maintain vegetation and wildlife habitat.

Cooperating with the Arizona Game and Fish Department (AGFD) to acquire water rights in

addition to reducing competition for water among big game species, livestock, and burros would ensure the legal availability of water and maintenance of flows in seeps and springs throughout the Bradshaw-Harquahala Planning Area. This water would maintain aquatic and wetlands vegetation and wildlife.

The use of native plant species when restoring or rehabilitating disturbed or degraded rangelands would reestablish native rangeland plant communities and improve forage and habitat quality for wildlife.

Protecting significant cliff areas in the Big Horn and Vulture Mountains and the Black Butte area would benefit raptors, including golden eagles, by reducing human harassment during their nesting season. Limits on the use of the area by wild burros and restrictions on other rights-of-way would protect raptor foraging areas from degradation and disturbance.

Protecting bighorn sheep lambing areas in the Harquahala Mountains from habitat disturbance and disposal would increase forage quality and quantity and reproductive success in sheep populations.

Decisions contained in the recently finalized amendment to the Lower Gila North MFP include measures that reduce competition between bighorn sheep and domestic livestock for available resources, reduce the possibility of disease transmission between domestic sheep and bighorn sheep and allow bighorn sheep population transplants and augmentations to facilitate establishment and maintenance of healthy bighorn sheep populations.

The prescribed protection from some construction activities in sensitive botanical areas in the vicinity of Arrastre Creek, Antelope Creek, Weaver Creek and the Harquahala Mountains would have little beneficial effect to the botanical resources given that the land health standards incorporated by previous plan amendment and wilderness designation of the Harquahala Mountains afford essentially the

same level of protection provided by the decisions.

Supplemental plantings of cottonwood and willow trees around springs and along riparian areas would supplement natural regeneration and expedite achieving desired plant community objectives.

Evaluating spring developments for impacts to endemic snails would contribute to the conservation of the natural biologic function of these ecosystem components.

The decision to monitor water quality at identified problem areas and improve conditions to meet established standards would have little effect to the biological resources given that the land health standards incorporated by previous plan amendment affords essentially the same level of protection provided by the decision.

Coordination and cooperation with the Arizona Game and Fish Department on the development of wildlife water catchments would benefit many wildlife species by making year-long water sources available and assist the Department in achieving desired population objectives.

Coordinating with livestock grazing allottees on the development of range management projects like fences and livestock waters would ensure that potential adverse impacts to wildlife habitat are avoided, fences do not hinder wildlife movement and livestock waters are safely accessible to wildlife populations year-long.

Livestock grazing management decisions to monitor browse species; construct monitoring exclosures and to develop an allotment management plan for the Harquahala Mountains, would have little effect to the biological resources given that the land health standards incorporated by previous plan amendment afford essentially the same level of protection provided by the decisions.

Implementation of desert tortoise management guidance would conserve and protect desert tortoises and their habitat.

The decision to develop fire management plans for the Bradshaw-Harquahala planning area would have little effect to the biological resources given that the Statewide Fire and Fuels plan amendment affords essentially the same prescription as the decision.

Alternative B

Most of the management prescriptions for biological resources apply to all action Alternatives; therefore, with the exception of allocated wildlife habitat areas and other special areas that influence habitat management, there is little difference between Alternatives. All of the actions discussed below are designed to maintain or improve the condition of priority wildlife populations and priority habitats.

Applying the Land Health Standards to all BLM-authorized activities would benefit biological resources by:

- reducing soil erosion,
- restoring and maintaining the functional condition of riparian habitats,
- ensuring that progress is made toward desired plant communities in both riparian and upland areas, and
- reducing the presence of invasive species.

Implementing these standards would place a high priority on the habitat needs of special status species where wildlife and other land uses conflict.

Reintroducing, transplanting, and supplemental stocking of wildlife, including game, nongame, and endangered species, would enhance biological resources by (1) restoring or maintaining wildlife populations, distributions, and genetic diversity and (2) contributing to the conservation and recovery of listed species.

Implementing desert tortoise management standards and actions would conserve and protect tortoise populations and habitat. Habitat protection for tortoises would affect other wildlife species that use the same habitat, such as rosy boa, chuckwalla, Gila monster, mule deer, and desert bighorn sheep.

Management direction provided by Desired Future Condition (DFC) objectives would benefit biological resources. The objectives would protect and conserve priority habitats and priority species, implement approved recovery plans, and contribute toward the conservation and recovery of listed threatened or endangered species.

Considering the impacts of permitted activities on priority wildlife species and priority habitats in determining conformance with the management direction provided by the DFC objectives would ensure maintenance of habitat quantity and quality, minimize or avoid "take" of migratory birds, and generally conserve biological resources.

Management direction provided by DFC objectives would benefit biological resources by establishing habitat standards whereby habitat quality would be protected for many riparian and upland species. These objectives would be considered part of Standard Three of the Land Health Standards and be implemented using BLM's discretion.

Management actions designed to protect springs and seeps would affect biological resources by protecting from overexploitation these important habitat features and their value to biological resources and natural processes.

Management actions to maintain wildlife water availability would ensure that water-dependant wildlife would continue to have access to existing water sources and new water sources could be built where needed to maintain, restore, or enhance populations. These actions would affect the distribution and abundance of some wildlife during some seasons. Research is

ongoing to look at impacts of artificial wildlife waters.

Implementing standards for artificial water design, water quality monitoring, and water rights protection would benefit biological resources by protecting aquatic wildlife habitat quality and quantity as well as wildlife access to water.

Prohibiting domestic sheep and goat grazing within nine miles of occupied desert bighorn sheep habitat would significantly reduce the likelihood of disease transmission to the wild sheep populations.

Guidance on exotic species management would benefit biological resources by protecting native wildlife and plants by emphasizing the restoring and maintenance of native species.

Management actions to evaluate and mitigate impacts to sensitive wildlife habitat would benefit biological resources by giving wildlife habitat a priority over motorized recreation when conflicts are found.

Land tenure guidance would affect biological resources by ensuring that endangered species conservation or recovery values are retained on Federal lands.

Management actions to continue to manage wildlife habitat cooperatively and in partnership with the AGFD and other entities would benefit biological resources by focusing management emphasis and resources on high-priority issues and avoiding costly redundancy.

The Agua Fria National Monument Proclamation (Appendix A) describes wildlife and habitats, emphasizing their management. This emphasis places a high priority on biological resources when conflicts arise between wildlife management and other land uses.

Collection of dead and down firewood for campfire use in the monument would remove small amounts of dead woody material used by

some wildlife species. In upland areas the woody material selected for firewood is from species (mesquite and catclaw) targeted for reduction in plans to enhance the diversity and health of the native desert grasslands. Impacts to biological resources are expected to be negligible. Collection of firewood in riparian areas could reduce habitat for wildlife dependent on dead and down woody material. Though the impact of wood collection is expected to be low, provisions to temporarily or permanently close areas to wood collection to prevent resource damage should avoid any adverse effects to wildlife habitat.

In the Bradshaw-Harquahala Planning Area, impacts to biological resources from firewood and vegetation collection would be essentially the same as those described for the national monument, except that noncommercial collection of some wood and cacti skeletons is allowed. Restricting commercial collection would protect stands of ironwood and mesquite that provide valuable habitat for many birds and other wildlife. In addition to closing, limiting, or mitigating motorized vehicle routes in the Harquahala Mountains Wildlife Habitat Area (64,220 acres), prohibiting the building of rangeland improvements in Browns Canyon and the Inner Basin would benefit biological resources by reducing impacts to Sonoran desert scrub, chaparral vegetation, and priority wildlife habitat, including habitat for mule deer, bighorn sheep, and desert tortoise.

The designation of the Harquahala Mountain WHA would add additional protection to 60,420 acres of Category I desert tortoise habitat, 1,710 acres of Category II habitat and 2,050 acres of Category III habitat as well as 0.4 miles of riparian habitat in Browns Canyon by emphasizing wildlife habitat management in this area. See Table 4-5 for comparisons of tortoise and riparian habitats protected in ACECs and WHAs by alternative.

Alternative C

Impacts to biological resources would be similar to those described for *Alternative B*, except as described below.

The allocation in Agua Fria National Monument of the Pronghorn Fawning Habitat WHA (16,810 acres) and the Pronghorn Movement Corridor WHA (22,520 acres) would do the following:

- limit or mitigate vehicular access to achieve DFCs,
- prohibit developing new recreational facilities,
- require in all fences meet BLM standards, and
- emphasize management of wildlife habitat, thereby reducing pronghorn habitat fragmentation and movement restrictions

In these managed areas, prescribed burns would improve pronghorn forage quality and reduce the abundance and spread of invasive species.

Allocating the Belmont/Big Horn Mountains WHA (140,790 acres) and Date Creek Mountains WHA (2,850 acres) would require the closure, limitation, or mitigation of motorized vehicle routes to reduce impacts to wildlife populations and habitat fragmentation. In the Belmont/Big Horn Mountains, this allocation would also protect bighorn sheep and desert tortoise populations from habitat fragmentation and allow unrestricted movement and greater use of this habitat, maintaining genetic diversity and population health of bighorn sheep. Other management actions for these areas include (1) acquiring State and private lands and (2) prohibiting the building of new fences. These actions would protect and maintain Sonoran desertscrub vegetation communities by restricting land disturbance.

Allocating the Upper Agua Fria River Basin Habitat Corridor WHA (9,907 acres) would benefit biological resources (1) by eliminating conflicts with vehicle routes that degrade

wildlife habitat value and (2) by allowing pronghorn and mule deer to move between BLM-managed lands and national forest lands by eliminating the building of new fences.

The designation of the WHAs would add additional protection to 6,520 acres of Category I desert tortoise habitat, 129,590 acres of Category II habitat and 7,840 acres of Category III habitat as well as 14.7 miles of riparian habitat by emphasizing wildlife habitat management in these areas. See Table 4-5 for comparisons of tortoise and riparian habitats protected in ACECs and WHAs by alternative.

Alternative D

Impacts to biological resources would be similar to those described for *Alternative B*, except as described below.

In Agua Fria National Monument impacts of allocating the Pronghorn Movement Corridor and the Pronghorn Fawning Habitat WHAs would be similar to those described for *Alternative C*, except that all fences would be removed in the absence of livestock grazing and substantial obstacles to movement would be eliminated.

Impacts of allocating Date Creek Mountains WHA would be similar to those described for *Alternative C*, except that all existing fences would be removed and mineral material and vegetation sales would be prohibited. These management actions would allow big game to move throughout the areas and would eliminate potential tortoise habitat destruction from mineral material sales.

Impacts of allocating the Upper Agua Fria River Basin Habitat Corridor WHA (21,443 acres) would be similar to those described for *Alternative C*, except that the management would be applied to a larger area and all fences would be removed, facilitating big game movement.

The designation of the WHAs would add additional protection to 2,850 acres of Category

II habitat and 3,630 acres of Category III habitat as well as five miles of riparian habitat by emphasizing wildlife habitat management in these areas. See Table 4-5 for comparisons of tortoise and riparian habitats protected in ACECs and WHAs by alternative.

Alternative E (Proposed Alternative)

Impacts to biological resources would be similar to those described for *Alternative B* except as described below.

Impacts of allocating the Pronghorn Movement Corridor WHA and the Pronghorn Fawning Habitat WHA would be similar to those described for *Alternative C*. *Alternative E* would prevent impacts to pronghorn during the fawning season from human activity resulting from special recreation use permits.

Within the Agua Fria National Monument, impacts of allocating the Belmont/Big Horn Mountains WHA would be similar to those described for *Alternative C* for allocating Belmont/Big Horn Mountains WHA and the Harquahala/Belmont/Big Horn Wildlife Corridor WHA.

The designation of the WHAs would add additional protection to 3,610 acres of Category I desert tortoise habitat, 129,340 acres of Category II habitat and 4,040 acres of Category III habitat as well as 14.7 miles of riparian habitat by emphasizing wildlife habitat management in these areas. See Table 4-5 for comparisons of tortoise and riparian habitats protected in ACECs and WHAs by alternative.

In the national monument, eight tributaries of the Agua Fria River are determined as eligible for analysis as potential additions to the national Wild and Scenic Rivers System. BLM policy requires protection of the outstandingly remarkable wildlife habitat values along these stream segments.

4.11.5 From Cultural Resource Management

Cultural resource management activities that protect sensitive sites can also protect biological resources that occur in the same area. Activities that encourage greatly increased visitor use or prescribe facility development can result in species or habitat disturbance that could degrade habitat conditions for some species.

Alternative A (No Action)

Management actions for cultural resources that prohibit surface disturbance near known archaeological sites would protect vegetation and wildlife habitat in those areas.

Alternative B

In Agua Fria National Monument, biological resources could be degraded by implementing high public use at five sites. If these site developments include visitor facilities with gravel parking areas, restrooms, and picnic facilities; vegetation loss and increased human activity could alter wildlife use of the area and lead to habitat loss and fragmentation. Any potential impacts to pronghorn or other biological resources in the national monument would be tempered by the requirement that management actions be consistent with the National Monument Proclamation (Appendix A). A portion of Black Mesa, along with the Badger Springs Wash area, is located in a pronghorn migration corridor. Public use of the sites could disturb the movements of the pronghorn. Impacts of developing four cultural sites to moderate public use, including such improvements as hardened trails and signs, would be lower than developing them to High Public Use. No impacts are expected from Low Public Use developments.

In the Bradshaw-Harquahala Planning Area there could be site-specific conflicts with biological resources, at locations developed for public use in eight or fewer SCRMA'S. The resources affected, and the nature and extent of

impacts, would depend on the site location, size, and surrounding habitat. Impacts would be reduced by the decision to manage desert tortoise habitat for no net loss in amount or quality.

Alternative C

In Agua Fria National Monument biological resources could be degraded by implementing high public use at one sites, Potential impacts would be similar to those described for *Alternative B* but limited to one area. Impacts from developing the eight Moderate Public Use sites described would be similar to those described for *Alternative B* but at more sites. Overall, development of public use sites is expected to have lower impacts than in *Alternative B*.

In the Bradshaw-Harquahala Planning Area, impacts would be similar to those described for *Alternative B*, but in fewer locations.

Alternative D

No sites would be allocated to High Public Use, and impacts from developing one Moderate Public Use site would be limited to that single area. There would be no conflicts with pronghorn migration corridors.

In the Bradshaw-Harquahala Planning Area, impacts would be similar to those described for *Alternative B*, but in fewer locations than in *Alternative C*.

Alternative E (Proposed Alternative)

In Agua Fria National Monument biological resources could be affected by implementing high public use at two sites and, to a lesser extent, moderate public use at up to six sites. The construction of visitor facilities, such as parking lots, trails or ramadas, could disturb small areas of habitat. Higher numbers of visitors could alter wildlife use of an area, contributing to habitat loss or fragmentation. Project planning will address the mitigation of potential adverse effects of site-specific

interpretive uses on biological resources. No sites will be developed for interpretive use in low public use areas, excluding at least 85% of the monument from impacts associated with higher visitation and development at public use sites.

In the Bradshaw-Harquahala Planning Area impacts would be similar to those described for *Alternative B*, but the impacts would be more limited in potential locations because two SCRMA's would be excluded from public use allocations.

4.11.6 From Paleontological Resource Management

Paleontological resource management activities that protect sensitive sites can also protect biological resources that occur in the same area.

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts to biological resources expected under any Alternative.

4.11.7 From Recreation Management

Recreation management activities can impact biological resources in various ways depending on the type of allocation or management action and location. Most types of recreational activities cause some level of disturbance to wildlife populations or vegetative communities. The development of recreational facilities like parking or staging areas, trailheads and hiking trails can destroy or degrade habitat within the footprint of the facility and also degrade the habitat quality of the surrounding area by encouraging human disturbance of wildlife populations and plant communities.

Management prescriptions that limit or restrict various types of activities can reduce adverse impacts to populations and habitat. Facility development can direct human activities to

previously disturbed areas or areas less sensitive or less susceptible to degradation from recreational activities.

Alternative A (No Action)

In the Agua Fria National Monument recreation uses would be allowed to the extent that they are consistent with the primary purpose of the monument to protect the objects identified in the proclamation.

In the Bradshaw-Harquahala Planning Area, current levels of recreation management would inadequately protect biological resources. Informal concentrated recreational use areas would continue to develop and grow causing increasing levels of habitat loss and disturbance. The location and use of these areas would continue to be unplanned and may conflict with sensitive biological resources, priority species or priority habitats, including riparian areas and desert tortoise habitat.

In both planning areas, cross-country travel by both motorized and non-motorized users could lead to the creation of permanent trails, sometimes called “social” or “user” trails that braid across the landscape. Plants are trampled, damaged or destroyed during the creation of these routes. These user-created and non-engineered trails are subject to hardening or erosion and may cross and impact fragile plant habitats. Cryptogamic (black crusty soil) soils in some desert locales and desert pavement areas in others are easily damaged. Erosion can lead to loss of plant life.

Alternative B

In Agua Fria National Monument the allocation of 57,900 acres of Front Country and 300 acres of Passage RMZs would emphasize public recreation use. This use could encourage ground disturbance in and near recreation use areas and access roads, degrading vegetation and wildlife habitat. Additionally, both campgrounds proposed by *Alternative B* would be in pronghorn movement corridors. Human activity in these campgrounds could affect pronghorn

behavior, reducing the value of fawning areas on Black Mesa and modifying pronghorn movement in the Bloody Basin Road area.

Allocating 12,700 acres of Back Country RMZ would emphasize natural primitive landscapes, resulting in limited access and less ground disturbance to vegetation and wildlife habitat.

In the Bradshaw-Harquahala Planning Area seasonally restricting motorized speed or timed events in Category I and II desert tortoise habitat would avoid impacts to desert tortoises from these types of activities.

Limiting designation of rock crawling areas to areas where biological values do not exist or could be mitigated would protect biological resources.

In the Table Mesa SRMA 20 acres allotted for OHV staging areas would destroy any remaining vegetation in these areas. In the Hieroglyphic Mountains SRMA, 30 acres allotted for OHV staging areas would destroy any remaining vegetation in these areas. In the Wickenburg SRMA, allotting 20 acres for OHV staging areas would destroy any remaining vegetation in these areas. In the San Domingo SRMA, allotting 10 acres for OHV staging areas would destroy any remaining vegetation in these areas.

Impacts on vegetation from cross-country travel by motorized and non-motorized users could cause impacts similar to those described under *Alternative A*.

Decisions contained in the recently finalized amendment to the Lower Gila North MFP provide protection for desert tortoise by restricting where Long-term Visitor Areas could be located and require resource protection as a concurrent objective of developing some types of recreational facilities.

Management of the Vulture Mountains as a Special Recreation Management Area emphasizing motorized and non-motorized recreational activities would likely degrade the wildlife habitat values in the area including that

for desert tortoise and nesting raptors by increasing visitor use and human disturbance to the area.

Alternative C

Impacts to biological resources in Agua Fria National Monument would be similar to those under *Alternative B* except that visitor use impacts on the Front Country RMZ could affect 42,000 acres. The developed campground in the Badger Springs area would be in a narrow portion of the pronghorn movement corridor, where human activity could affect pronghorn behavior, reducing the value of fawning areas on Black Mesa.

Impacts to biological resources in the Back Country RMZ would be similar to those described for *Alternative B*, except that the Back Country RMZ would be expanded to 28,200 acres.

Impacts to biological resources from allocating a Passage RMZ would be similar to those described for *Alternative B*, except that the Passage RMZ would occupy just 700 acres.

Within the Bradshaw-Harquahala, impacts from staging areas and route designations would be similar to those described for *Alternative B*, except the size of the disturbance and vegetation loss would be less.

Impacts on vegetation from cross-country travel by motorized and non-motorized users could cause impacts similar to those described under *Alternative A*.

Alternative D

Impacts to biological resources in Agua Fria National Monument would be similar to those under *Alternative B*, except that visitor use impacts of the Front Country RMZ would affect 1,530 acres. The national monument would have no developed campgrounds, decreasing possible impacts to pronghorn behavior in the pronghorn movement corridor.

Impacts to biological resources in the Back Country RMZ would be similar to those described for *Alternative B* except that the Back Country RMZ would be expanded to 68,380 acres.

Impacts to biological resources from allocating a Passage RMZ would be similar to those described for *Alternative B*, except that the Passage RMZ would consist of 990 acres.

Within the Bradshaw-Harquahala, impacts from staging areas and route designations would be similar to those described for *Alternative C*, except that the size of the disturbance and vegetation loss would be greater, especially in Castle Hot Springs SRMA.

Shifting uses in the Hieroglyphic Mountains SRMA from motorized to non-motorized over the life of the plan would reduce habitat fragmentation and disturbance and the displacing of wildlife.

Impacts on vegetation from cross-country travel by motorized and non-motorized users could cause impacts similar to those described under *Alternative A*, but would be less pronounced under this alternative due to vehicle use and entry prescriptions.

Alternative E (Proposed Alternative)

Impacts to biological resources in Agua Fria National Monument would be similar to those under *Alternative B*, except that visitor use impacts of the Front Country RMZ would affect 11,900 acres. As in *Alternative D*, the national monument would have no developed campgrounds.

Impacts to biological resources in the Back Country RMZ would be similar to those described for *Alternative B* except that the Back Country RMZ would be 57,650 acres. Impacts to biological resources from allocating a Passage RMZ under *Alternative E* would be similar to those described for *Alternative B* except that the Passage RMZ would consist of 1,350 acres.

Within the Bradshaw-Harquahala, impacts from staging areas and route designations would be similar to those described for *Alternative A*.

Impacts on vegetation from cross-country travel by motorized and non-motorized users could cause impacts similar to those described under *Alternative B*.

4.11.8 From Visual Resource Management

The designation and management to maintain VRM objectives can limit or restrict some types of activities in some locations. Limiting or precluding the development of facilities that would otherwise destroy or degrade wildlife habitat can benefit wildlife populations. Class I and II designations may limit or preclude active wildlife management, like the development of artificial water sources, if mitigation is not possible, which can benefit some wildlife populations.

Alternative A (No Action)

In the Lower Gila North MFP (BLM 1983) area, impacts to biological resources from designating areas as VRM Class I would influence the design and location of wildlife management developments, including water facilities, by requiring that the level of change from the characteristic landscape be very low and not attract attention from key observation points. Some types of habitat developments may be precluded at some locations depending on design and site characteristics. This allocation may also limit or preclude some types of developments that could destroy habitat or adversely affect wildlife populations. VRM Class I for the entire planning area is allocated only within designated wilderness areas and equals 96,820 acres. The Phoenix RMP (BLM 1988a) area has no VRM classification except where designated wilderness is VRM Class I.

In the absence of VRM allocations, implementation actions use VRM Class III standards. VRM Class III would allow wildlife

related developments to attract the attention but not dominate the view of the casual observer. Though efforts would be made to minimize the visual impacts of wildlife related developments, few limitations would be likely imposed on placement or design.

Alternative B

Impacts to biological resources would be similar to those under *Alternative A*, except that the area in VRM Class I would be 96,820 acres and VRM Class II would be allocated to 486,800 acres.

Similar to the VRM Class I description in *Alternative A*, VRM Class II would influence the design and location of wildlife management developments, except that they should not attract the attention of the casual observer from key observation points.

Alternative C

Impacts to biological resources would be similar to those under *Alternative B*, except that the area in VRM Class I would increase to 109,570 acres and the area in VRM Class II would increase to 507,610 acres.

Alternative D

Impacts to biological resources would be similar to those under *Alternative B*, except that the area in VRM Class I would decrease to 298,310 acres and the area in VRM Class II would decrease to 340,880 acres.

Alternative E (Proposed Alternative)

Impacts would be similar to those described for *Alternative A*, except that the area in VRM Class I would increase to 96,820 acres and the area in VRM Class II would increase to 488,250 acres.

4.11.9 From Rangeland Management

Livestock grazing can degrade vegetative communities in both upland and riparian areas by selectively grazing or browsing more palatable plants. Livestock can degrade water quality in springs and streams through trampling, defecation and facilitating silt runoff from overgrazed watersheds. Grazing can degrade wildlife and fish habitat by removing forage and cover, and altering stream morphology. Grazing can also facilitate the introduction and establishment of exotic plants by creating disturbed areas and depositing seeds from other locations. Livestock management facilities can limit wildlife movement (fences), alter natural behavior through the establishment of numerous temporary water sources that wildlife become dependent upon and degrade habitat by creating livestock concentration areas.

Rangeland management can reduce or mitigate the above potential adverse effects to biological resources by setting ecological standards or objectives and Desired Future Conditions that address the needs of the plant communities and wildlife populations then prescribing and enforcing management actions to achieve them. Active rangeland management can regulate the authorized use to avoid the degradation of biological resources. Livestock facilities can be designed to avoid or minimize adverse effects to habitat and animal behavior.

Permanent livestock waters can provide an important habitat component for many species in areas where roads have fragmented habitat and eliminated access to historic water sources.

Alternative A (No Action)

Adhering to the *Rangeland Health Standards* would benefit biological resources by doing the following:

- reducing soil erosion,
- restoring and maintaining the functional condition of riparian habitats, and

- ensuring that progress is made toward desired plant communities in both riparian and upland areas, including reducing the presence of invasive species.

Implementing these standards would prioritize the habitat needs of special status species, where wildlife and other land uses conflict. Implementing changes in grazing practices and management systems as a result of the *Rangeland Health Standards* would also increase vegetation density and cover, which provide forage and cover for wildlife.

Prohibiting livestock grazing in Larry Canyon ACEC in Agua Fria National Monument would have little effect on biological resources because the sensitive riparian habitat in the ACEC is inaccessible to cattle.

Modifying all fences to facilitate big game movement would benefit biological resources by allowing unimpeded movement of pronghorn and other game between seasonal use areas.

Developing new range water sources might benefit biological resources by making usable some habitat that would not otherwise be suitable because of a lack of water. Some wildlife might expand or increase as a result of the increased water availability. However, the presence of range waters might alter the behavior of some wildlife species, populations, or individuals. Wildlife might become dependent on these water sources and be adversely affected if the water source is not maintained. While designed to be wildlife friendly, range water sources can result in mortality to some small mammals and birds, which can become trapped in troughs and storage tanks not designed or maintained to BLM's standards.

Range waters might also be a potential source of disease transmission to some game species. These waters tend to concentrate livestock use and result in over-utilization of vegetation and soil alterations in the area of influence, generally within a half mile of the water source.

Habitat alteration resulting from concentrated use can reduce forage availability for some wildlife, including desert tortoise and mule deer.

Alternative B

Impacts from adhering to the *Rangeland Health Standards* would be the same as in *Alternative A*.

Implementing ephemeral allotment designations when warranted would eliminate year-long livestock use of perennial shrubs and trees in Sonoran desertscrub vegetation communities, where precipitation and vegetation production are low. The absence of perennial use would likely increase native grass production, shrub and tree cover, and habitat complexity essential for many small mammals and birds.

Allowing the consideration of allotment retirement when lands are devoted to other public purposes could increase plant species diversity and wildlife habitat complexity in areas of implementation.

In Agua Fria National Monument limiting livestock grazing in riparian areas to winter only (November 1 to March 1), implemented through the allotment evaluation process, would do the following:

- ensure recruitment and survival of cottonwood, willow, ash, and sycamore trees;
- reduce livestock loafing along creek bottoms, which degrades streambanks and alters channel morphology, thereby increasing the channel width-depth ratio and creating a deeper channel with more pools;
- allow the accumulation of vegetation in the herbaceous layer that protects the natural function of streams.

These effects would increase the diversity and abundance of plant species and the complexity of the wildlife habitat, benefiting a number of

wildlife species, including endangered fishes and migratory birds.

In the Bradshaw-Harquahala Planning Area, implementing riparian management through the allotment evaluation process would have effects on biological resources similar to those described for Agua Fria National Monument, except that impacts would occur more slowly and management techniques could vary.

In both planning areas, impacts from water developments and fences would be the same as those described in *Alternative A*.

Alternative C

In Agua Fria National Monument impacts to biological resources from closing all riparian pastures to livestock grazing would be similar to those described for *Alternative B* for the winter season of use, except that the vegetation and stream channel response would likely be more pronounced and occur more quickly due to the lack of vegetation utilization and trampling. Upland areas in riparian pastures would likely respond to the absence of livestock grazing by increasing vegetation ground cover and litter. Wildlife forage would increase because livestock would remove no annual production. Individual plants would not be hedged. Most plants would produce more seeds and accumulate decadent material and litter in the absence of livestock utilization. This accumulation of vegetation material would increase wildlife habitat diversity and abundance, which in turn would result in increases in populations of wildlife depending upon vegetation cover.

In the Bradshaw-Harquahala Planning Area impacts to biological resources would be similar to those described for Agua Fria National Monument.

Closing the Harquahala Mountains ONA ACEC to livestock grazing during bighorn sheep lambing season (January 1 – April 1) would increase wildlife forage quality and availability and eliminate competition between bighorn

sheep and livestock for forage during the critical lambing season. These benefits should increase lamb fitness and survival.

Prohibiting the developing of facilities that would increase livestock use in Browns Canyon and the Inner Basin would eliminate concentrated livestock use from sensitive riparian and upland habitat areas.

Impacts from water developments and fences would be the same as those described in *Alternative A*.

Alternative D

The affects of removing all livestock from Federal lands in both planning areas would be similar to those described for riparian and upland areas under *Alternative C*. However, *Alternative D* would affect a much larger area.

Eliminating all range improvements that serve no purpose in the absence of livestock grazing would remove many fences and corrals that hinder natural movement of pronghorn, mule deer, and bighorn sheep.

Impacts from water developments would be greatly reduced due to the limitations and restrictions on grazing. Facilities that are not needed for other management purposes or are creating negative impacts would be removed.

Alternative E (Proposed Alternative)

Alternative E would have impacts similar to those described for *Alternative B*.

4.11.10 From Minerals Management

Minerals exploration and extraction can destroy or degrade wildlife habitat by removing vegetation and altering the landscape. Minerals extraction activities include the development and use of haul roads that can fragment habitat. Minerals extraction activities can destroy habitat for sensitive species like the desert tortoise,

chuckwalla and rosy boa by removing rocks that provide burrows and coversites. Mining activities within streams and washes can degrade or destroy habitat on site and also downstream by altering the hydrology of the area. Mining activities can leave behind disturbed areas that facilitate the establishment of exotic plant species and pits that can entrap some wildlife species.

Active minerals management can ensure that biological resource concerns are addressed during the development of mining plans of operation. Discretionary activities and facilities can be modified to the extent allowable by law in order to protect sensitive biological resource.

Abandoned mine shafts and adits are an important source of roost sites for many bat species and can be used by various other wildlife species including javelina, barn owls and various reptiles.

Alternative A (No Action)

Agua Fria National Monument is closed to new mineral entry. This closure removes the threat of vegetation clearing, habitat loss, and exotic plant introduction that could occur as a result of mining.

In the Bradshaw-Harquahala Planning Area minerals actions would be evaluated on a case-by-case basis and impacts to biological resources would be mitigated and avoided to the extent allowable by regulation. Some residual loss of desert tortoise habitat is likely as a result of mining conducted under the 3809 regulations. This unmitigated loss is expected to be relatively small.

Alternative B

In Agua Fria National Monument impacts to biological resources would be similar to those described for *Alternative A*.

Closing Tule Creek ACEC to mineral entry, mineral leasing, geothermal leasing, and mineral material disposal would reduce ground

disturbances and impacts to vegetation and wildlife habitat, including habitat for the endangered Gila topminnow and desert tortoise.

Closing the Hassayampa “Box” area to mineral entry would reduce ground disturbance and impacts to vegetation and wildlife habitat, including priority riparian habitat.

Opening reconveyed lands to mineral entry could result in mining and mineral material sales in areas now closed. Mining could disturb priority habitats, including riparian areas and desert tortoise habitat, and could degrade the value of these habitats to wildlife.

Alternative C

In Agua Fria National Monument impacts to biological resources from minerals management would be similar to those described for *Alternative A*.

Impacts to biological resources in Tule Creek ACEC from minerals management would be similar to those described for *Alternative B*.

Closing Sheep Mountain RNA ACEC to mineral entry would reduce the potential for ground disturbance and mining-related impacts to vegetation and wildlife habitat, including desert tortoise habitat.

Closing the Harquahala Mountains ONA ACEC to mineral entry would reduce the potential for ground disturbance and mining-related impacts to vegetation, spring sources, and wildlife habitat, including desert tortoise and bighorn sheep habitat.

Opening reconveyed lands with high mineral potential to mineral entry could result in mining and mineral material sales in areas now closed to those activities. Mining could disturb priority habitat, including that of desert tortoises. Priority riparian habitat on reconveyed lands would be protected from mining disturbances.

Alternative D

In Agua Fria National Monument impacts to biological resources from minerals management would be similar to those described for *Alternative A*.

Keeping reconveyed lands closed to mineral entry would protect from mining disturbances priority wildlife habitats, including riparian areas and desert tortoise habitat.

Impacts to biological resources in Tule Creek ACEC from minerals management would be similar to those described for *Alternative B*.

Impacts to biological resources from closing the Harquahala Mountains ONA ACEC, Baldy Mountain ONA ACEC, and Sheep Mountain RNA ACEC to mineral entry would be similar to those described for *Alternative C*.

Impacts to biological resources from closing the Belmont-Big Horn ACEC to mineral material disposal and leasing would be similar to those described for *Alternative B* for the lands allocated to maintain wilderness characteristics.

Alternative E (Proposed Alternative)

In Agua Fria National Monument impacts to biological resources from minerals management would be similar to those described for *Alternative A*.

Impacts to biological resources in Tule Creek ACEC from minerals management would be similar to those described for *Alternative B*.

Impacts to biological resources from management of reconveyed lands would be similar to those described for *Alternative C*.

In other areas, impacts would be similar to *Alternative A*.

4.11.11 From Fire Management

Fire management can suppress wildfires that destroy habitat in non-fire adapted vegetative communities like Sonoran Desertscrub and suppress catastrophic wildfires that can destroy habitat in fire adapted communities like chaparral. By managing wildfires and choosing the appropriate management response, suppression actions take into consideration both negative and positive resource impacts due to fire.

The use of prescribed fire in fire adapted vegetative communities can restore natural vegetative communities and natural fire return intervals to which the wildlife and plant communities are adapted to historically. Prescribed fires can be designed to avoid adverse impacts associated with catastrophic wildfires and optimize the beneficial effects to the vegetation by controlling fire intensity and timing.

Alternative A (No Action)

The use of prescribed fire in Agua Fria National Monument would particularly affect pronghorn habitats by doing the following:

- removing old, woody vegetation,
- promoting the growth of healthy new plants for forage,
- eliminating shrubs that allow predators to ambush pronghorn,
- increasing the quality of fawn hiding cover, and
- helping control or potentially eliminate invasive species and restore the natural fire cycle.

Full wildland fire suppression of naturally set fires in the national monument could interrupt the natural fire cycle required for proper successional development of plant communities. Suppression of natural fires can promote the growth of invasive or exotic species and allow a buildup of the existing fuel load.

Full suppression of all fires in the Bradshaw-Harquahala Planning Area would have the same impacts to fire-adapted communities (grassland and chaparral) as those shown above.

Full suppression of fires in Sonoran desertscrub habitat in the Bradshaw-Harquahala Planning Area would affect vegetation and wildlife by decreasing mortality to species not adapted to fire.

Alternatives B, C, D, and E (No Action)

Vegetation and wildlife (particularly pronghorn antelope) would benefit from prescribed burning and mechanical treatment of the vegetation in the planning areas. Impacts would include a temporary reduction in the availability of forage. Over the long term these treatments would do the following:

- eliminate invasive species,
- reduce the fuel load, and
- improve and maintain the species diversity of perennial grasses and forbs.

The treatments would also reduce the population size of invasive species in fire-adapted environments throughout the planning areas, reducing competition between invasive species and native vegetation for available space, nutrients, and water.

Allowing natural fire starts to burn when conditions are suitable would allow the natural fire cycle to occur in fire-adapted grassland and chaparral plant communities. These fires would create a natural mosaic of vegetation of different successional stages as well as improve forage and reduce hazardous fuels.

Full suppression of fires in Sonoran desertscrub habitat in the Bradshaw-Harquahala Planning Area would have the same impacts as described in *Alternative A*.

4.11.12 From Wild Horse and Burro Management

Maintaining and managing burro populations can have adverse impacts to vegetation and wildlife habitat. Burro use can remove forage and cover for some wildlife species and degrade habitat quality, especially along riparian areas, through utilization of vegetation and bank trampling. Burros can compete with game species for available forage and water.

Active management of burro herds can ensure burro numbers are maintained at levels that do not degrade habitat nor adversely impact plant communities.

Alternative A (No Action)

No impacts are expected in Agua Fria National Monument.

In the Harquahala Herd Area (HA), concentrated burro use of sensitive habitats, especially in Browns Canyon in the Harquahala Mountains, would continue to cause degradation of those habitats and increase competition between wildlife species and burros for limited forage and water resources.

Maintaining the burro herd within the 80,800-acre Lake Pleasant Herd Management Area (HMA) at the Appropriate Management Level (AML) determined in the Lake Pleasant Herd Management Plan would minimize competition between burros, wildlife, and livestock.

Alternative B

Impacts are the same as in *Alternative A*.

Alternatives C and D

By eliminating the burro population in the Harquahala HA, sensitive habitats where burros now concentrate would begin to recover and burros would not compete with mule deer and bighorn sheep for forage, water, or other habitat.

Impacts in the Lake Pleasant HMA are the same as in *Alternative A*.

Alternative E (Proposed Alternative)

Removing nuisance burros and burros impairing sensitive habitats would result in impacts similar to those described for *Alternatives C* and *D*.

The effects of eliminating the burro population in the Harquahala HA would be the same as *Alternatives C* and *D*.

Impacts in the Lake Pleasant HMA are the same as in *Alternative A*.

4.11.13 From Management of Travel Management

Roads and vehicle ways can degrade habitat quality for many wildlife species, destroy habitat when roads are created, cause habitat fragmentation, disrupt natural animal behavior, result in direct mortality to individual animals, alter natural flow of streams and washes, pollute downstream water sources, encourage the spread of invasive plant species and increase human disturbance to wildlife populations.

The mere presence of a road has little or no impact to wildlife populations. It is the frequency of road use and the associated human and vehicle presence that impacts wildlife populations.

In general, more improved roads receive more use and the wider the road, the more improved the road, the more disruptive the road is to wildlife populations. Road densities can also affect wildlife populations and habitat quality. Generally, the higher the road density, the more impact there is to wildlife but the frequency of road use has more influence than road density.

For example, an area with 4 miles of roads which are infrequently used may have minimal impact to wildlife populations while the same size area with 2 miles of roads that receive heavy use may cause wildlife populations to

avoid the roads and habitat fragmentation may occur.

Managing transportation and access by closing roads that are unneeded, prohibiting off-road travel and controlling traffic volume by regulating the width or level of improvement can reduce the adverse impacts of roads to wildlife populations, vegetation and wildlife habitat.

Alternative A (No Action)

In Agua Fria National Monument, biological resources would benefit from prohibiting cross-country OHV use, which would prevent the destruction of vegetation and priority wildlife habitats and habitats for priority species.

Decisions contained in the recently finalized amendment to the Lower Gila North MFP eliminate cross country travel, limit vehicle use to existing and/or designated roads and vehicle routes, prohibit creation of unauthorized routes and allow for vehicle use of designated routes only when needed for resource protection. These measures would provide some protection to priority species and priority habitats but is reactive and management measures would lag behind resource degradation.

Prohibiting cross-country OHV use in the management area covered by the Phoenix Resource Management Plan (BLM 1988a) would provide some protection for sensitive desert tortoise habitat but plan language makes enforcement difficult due to the lack of route designation or signing. Vehicle use of routes that degrade the value of sensitive riparian and tortoise habitat would likely continue and increase.

Route proliferation would likely continue as a result of not designating open routes. Habitat loss and fragmentation would likely continue to increase with time. Human disturbance to wildlife populations in more remote areas would likely increase as more vehicle routes are established in these areas.

Alternative B

Designating 134 miles of road as open and closing 37 miles in the Agua Fria National Monument would reduce the likelihood of habitat fragmentation and human disturbance to priority habitat and priority species, including riparian and pronghorn habitats. Closed roads would reclaim and restore habitat.

Most of the roads on the Agua Fria National Monument receive infrequent use and do not appear to constitute barriers to wildlife movement.

In the Bradshaw-Harquahala Planning Area, designating vehicle routes and closing undesignated routes and cross-country travel would benefit biological resources by reducing human disturbance associated with vehicle activity, reduce the potential for habitat fragmentation and allow closed routes to reclaim and provide habitat values.

Alternative C

Impacts in Agua Fria National Monument would be similar to those described for *Alternative B* except that only 123 miles of roads would remain open, and 48 miles would be closed reducing potential adverse impacts to wildlife.

Impacts in the Bradshaw-Harquahala Planning Area would be similar to those described in *Alternative B*.

Alternative D

Impacts in Agua Fria National Monument would be similar to those described for *Alternative B*, except that only 48 miles of roads would remain open, and 123 miles of roads would be closed potential adverse impacts to wildlife would be much reduced.

Impacts in the Bradshaw-Harquahala Planning Area would be similar to those described in *Alternative B*.

Alternative E (Proposed Alternative)

Impacts in Agua Fria National Monument would be similar to those described for *Alternative B* except that only 94 miles of roads would be open.

Impacts in the Bradshaw-Harquahala Planning Area would be less than *Alternative C* but more than *Alternative D*.

4.11.14 From Management of Wilderness Characteristics

The allocation and management of areas to maintain wilderness characteristics can reduce adverse impacts associated with roads, vehicles and other human activities to biological resources by restricting access and the types of activities permitted.

These types of allocations may also add restrictions to some types of management activities which require mechanized access but are beneficial to wildlife and wildlife habitat. Construction of some types of wildlife water facilities in some locations may be incompatible with wilderness characteristics objectives or associated VRM objectives and require modification or mitigation.

Allocations to maintain wilderness characteristics would recognize wildlife populations and habitat as important aspects of naturalness and actively manage them. Such management would minimize impacts to wildlife.

Alternative A (No Action)

There would be no impacts to biological resources because there are no areas managed for wilderness characteristics in this Alternative.

Alternative B

Allocating 56,040 acres to maintain wilderness characteristics in the Harquahala Management Unit, along with restrictions to roads and vehicles, would reduce disturbances to priority wildlife habitats.

Closing lands allocated to maintain wilderness characteristics to mineral material disposal would reduce ground disturbance and impacts to vegetation and wildlife habitat.

No allocations to maintain wilderness characteristics were made in the Agua Fria National Monument under this alternative.

Alternative C

Impacts would be similar to *Alternative B*, except that allocating 107,843 acres to maintain wilderness characteristics in 3 management units, along with restrictions to roads and vehicles and minerals would further reduce disturbances to priority wildlife habitats.

Alternative D

Impacts would be similar to *Alternative C*, in the Bradshaw-Harquahala Planning Area except 140,235 acres would be allocated to maintain wilderness characteristics. These areas would be less subject to impacts associated with mineral disposal activities

Allocating areas to maintain wilderness characteristics in the Agua Fria National Monument and associated restrictions to roads and vehicles would have little effect on biological resources as vehicle and road restrictions are required to protect the monument resources and included in all alternatives.

Alternative E (Proposed Alternative)

In the Bradshaw-Harquahala Planning Area, impacts would be similar to *Alternative B*, except 89,870 acres would be allocated to maintain wilderness characteristics and these areas would not be closed to mineral material

disposal making them subject to impacts associated with this activity.

In the Agua Fria National Monument, impacts would be similar to *Alternative B*.

4.12 Impacts on Cultural Resources

The impact analysis addresses the following management priorities and uses for cultural resources:

- resource protection
- scientific research, and
- public education and interpretation.

Protecting significant cultural resources is an overarching goal of all of the Alternatives, as well as a directive that is accorded special emphasis in Agua Fria National Monument. In addition, because the significance of an archaeological or historical site may be closely related to its scientific research potential, the consequences of implementing the Alternatives on current and future research opportunities need to be determined. Finally, even though no stipulations were made in the Agua Fria National Monument Proclamation (Appendix A) for public use, some degree of onsite public education and interpretation is considered desirable, though not to the detriment of the cultural resources that Agua Fria National Monument was created to protect. In the Bradshaw-Harquahala Planning Area, demand is also increasing for opportunities for cultural heritage tourism.

The Alternatives discussed in Chapter 2 differ mainly in the proposed number of sites and SCRMA's that would be allocated to public use. Generally, the greater the public use is expected to be, the greater the potential for cultural resource damage. However, increased use also provides greater opportunities for public education and promotion of responsible stewardship.

4.12.1 From Special Designations

Alternative A (No Action)

Cultural resource inventories, such as those described in Section 3.6, would continue throughout the planning areas in each Alternative. These studies are nonintrusive and have no noticeable affect on the locations in which they are conducted.

Cultural resources represent one of the outstanding values for which the Agua Fria River was recommended as suitable for wild and scenic river designation. BLM guidance mandates the protection of these values. Actions implemented to protect wildlife habitat and scenic values, which are also regarded as outstanding, are also likely help to preserve the integrity of cultural resources in the river corridor. For example, the closure of Badger Springs Wash to vehicles has helped to protect the integrity of the Badger Springs petroglyph site.

Within designated Wilderness Areas, prohibitions of motorized and mechanized use, as well as restrictions on development would continue to preserve cultural resources in their current condition.

Alternative B

No impacts are expected from removing the Perry Mesa and Larry Canyon ACEC designations because the Monument Proclamation (Appendix A) provides a higher level of protection for cultural resources across a more extensive landscape.

An increased number of users resulting from Back Country byway designations would likely affect cultural resources along Bloody Basin and Constellation Mine Roads. Potential impacts include the possibility of increased vandalism and accelerated erosion at roadside sites. Increases in traffic could create a need for more frequent maintenance or stabilization to preserve

the historical masonry features of Constellation Road. Other effects include greater opportunities for public education and cultural heritage tourism.

Designating Tule Creek ACEC would help protect cultural resources by restricting motorized access and eliminating grazing from fenced areas. These actions would limit surface disturbances that could damage archaeological features.

Alternative C

Impacts from designating Bloody Basin and Constellation Mine Roads as Back Country byways would be similar to those discussed for *Alternative B*.

Among the special designation areas described for *Alternative C*, the Black Mesa, Tule Creek, Black Butte, and Harquahala Mountains ACECs are known to contain significant cultural resources. These and other proposed ACEC designations would include restrictions on transportation routes, rights-of-way, livestock grazing, and minerals actions. Such restrictions would help protect cultural resources by limiting public access and ground-disturbing activities. The management prescriptions for the Black Butte ACEC allow for restricting activities that might threaten the integrity of the Vulture obsidian source, an important cultural resource.

Alternative D

Because *Alternative D* proposes no Back Country byways, no impacts to cultural resources are expected.

ACEC designations would have similar impacts to those discussed for *Alternative C*. Designating more ACECs would further restrict motorized access and other land uses, thereby better protecting cultural resources.

Alternative E (Proposed Alternative)

No back country byways are proposed; therefore, no impacts to cultural resources are

expected in the national monument or the remainder of the planning area

ACEC designations would have impacts similar to those discussed for *Alternative C*. Rather than being designated as an ACEC, the Black Mesa area would be nominated to the National Register of Historic Places as the Black Mesa Rim Archaeological District. Cultural resources would be protected by management actions identified as common to all Alternatives for the Black Mesa/Bumble Bee SCRMA in Section 2.7.3.6. These actions include road closures, fencing to exclude livestock from sites, signing, and frequent monitoring. This area would also be excluded from public use. A National Register listing would underscore the cultural importance of the area in support of BLM's efforts to protect it through a partnership with the Arizona Site Stewards and other organizations. The Black Mesa Rim Archaeological District would be next to, as well as complementary to the Perry Mesa National Register District.

4.12.2 From Lands and Realty Management

Alternative A (No Action)

Land acquisitions could bring into federal ownership significant archaeological sites in and around Agua Fria National Monument, thereby enhancing values that the national monument was created to protect. In the monument and the rest of the planning area, added protection afforded to acquire cultural resources under federal management, such as applying the Archaeological Resources Protection Act (ARPA), would also help ensure that sites are protected and available for future scientific or public uses. Land acquisitions could also secure places of traditional cultural importance that could be managed to protect traditional uses or heritage values.

Installing new above-ground utilities in the existing right-of-way corridor would degrade the physical integrity and visual setting of Agua Fria

National Monument's natural and cultural landscape.

The disposal of 54,370 acres of BLM-managed lands in the Bradshaw-Harquahala Planning Area could potentially place some cultural sites at risk, if disposal contributes to urban sprawl and increased recreational use that could impact sites on public land near the disposal parcels. In addition, the lands selected for disposal could contain cultural resources that would be transferred out of federal protection. However, before parcels are disposed of, cultural survey is conducted and the significance of cultural resources found can be a reason to halt the disposal. The BLM would identify and evaluate cultural resources that would be affected by transfer out of federal ownership. Treatment plans would be developed and implemented to mitigate any adverse effects through monitoring, protective stipulations or scientific data recovery. In the case of land leased under the Recreation & Public Purposes Act, the BLM would continue to regularly monitor the condition of the sites and the lease holder's compliance with the required protective stipulations.

Alternative B

Non-Federal land acquisitions in and next to Agua Fria National Monument would have similar impacts to those discussed for *Alternative A*.

Restrictions on new utility or transportation corridors or telecommunication site areas in Agua Fria National Monument would eliminate any ground disturbance or visual intrusions that could damage the physical integrity or visual setting of cultural resources.

Acquiring or disposing of lands in the Bradshaw-Harquahala Planning Area would have similar impacts to those discussed for *Alternative A*, except 58,400 acres would be available for disposal.

Widening the Black Canyon utility corridor, and creating new electric and gas corridors in the

Bradshaw-Harquahala Planning Area could impact cultural resources that previously were not in the path of utility lines. Construction activities and access requirements might threaten disturbance of archaeological sites along new right-of-way corridors or access roads. Installing above-ground utilities might detract from the visual integrity of site settings.

Widening the Black Canyon utility corridor, and creating new electric and gas corridors in the Bradshaw-Harquahala Planning Area could disturb cultural resources in designated areas. Construction activities and access requirements might threaten disturbance of archaeological sites in new right-of-way corridors or along new access roads. Installing above-ground utilities might detract from the visual integrity of site settings.

On the other hand, establishing specific corridors encourages project applicants to place utility lines in certain confined areas, which helps to confine cultural resource impacts. In these corridors, cultural resource surveys would be conducted to identify sites along proposed utility lines and ancillary facilities. BLM would work with applicants to develop route and project design alternatives that emphasize avoidance of impacts to cultural resources. Treatment plans would specify avoidance requirements or other actions, such as scientific data recovery or aerial installation of power lines, to mitigate adverse impacts should avoidance be infeasible.

Alternative C

Non-Federal land acquisitions in and next to Agua Fria National Monument would have similar impacts to those discussed for *Alternative A*.

Eliminating the Black Canyon utility corridor from Agua Fria National Monument would reduce the likelihood that cultural resources would be affected by ground disturbance or visual intrusions from future utility development.

Widening the Black Canyon utility corridor to the west and creating new electric and gas corridors in the Bradshaw-Harquahala Planning Area could have impacts to cultural resources similar to those discussed for *Alternative B*.

Impacts of land disposal and acquisition in the Bradshaw-Harquahala Planning Area would be similar to *Alternative A*, except the disposal of 600 acres, as identified under method one, is not likely to significantly affect cultural resources. The disposal of 49,100 acres, as delineated through method two, could potentially place cultural sites at risk as in *Alternative A*.

Alternative D

Non-Federal land acquisitions in and next to Agua Fria National Monument would have similar impacts to those discussed for *Alternative A*.

Eliminating the Black Canyon utility corridor from Agua Fria National Monument would have impacts similar to those discussed for *Alternative C*.

Acquiring State and Federal lands in the Bradshaw-Harquahala Planning Area would likely increase the level of protection for cultural resources on those lands, similar to *Alternative C*. Under this *Alternative*, no lands would be available for disposal and so no impacts would be expected.

Alternative E (Proposed Alternative)

Non-Federal land acquisitions in and next to Agua Fria National Monument would have similar impacts to those discussed for *Alternative A*.

Projected impacts to cultural resources in Agua Fria National Monument would be similar to those described for *Alternative C*.

Projected impacts to cultural resources in the Bradshaw-Harquahala Planning Area would be similar to those described for *Alternative B*.

Adjustments were made to the Black Canyon Utility corridor boundaries to exclude known sensitive cultural resources which reduce potential opportunities for utilities to threaten significant cultural sites. Any project-related impacts to specific sites would be addressed through mitigation measures developed during site specific environmental analysis, which could range from redesigning a utility project to avoid sensitive areas, to scientific data recovery.

Impacts from land acquisitions and disposals in the Bradshaw-Harquahala area would be similar to those described for *Alternative A*, except that 38,755 acres would be available for disposal. SCRMA's, which contain the most sensitive concentrations of cultural resources within the planning area, would be excluded from disposal.

4.12.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Where BLM implements measures that improve soil stability and vegetation cover, cultural resources would be better protected from soil erosion.

4.12.4 From Biological Resource Management

Alternative A (No Action)

Modifying existing fences in Agua Fria National Monument to allow wildlife movement would have little effect on cultural resources. New fences could disturb sites or detract from the visual setting of the primitive landscape.

Restricting public access in sensitive wildlife habitats would likely help protect cultural resources in those areas (e.g. Harquahala Mountains, Vulture Mountains).

Alternative B

There are no impacts expected from removing Larry Canyon ACEC (designated mainly to protect biological resources) because the Monument Proclamation (Appendix A) provides a higher level of protection for cultural resources across a more extensive landscape.

In general, actions implemented to protect wildlife habitats would support the protection of cultural resources by restricting ground-disturbing activities. Building new water sources could disturb surface artifacts and features, as well as subsurface archaeological deposits. Surveys would be conducted to find and avoid archaeological sites or mitigate disturbance to them from new water sources.

Ensuring connectivity of habitats for wildlife, through such actions as seasonal restrictions on travel and other activities in wildlife migration corridors, could limit access to cultural resources and restrict opportunities for archaeological research and cultural heritage tourism.

Alternatives C, D, and E (Proposed Alternative)

Limiting vehicle routes in pronghorn corridors would restrict access to cultural resources, which would protect sites from human intrusions. This could limit opportunities for scientific research, site monitoring, and interpretive development when vehicles are needed to transport supplies and equipment.

Impacts of modifying fences in Agua Fria National Monument would be similar to *Alternative A*.

Closing or limiting vehicle routes in sensitive wildlife habitats in the Bradshaw-Harquahala Planning Area should help protect cultural resources by restricting public access that could contribute to intentional or inadvertent damage. Each Alternative varies the number of vehicle routes limited or closed, as described in Appendix N. Generally, the more routes closed

or limited would result in more protection of cultural resources.

4.12.5 From Cultural Resource Management***Alternative A (No Action)***

Restrictions on surface disturbances in Agua Fria National Monument following current interim guidelines would help protect cultural resources but could limit archaeological research opportunities, as well as the compiling of related information useful for public education and interpretive development.

BLM would continue to implement actions to monitor, document, and protect significant cultural resources in both planning areas. Existing management guidance for the Bradshaw-Harquahala Planning Area emphasizes compliance with Section 106 of the National Historic Preservation Act (NHPA) as described in Section 2.7.1.5. Proposed authorizations or actions that may impact cultural resources would be required to implement treatment plans for avoiding or mitigating adverse effects. Such actions are generally funded by the project applicants or by the BLM's programs that initiate them, rather than by the cultural heritage program. Impacts from management of cultural resources would be minimal.

Alternatives B, C, D, and E—Actions Common to Alternatives

Under all action Alternatives, there are proactive management actions carried out in accordance with Section 110 of the NHPA, which mandates identifying and protecting archaeological, historical, and cultural values, whether or not they might be affected by proposed undertakings. Inventory, protection, documentation, and monitoring projects would be described for annual work and strategic plans. This proactive approach would result in an increase in the knowledge collected from and about cultural resources in the area. Long term

preservation of cultural resources and the information they can contribute depends on knowing what kinds of sites there are and where they are located. In addition, the proactive approach contained in the Alternatives would improve public enjoyment of the cultural resources in the planning areas, leading to improved recreational experiences and a heightened awareness of the sensitivity of these resources.

In the Bradshaw-Harquahala Planning Area proactive management actions would be directed mainly toward eight sites in Special Cultural Resource Management Areas. These areas contain particularly important sites that are most at risk of damage from human activities or natural processes. However, this management focus would not exclude implementing necessary protective actions at sites outside the Special Cultural Resource Management Areas.

Archaeological inventories (surveys), a proposed ethno-historic study of Native American values in Agua Fria National Monument, and ongoing tribal consultations would identify significant resources and provide information critical for implementing protection and monitoring. This information would also support allocations of sites to use categories, allowing for traditional uses, access needs, or protective measures that might be important to tribes.

Physical and administrative measures implemented to protect cultural resources would help to stop, limit, or repair damage from vandalism, erosion, and other disturbances. Signs placed to inform the public about prohibitions under the ARPA and other laws would help protect threatened sites by providing relevant information and an alert that the sites are being monitored. If vandals damage a signed site, they would be less likely to claim ignorance of the prohibitions on illegal activities and to use this argument in legal defense of their actions. Signs would be installed so as not to draw undue attention to sites.

Threats to cultural resources would be reduced by frequent and systematic monitoring of sites

by BLM's staff and volunteers; in addition, to restricting information about the locations of archaeological sites that are not allocated for public use.

In the Bradshaw-Harquahala Planning Area greater emphasis would be placed on regular monitoring of compliance, with stipulations developed to protect cultural resources in R&PP Act leases and patents.

Archaeological and historical research projects would be consistent with scientific use allocations. Scientific research would contribute significantly to local and regional knowledge of human prehistory and history. Research would also allow for training students and volunteers who need to enhance their field and analytical skills. Research would offer opportunities for developing new techniques in rock art recording and other areas. The information gained through research projects would be useful, not only for scientists and students, but also for public education and interpretive planning.

Noninvasive methods of research and site documentation, such as surveying, mapping, photography, and remote sensing, would have little effect on cultural resources beyond a temporary increase in foot traffic and footprints. Collecting samples of artifacts from the site surface would affect site integrity by removing a small portion of the site. At sites that receive a relatively high number of visitors, well-documented collections would preserve rare or important artifacts (i.e. painted pottery or projectile points) that are particularly vulnerable to loss through casual collection.

Scientific excavations would disturb cultural deposits and could disturb buried human remains and associated items. Excavations could provide important data as no other means could. To limit undue disturbances, the highest priority for research projects would be assigned to sites threatened by vandalism or other types of disturbance, as well as sites determined to be suitable for interpretive development. BLM would require proper research designs and permits. In Agua Fria National Monument

research plans would be required to ensure that most architectural features and cultural deposits would remain intact at habitation sites with multiple rooms.

Scientific research would be limited to noninvasive methods at sites allocated to "conservation for future use" in the Agua Fria National Monument backcountry, south of Perry Tank Canyon. These remote sites would be protected from surface disturbances resulting from investigations.

Scientific uses (research) could conflict with traditional uses (cultural heritage values). Many Native Americans might object to research at sites that are not threatened by imminent damage. In approving research designs, BLM would seek to avoid the disturbance or removal of Native American human remains and associated items and would include stipulations to that effect. Tribes would be allowed to participate in research projects, which would benefit from their cultural perspectives. Other benefits could include enhanced knowledge of tribal history and the opportunity to include Native American perspectives in interpretive planning.

Public education, whether through onsite interpretive development or offsite programs, would increase public understanding of the multiple values and irreplaceable nature of cultural resources. Benefits would be derived through public enjoyment and enhanced knowledge, as well as greater support for the protection and responsible stewardship of these resources. Such efforts would fulfill public education mandates under the NHPA and the ARPA.

Establishing partnerships with universities, museums, nonprofit archaeological and historic preservation organizations, government agencies, tribes, and community groups would enhance opportunities for cost sharing and public participation in monitoring, protection, research, and education.

Under all Alternatives for both planning areas, specific sites would be allocated to public use to allow visitors to enjoy, appreciate, and learn about cultural resources. Interpretive efforts would be coordinated with the recreation program staff and, where suitable, with cultural heritage tourism programs managed by local communities and Government agencies. Efforts would be made to develop public use opportunities at accessible sites near such recreational facilities as public parks, back country byways, and hiking trails.

Public use of archaeological sites entails potential problems as well as benefits. Prehistoric and historic sites hold great fascination for many people, and there is a high public demand for opportunities to visit and learn about these sites. Cultural heritage tourism is one of the fastest growing sectors of Arizona's tourism industry, which is the second largest industry in the State. Opportunities to visit cultural sites allow people to enjoy these resources and to learn about prehistoric people, archaeology, history, Native American cultures, cultural values, scientific methods, and the interrelationships between people and the natural environments in which they lived. Agua Fria National Monument offers particularly compelling opportunities to view ancient sites in an undisturbed setting that strongly evokes a feeling of traveling back in time. Public use also provides an excellent opportunity to convey a sense of common heritage with the shared responsibility of stewardship.

Public use and interpretive development of cultural resources also can economically benefit local communities. For Arizona's BLM as a whole, the magnitude of this economic contribution can roughly be estimated by multiplying the overall daily spending average for cultural heritage tourists of \$118 per day by the number of visitor days recorded in BLM's Recreation Management Information System (RMIS). RMIS contains visitor use data for 31 cultural heritage sites and areas administered by BLM in Arizona. In Fiscal Year 1999, site records show a total of 9,616 visitor days. Multiplying the total visitor days by the average daily spending rate results in an estimated

annual economic contribution of \$1,134,688. Cultural heritage tourism at BLM's sites in both planning areas could contribute several hundred thousand dollars annually to the economies of Maricopa and Yavapai Counties.

Sites that are developed and publicized for public use are undoubtedly exposed to visitor-caused damage from surface disturbance and erosion, destabilization of standing walls, other damage to structures and features, trash dumping, multiple trailing, and theft of artifacts. Additionally, visitors tend to alter the spatial distributions of artifacts by picking them up and depositing them into piles. Rock art could be damaged by climbing, which dislodges boulders; touching or applying foreign substances, such as chalk; painted or pecked graffiti; or theft. The presence of responsible visitors would likely discourage major incidents of vandalism or theft by others, but it would be difficult to halt the cumulative effects of small-scale removal of a few artifacts at a time.

BLM would use site-selection criteria and protective measures to mitigate the impacts of public use. Most sites that are allocated to public use would be accessible sites that are already well known and visited by the public. Without BLM's authorization many of these sites have been publicized in newspapers, magazines, books, and websites. Remote, undisturbed sites would not be allocated to public use. Sites considered for public use would be evaluated as to the feasibility of treating or stabilizing selected areas to withstand visitation, for example, by building foot trails to confine and direct traffic through sites.

Site mapping and documentation would be implemented to obtain scientific data and the information needed to develop protective measures and an interpretive plan. For example, architectural mapping and rock art documentation would preserve information that could be lost through damage. Documentation would also provide a baseline condition assessment for monitoring and managing changes resulting from visitor use over time. All public use sites would be systematically

monitored to evaluate any changes resulting from visitation. Ongoing damage could lead to use restrictions, new protective measures, or suspension of the site's public use status.

Not all public use sites would be open to commercial tours. Applications for special recreation permits would be evaluated on a case-by-case basis. Commercial tour operators would be required to adhere to site-specific stipulations, for example, that could restrict access to certain areas or limit the sizes of tour groups. They would be required to help monitor damage to the sites. In developing stipulations for commercial tours, BLM would consider adopting measures implemented by Coconino National Forest to manage tour operators to archaeological sites in the Sedona area.

Sizes of tour groups, whether led by commercial operators, nonprofit organizations, or BLM, would be limited to 25 people at a time on a single site. Larger groups are difficult to monitor and manage and thus pose a greater threat of damage.

Requiring that holders of special recreation permits provide site visitors with educational information on archaeological site preservation would help disseminate information on the nature and values of cultural resources and the need to preserve them.

Alternative B

Under *Alternative B*, five sites in the national monument would be allocated to public use within a High use SCRMA, and four sites would be allocated to public use within a Moderate use SCRMA. Levels of public use are described in the Cultural Resources section. Except for the Pueblo la Plata group of sites, which is accessible from Bloody Basin Road on Perry Mesa, the four other sites in the High use area are in the Badger Springs and Black Mesa areas that are relatively accessible from Interstate 17.

There are inherent conflicts of the proposed public use of the Badger Springs and Richinbar pueblos on Black Mesa, the Rollie site, and to a

lesser extent, the Badger Springs petroglyph site. Although their accessibility would enhance their value as interpretive sites, there is now no access to the mesa top sites from the Interstate 17. A locked gate restricts access to the few jeep trails on the mesa, and it is dangerous to exit and enter the busy highway from that point.

With the largest number of sites allocated to High public use, *Alternative B* entails the greatest potential for damage to cultural resources from interpretive development and public visitation. Conversely, opportunities for public education and enjoyment of cultural sites would also be more numerous under *Alternative B*.

In the Bradshaw-Harquahala Planning Area, sites could be selected for public use in all eight of the Special Cultural Resource Management Areas (Appendix F). As in the monument, *Alternative B* entails the greatest potential for damage to sites from public use, as well as the greatest potential benefit of public education and the recreational opportunities and economic returns of cultural heritage tourism.

Alternative C

In Agua Fria National Monument, only the Pueblo la Plata group of sites would be allocated to a High public use SCRMA and eight sites would be allocated to a moderate public use SCRMA. *Alternative C* would switch four sites from High use prescriptions to less-intensive management actions. Although they would be developed at a less-intensive level, there are inherent conflicts in the proposed public use of the Badger Springs and Richinbar pueblos on Black Mesa, the Rollie site, and to a lesser extent, the Badger Springs petroglyph site as stated in *Alternative B*.

With fewer sites allocated to High public use, *Alternative C* entails less potential for damage to cultural resources from interpretive development and public visitation. Conversely, opportunities for public education and enjoyment of cultural sites would be more restricted due to more

primitive facilities and fewer tours under this *Alternative*.

In the Bradshaw-Harquahala Planning Area, sites that are described for the plan, as well as sites that meet the guidelines for public use allocations, could be selected for public use in four of the Special Cultural Resource Management Areas (Appendix F) (Black Canyon corridor, Lake Pleasant/Agua Fria, Wickenburg/Vulture, and Harquahala Mountains). The other four Special Cultural Resource Management Areas would be excluded from public use allocations. *Alternative C* entails a moderate potential for damage to sites from public use, as well as a moderate potential benefit in public education and the recreational opportunities and economic returns of cultural heritage tourism.

Alternative D

Alternative D would allocate no sites in Agua Fria National Monument to High public use and only the Pueblo la Plata site group to Moderate public use and associated management actions. All areas outside the Pueblo la Plata group of sites would be characterized by Low public use, with no interpretive development or commercial tours.

With only one site area allocated to public use, *Alternative D* entails the least potential for damage to cultural resources from interpretive development and public visitation. Conversely, opportunities for public education and enjoyment of cultural sites would be the most limited.

In the Bradshaw-Harquahala area, sites described for the plan and sites that meet the guidelines for public use allocations would be identified for public use in two of the Special Cultural Resource Management Areas (Black Canyon corridor and Harquahala Mountains). The other six Special Cultural Resource Management Areas would be excluded from public use allocations. *Alternative D* entails the least potential for damage to sites from public use, as well as the least potential benefit for

public education and the recreational opportunities and economic returns of cultural heritage tourism.

Alternative E (Proposed Alternative)

In the Agua Fria National Monument two accessible sites would be allocated to a High public use SCRMA under High use prescriptions:

- the Pueblo la Plata group on Perry Mesa, and
- the Teskey homestead site near Cordes Lakes.

All sites are within the Front Country RMZ and are also accessible from well-established roads. Six sites would be allocated to a Moderate public use SCRMA under management actions defined for this level of use. The Badger Springs and Richinbar pueblos would be excluded from public use with no interpretive development. A site at the southern end of Black Mesa, accessible by hiking trails, would be added to those allocated to Moderate public use.

At least 60,000 acres (85 percent of Agua Fria National Monument) would be excluded from public use allocations. In these remote areas, visitors could encounter and observe archaeological sites under conditions of solitude in pristine settings. In the public use SCRMA's, interpretive uses would be site-specific and confined to the eight site areas and their Passage RMZs.

Alternative E balances the potential for damage and the availability of opportunities for public education and enjoyment of cultural sites. Interpretive plans with monitoring and protection measures would be implemented to mitigate adverse impacts from visitation. This Alternative satisfies the public's desire to visit Agua Fria National Monument's archaeological sites, by including sites allocated to High and Moderate public use levels on both Perry Mesa and Black Mesa. Opportunities would be open to those who wish to take advantage of tours of

more developed facilities at accessible sites, as well as those who would like to hike to less accessible sites that have fewer visitors but offer interesting interpretive information.

In the Bradshaw-Harquahala Planning Area, sites that are described for the plan and those that meet the guidelines for public use allocations would be selected for public use in six of the eight Special Cultural Resource Management Areas. The Black Mesa/Bumble Bee and Harcuvar Mountains Special Cultural Resource Management Areas would be excluded from public use allocations to protect fragile and significant sites from damage. In the other six Special Cultural Resource Management Areas, selected prehistoric and historic sites would be managed for interpretive development, educational uses, and public visitation.

Alternative E entails a moderate potential for damage to sites from public use, as well as a relatively high potential benefit for public education and the recreational opportunities and economic returns of cultural heritage tourism.

4.12.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.12.7 From Recreation Management

Alternative A (No Action)

Limiting the use of motorized vehicles to designated routes would help protect cultural resources, while continued use of roads leading to large archaeological sites might increase the potential for vandalism and damage.

Continued protection and interpretation of the historic Harquahala Peak Observatory would enhance opportunities for public education and cultural heritage tourism.

No limits would be established for the number of permitted commercial guided tours and special events; however, SRPs would include stipulations designed to protect cultural resources and archaeological sites allowed for such use. However, the potential for damage to cultural resources could continue as public awareness and subsequent casual use of these areas is increased.

Cross-country non-motorized travel by foot, horse or mountain bike could lead to the creation of permanent trails, sometimes called “social” trails that braid across the landscape. These user-created and non-engineered trails may cross and impact fragile and undocumented cultural resources. These cultural features could be inadvertently damaged by trampling to a degree that their scientific and education values or impaired or lost. This use is most likely to happen in areas close to population centers, trailheads, or motorized routes. To date, this has been a minor concern to archaeologists due to greater impacts from vandalism and motorized vehicles.

Alternative B

Prohibiting the placing of geocaches on archaeological sites would help protect sites in Agua Fria National Monument and in the Bradshaw-Harquahala Planning Area.

Restricting campfires and camping near archaeological sites would reduce damage from the following:

- disturbing the ground’s surface,
- collecting wood components from prehistoric or historic structures,
- dismantling features to create fire rings, and
- contaminating archaeological deposits.

Where camping is not confined to previously disturbed areas, such activities could disturb subtle features that are near sites or places not easily recognized as archaeological sites.

SRPs would include stipulations developed to monitor and protect archaeological sites that have been allocated to public use. In addition to an overall limit of 25 people per tour group visiting a site at any one time, these provisions would help protect cultural resources from the disturbance of increased visitation.

Impacts on cultural resources from cross-country travel by non-motorized visitors are considered to be similar to those described under *Alternative A*.

Public outreach and environmental education programs would help protect cultural resources by making the public more aware of their values, fragile nature, and need for protection. Conversely, the message of responsible recreation and resource stewardship would benefit cultural resources by discouraging activities that damage both cultural and natural resources.

BLM would consider converting some reclaimed routes to hiking trails. Limiting vehicle traffic to and on fragile sites would help protect the surface of these sites and could deter illegal pothunting by increasing the difficulty of hauling equipment and illegally-collected items to and from sites.

Alternative B would allocate a relatively large area of Agua Fria National Monument (57,900 acres) to the Front Country RMZ. Among the Alternatives, it would allow for the most extensive network of travel routes and a higher number of special recreation permits. Additionally, it would allow for potentially higher numbers of visitors with a larger number of trails and other recreational facilities. Relatively high levels of visitor traffic could increase the potential for cultural resources damage. Impacts to archaeological sites from recreation could include the following:

- surface disturbance,
- artifact theft and breakage,
- artifact piling,
- wall destabilization,
- rock art graffiti, and

- casual digging.

Conversely, the relatively large Front Country RMZ would also allow for more interpretation, which could enhance the public's understanding and stewardship of cultural resources. Limiting access and recreational facilities in the Back Country RMZ would result in fewer visitors with a lower level of impacts on cultural resources.

Impacts in the Bradshaw-Harquahala Planning Area would be the same as those described for the monument.

Casual, unmonitored activities would likely be the greatest threat, as visitors travel further into remote areas that have previously received few visitors. BLM would be better able to manage the impacts of special events because these events would not be placed in zones of high cultural resource density. Locations for proposed courses and staging areas would be evaluated through cultural resource inventories, and, if approved, courses would be designed to avoid or mitigate damage to archaeological sites. Ultimately, special events could contribute to an increase in public awareness and casual use of these areas.

Alternative B would provide the most extensive opportunities for cooperative efforts in site interpretation and cultural heritage tourism projects. Potential partners could include many agencies, parks, and communities in the Phoenix, Black Canyon City, Prescott, Dewey, Yarnell, Wickenburg, and Lake Pleasant areas. Such partnerships could promote the following:

- expanded recreational opportunities,
- enhanced public education and understanding of cultural resources, and
- increased revenues from cultural heritage tourism.

Alternative C

Alternative C would allocate a smaller proportion of Agua Fria National Monument (42,000 acres) to the Front Country RMZ with

an expected reduction in levels of recreational facilities and visitation. Impacts to archaeological sites from visitor use are expected to be less extensive in the areas allocated to the Back Country RMZ than in the areas allocated to the Front Country RMZ. Site visitation and educational opportunities from the interpretive development of archaeological sites would also decline.

In the Bradshaw-Harquahala Planning Area reductions in travel routes are expected to contribute to lower levels of unintentional and intentional damage to cultural resources. Opportunities for cultural heritage tourism partnerships would slightly decrease. However, communities and agencies in the Phoenix, Lake Pleasant, Black Canyon City, and Wickenburg areas could still take advantage of interpretive opportunities, particularly those developed in conjunction with parks and recreational trails.

Impacts on cultural resources from cross-country travel by non-motorized visitors are considered to be similar to those described under *Alternative A*.

Alternative D

Alternative D would allocate a small area of Agua Fria National Monument (1,530 acres) to the Front Country RMZ and result in a decline in levels of visitation to interpreted sites and recreational facilities, which would be limited to the Pueblo la Plata area and zones near major roads. *Alternative D* would also close the largest number of routes and would allow only limited motorized use in the extensive Back Country RMZ.

Emphasizing primitive recreation would reduce the levels of damage to archaeological sites from interpretive development, vehicle use, and public visitation. Conversely, this would limit the regular monitoring of archaeological sites in remote areas, which could leave some sites more vulnerable to vandalism. *Alternative D* would also restrict campground development and target shooting, which would help protect sites. There would be fewer opportunities for public

education through site interpretation. Restrictions on access for permitted scientific studies would limit the scientific use of sites and the gathering of information useful for research and site management.

Alternative D would place more emphasis on non-motorized recreation in the Bradshaw-Harquahala Planning Area. Additional travel routes would be closed further reducing potential damage to cultural resources. As in Agua Fria National Monument, an emphasis on primitive recreation would reduce the levels of damage to archaeological sites. Site visitation, educational opportunities, and community partnerships for cultural heritage tourism would decline. Cooperative efforts between the cultural heritage and recreation programs would focus on the existing interpretive facilities on Harquahala Peak and the Black Canyon recreational trail.

Impacts on cultural resources from cross-country travel by non-motorized visitors are considered to be similar to those described under *Alternative A*.

Alternative E (Proposed Alternative)

Alternative E would allocate 11,900 acres of Agua Fria National Monument to the Front Country RMZ. Developed interpretive and recreational facilities would focus on a small number of areas, such as Badger Springs and Pueblo la Plata. The relatively large area allocated to the Back Country RMZ, along with a number of route closures, would contribute to protecting cultural resources, while still allowing for unobtrusive interpretive uses and access for scientific research and monitoring. Restrictions on camping and target shooting would also help protect cultural resources.

In the Bradshaw-Harquahala Planning Area *Alternative E* would involve an intermediate level of recreational facilities, and route closures. Impacts to cultural resources would be similar to those described for *Alternative C*. Recreational activities would continue to threaten damage to cultural resources,

particularly in areas most accessible from urban zones and major roads. *Alternative E* emphasizes developing community partnerships to enhance interpretive opportunities, environmental education, and the promotion of responsible stewardship. Such activities would enhance the long-term effectiveness of public education, stewardship, and cultural resource protection by enlisting citizens as partners in these efforts. Impacts on cultural resources from cross-country travel by non-motorized visitors are considered to be similar to those described under *Alternative A*.

4.12.8 From Visual Resource Management

Alternative A (No Action)

No VRM classes have been established under this *Alternative*, which could result in the steady degradation of visual landscapes that contribute to both prehistoric and historic cultural sites.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts to cultural resources from implementing management actions in accordance with VRM classes would be dependent on the presence of sites and the extent to which the surrounding landscape would be modified. VRM classes and actions could affect qualities that contribute to the eligibility of cultural resource sites for nomination to the National Register of Historic Places. These qualities include integrity of setting (which refers to an undisturbed physical environment surrounding a site), and integrity of feeling (which refers to a site's expression of the aesthetic or historic sense of a particular period of time). Long-term alterations of a site's setting could detract from its status as National Register-eligible and could limit its potential use for public education. For example, integrity of setting and feeling are important aspects of archaeological sites in Agua Fria National Monument. As a result, a large portion of the area can be regarded as a cultural landscape preserved through time, which would be

protected under the proposed VRM classes defined for *Alternative E*.

4.12.9 From Rangeland Management

Alternative A (No Action)

Grazing impacts in Agua Fria National Monument can be considered from a historical perspective. The greatest livestock damage to archaeological sites most likely occurred before the implementing of the Taylor Grazing Act (TGA) in the 1930s. From about 1915 to 1926, the Coburn Brothers Cattle Company operated the Horseshoe Ranch and ran at least 12,000 head of cattle on Perry Mesa and in Tonto National Forest (Cordes 2002:22). The Horseshoe Ranch today maintains fewer than 400 cattle, which are dispersed over the mesas during much of the year.

Continued livestock grazing could affect cultural resources in both planning areas. Cattle trampling can crush, break, and relocate surface artifacts. Standing walls can collapse or become destabilized as a result of cattle rubbing up against them and cattle trails can accelerate site erosion. The continued presence of cattle in Agua Fria National Monument might also detract from the primitive experience for visitors.

Soil erosion caused by the loss of stabilizing vegetation or the trampling of streambanks in riparian areas could damage sites. Damage is expected to be greatest in sensitive sites where livestock tend to concentrate, such as at corrals, water sources, and the livestock trails that lead to them. Fewer impacts are expected from dispersed use.

In both planning areas, implementing the guidelines adopted in Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (Land Health Standards) would maintain or improve ground cover and soil stability and reduce destructive impacts to cultural resources from soil erosion.

Installing and maintaining fences, cattle guards, cattle tanks, and other range management facilities might damage the physical or visual integrity of cultural resources. The proposed locations of new facilities would be surveyed in advance to determine archaeological site impacts and to avoid or mitigate them.

Alternative B

In Agua Fria National Monument impacts to cultural resources from rangeland and grazing management in upland areas would be similar to those described for *Alternative A*. Grazing in riparian areas would be limited to winter, which would reduce the incidence of impacts to archaeological sites in those areas.

Continued grazing in the Front Country RMZ would likely increase the potential for conflict between public use of the monument and grazing use, especially near archaeological sites (e.g. Pueblo la Plata) that are slated to be developed for public interpretation. To mitigate such conflicts, cattle could be excluded from areas on and near interpretive sites.

In the Bradshaw-Harquahala Planning Area impacts would also be similar to those described for *Alternative A*. Seasonal use of riparian areas would be limited to the winter, where practical. This could reduce impacts to cultural resources from soil erosion resulting from grazing.

Grazing could be limited if needed to protect natural or cultural resources. Such limits could include seasonal restrictions or excluding grazing in affected areas. Allotment boundaries could be adjusted to preclude grazing on lands devoted to a public purpose, such as an interpretive site. This provision would reduce conflicts between visitor use and the presence of cattle. BLM could also exclude livestock through fencing or other measures from sites that are suffering a loss of physical integrity from grazing and that need to be protected from further impacts. Installing and maintaining fences, cattle guards, cattle tanks, and other range management facilities would have the same impacts as those described for *Alternative*

A, as would implementing the guidelines adopted in *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (Land Health Standards).

Alternative C

In both planning areas reductions in upland grazing and the removal of livestock from riparian habitats would reduce damage to cultural resources in nearby areas. Other impacts are expected to be similar to those discussed for *Alternative B*.

Alternative D

Eliminating grazing on public lands in Agua Fria National Monument and in the Bradshaw-Harquahala Planning Area would eliminate grazing-related damage to cultural resources. In Agua Fria National Monument this action would remove the potential for conflict between the interpretive use of Pueblo la Plata and ranching, as well as enhance the overall primitive experience for visitors.

Alternative E (Proposed Alternative)

In both planning areas, grazing impacts would be similar to those described for *Alternative B*.

4.12.10 From Minerals Management

Alternative A (No Action)

Any surface disturbance resulting from minerals actions could degrade cultural resources. All authorized mineral-related activities beyond casual use require a survey to determine if cultural resources are present. Hence, in all cases impacts are mitigated. During the surveys some cultural resources might be overlooked because they are buried and not visible on the surface. Therefore, in these cases mineral development might expose them and cause inadvertent damage.

The monument's proclamation (Appendix A) prohibits new mining claims, mineral material sales, and leasing of mineral or geothermal resources, as well as protects cultural resources from any mining disturbances. Two active mining claims, held by prospecting clubs for casual mining use, existed before the national monument designation. Because only casual use is allowed without a formal determination of valid existing rights, should the claimant decide to develop these claims beyond such use, a mining plan of operation would be required for BLM's review. This process involves lengthy and complicated validity studies to determine if a mineral discovery warrants development. Should the claim be found valid, the claimant is still required to comply with laws regulating mining and not create any undue and unnecessary degradation of the environment.

In the Bradshaw-Harquahala Planning Area developing leasable, saleable, and locatable minerals can damage cultural resources through surface and subsurface disturbance or removal of archaeological deposits. Furthermore, there is the potential for the removal, whether intentional or not, of boulders containing petroglyphs or other rock art. The visual impacts of mining can degrade the visual setting and related aspects of integrity of archaeological sites.

Archaeological surveys are completed to find and evaluate cultural resources that could be affected by proposed mining. BLM has the discretion to deny approval of proposed mineral material sales that would damage cultural resources. Approved mining plans contain provisions to avoid or mitigate damage to cultural resources, if such resources would be affected. Since it is often difficult to implement avoidance, scientific data recovery is typically implemented as a mitigation measure. However, casual mining in areas smaller than 5 acres typically does not require mining plans. As such, it is difficult to monitor and mitigate the effects of casual mining on cultural resources or the effects of related activities such as camping.

Alternative B

Minerals management would not affect cultural resources under any Alternatives in Agua Fria National Monument because of prohibitions against mining.

In the Bradshaw-Harquahala Planning Area cultural resources would be protected by closing areas to mineral leasing, mineral material sales, and mineral entry. Where cultural resources are present, such closures would reduce damage to their physical and visual integrity. ACECs, lands allocated to maintain wilderness characteristics, and lands that are reconveyed to the Federal Government could be closed.

Alternative B would close the fewest number of areas to mining-related activities. The potential impacts of mineral development on cultural resources would be greatest under this Alternative.

Alternative C

Impacts would be less than *Alternative B*, because *Alternative C* includes a number of ACECs and lands allocated to maintain wilderness characteristics that have provisions for restricting mining.

Alternative D

Impacts would be similar to *Alternative C*, except *Alternative D* also restricts activities on lands that are reconveyed to the Federal Government. Therefore, the potential impacts of mineral development on cultural resources would be the least under *Alternative D*.

Alternative E (Proposed Alternative)

In the Agua Fria National Monument, the impacts of minerals management would be as described for *Alternative A*.

In the Bradshaw-Harquahala Planning Area the impacts of minerals management on cultural resources would be similar to those described for *Alternative B*.

Tule Creek ACEC would be withdrawn from mineral entry, closed to leasing and mineral material disposals. In the Black Canyon MU, riparian areas on reconveyed lands would be closed to mineral material sales, which could include sand and gravel mining. These restrictions would help protect cultural resources in Tule Creek ACEC and in riparian zones of the Black Canyon area.

4.12.11 From Fire Management***Alternative A (No Action)***

Wildfires and prescribed burns can affect cultural resources through direct exposure to fire and disturbances from the methods used to suppress and manage fires, as well as natural fuels. Flammable structures and features, such as wooden buildings and mining headframes, are particularly vulnerable to damage and destruction by fire. Damage to historical structures is a particular management concern for sites in the Bradshaw and Weaver Mountains.

The prehistoric residents of Agua Fria National Monument were likely to be well acquainted with fire as a natural process in this fire-adapted grassland ecosystem. The remains of their villages have likely been burned many times over the past centuries. Evidence reveals that the relatively low intensity of the grassland fires has spared major damage to archaeological sites. The Baby Canyon Ruin in Agua Fria National Monument and the Squaw Creek Ruin in the Tonto National Forest have been burned over in the past decade. Neither site has suffered damage to walls, artifacts, or rock art. The loss of vegetation from fire could increase the potential for soil erosion in susceptible areas, although this problem has not been observed at these two sites.

Prescribed burns would temporarily affect the visual setting of cultural resources for visitors to Agua Fria National Monument. In some cases, prescribed burns have benefited scientific

studies by exposing previously obscure archaeological features in the national monument, such as agricultural terraces (North 2002).

Fire suppression and fuels management techniques could cause surface disturbance to cultural resources. Surface disturbance could result from staging activities, vehicle tracks, the use of earth-moving equipment, or applying mechanical treatments to manage vegetation. The use of heavy equipment and mechanical thinning of trees also could temporarily disturb soils and increase the potential for erosion.

Alternatives B, C, D, and E (Proposed Alternative)

Archaeological surveys in both planning areas, including inventories of 10 percent of areas above 3,500 feet in elevation in the Bradshaw-Harquahala Planning Area would help to find sensitive cultural resources that need to be avoided by fire and fuels management, or that require special attention during wildfire suppression.

BLM would implement measures to protect cultural resources, such as the use of minimum impact suppression tactics to reduce damage to archaeological sites as well as to natural resources. Other protection measures could include the following:

- using foam or retardant to protect historic structures;
- removing fuels around vulnerable sites;
- creating fire breaks that would protect sites while avoiding damage to them; and
- covering rock art in fire retardant fabric.

The impacts of fire management under these Alternatives would be similar to those discussed for *Alternative A*.

4.12.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts to cultural resources expected.

4.12.13 From Management of Travel Management

Alternative A (No Action)

Continued restrictions that limit the use of motorized vehicles to designated routes in Agua Fria National Monument would help protect cultural resources.

Continued use of existing roads leading to large archaeological sites in Agua Fria National Monument might increase the potential for vandalism and damage to these sites as more people visit the monument.

Alternative B

All Alternatives include closures of selected routes that lead directly to archaeological sites that have been damaged or are threatened by vandalism. In many cases, there is no other obvious purpose for these routes. Where such routes are being reclaimed by natural processes, as at Pueblo Pato in Agua Fria National Monument, or where they exist at other sites that have been allocated to public use, BLM would consider converting them to hiking trails.

Limiting vehicle traffic to and on fragile sites would help protect the surface of the sites and could deter illegal digging and collecting activities by complicating the task of hauling equipment and collected items to and from sites.

Alternative B would allow for a more extensive network of transportation routes, which could increase the potential for cultural resources damage. Direct impacts could include disturbance to surface features such as walls,

soils, and artifacts from vehicle traffic resulting in damage, breakage, or displacement. A more extensive road network would facilitate public access to a larger number of archaeological sites, increasing their vulnerability to vandalism and artifact theft.

Conversely, increased access would also allow for more interpretation, which could enhance the public's understanding and stewardship of cultural resources. Limiting access in the Back Country RMZ would result in fewer visitors with a lower level of impacts on cultural resources.

A more extensive network of transportation routes would also be supported in the Bradshaw-Harquahala Planning Area. In general, relatively higher levels of public access would pose greater threats to the integrity of cultural resources, as described above for Agua Fria National Monument.

Alternative C

Alternative C would allocate fewer transportation routes than would be available for travel under *Alternative B*. More limited public access would be expected to reduce the impacts to archaeological sites from vehicle and visitor traffic in both planning areas.

Impacts would be similar to *Alternative B*, except *Alternative C* would allocate fewer transportation routes. More limited public access would be expected to reduce the impacts to archaeological sites from vehicle and visitor traffic in both planning areas.

Alternative D

Alternative D would close the largest number of transportation routes in both planning areas. In the monument, only limited motorized use would be allowed in the extensive Back Country zone. While this would reduce the levels of damage to archaeological sites from interpretive development, vehicle use, and public visitation, fewer areas would be available for site visitation and cultural heritage tourism projects.

Restricted access would also limit the regular monitoring of archaeological sites in remote areas, which could make some sites more vulnerable to vandalism. Restrictions on access for permitted scientific studies would limit the scientific use of sites and the gathering of information useful for research and resource management.

Alternative E (Proposed Alternative)

Impacts from travel management would be similar to those described under *Alternative C* for Agua Fria National Monument. The number of route closures under this *Alternative* would contribute to protecting cultural resources, while still allowing for unobtrusive interpretive uses and access for scientific research and monitoring.

The following table describes the distances, at ¼ mile intervals, between the nearest open routes and the 12 most vulnerable sites/site clusters, under existing baseline conditions and as designated in the Final RMP. The specific names and locations of the sites are available for review by qualified researchers at the Phoenix District.

Increased distances between open routes and vulnerable sites, especially across rocky surfaces and rugged terrain, are expected to enhance site protection, by reducing access and visibility. In regard to the 12 most vulnerable site areas, the route designations would increase the accessible distances to 7 sites, by designating current routes as “closed” or for “administrative use only.” The proposed route system also would maintain the current closures of two routes that once led directly to sites, but now restrict vehicle traffic. Under the current transportation system, there are 7 vulnerable sites that are less than ½ mile, and 5 sites that are further than ½ mile, from an open route. Under the proposed transportation system, there are 3 sites that would be less than ½ mile, and 9 sites that would be further than ½ mile, from an open route.

Prior to the late 1990's, roads led directly to 7 of the 12 most vulnerable sites/site areas. Under

the proposed transportation system, direct route access will be cut off to all but one of these sites. This particular site on Black Mesa, which has been identified for possible interpretive development, will be closely monitored to detect any vandalism; a nearby, redundant route to the site will be closed.

For these 12 particularly vulnerable sites, restricted access to 9 sites would result from maintaining existing closures or changing the closest, currently open routes to “closed” or “administrative use only.” At the other 3 sites, proposed route closures would reduce the number and density of open roads in the surrounding areas. The elimination of redundant routes and overall route densities would reduce impacts to sites from vandalism and soil erosion.

In general, and in terms of cumulative impacts from vandalism and erosion, cultural resources would be protected by the elimination of redundant routes and overall route densities; the closure of at least 9 routes leading to canyon rims; and the closure of several routes near the river and creeks. Mitigation measures, which could include additional route closures, would be implemented if new surveys or monitoring observations revealed cases of damage associated with open routes.

In the Bradshaw-Harquahala Planning Area *Alternative E* would involve an intermediate level of route closures. Impacts to cultural resources would likely be similar to those described for *Alternative C*.

4.12.14 From Management of Wilderness Characteristics

Alternative A (No Action)

Under current resource management plans, no areas have been specifically identified for management of wilderness characteristics. Therefore, there are no associated impacts on cultural resources.

Alternatives B, C, D, and E (Proposed Alternative)

Management of wilderness characteristics would maintain natural landscapes and remoteness, with an emphasis on primitive and non-motorized recreation. Limits on public access and motorized travel would reduce damage to remote archaeological sites from vehicle traffic and visitor use. Maintenance of wilderness characteristics would also help to preserve the visual integrity and natural settings of archaeological sites and cultural landscapes. On-the-other-hand, cultural research requiring motorized access and mechanized equipment could be hampered or foregone if such research activities are not authorized.

4.13 Impacts on Paleontological Resources

Impacts to paleontological resources include effects on resources such as petrified wood and other fossils. Paleontological resources are a nonrenewable resource that provides scientific value and clues to geologic history. Although only a minimal amount of paleontological research has been conducted in the region, 11 paleontological sites are known to occur near the planning areas. None of the known paleontological sites are on BLM-managed land in either of the planning areas.

The geology of the planning areas is not conducive to paleontological resources. The potential for paleontological resources does; however, exist, and could be affected by surface disturbance. However, the potential for such impacts is very low. Many of the known sites in surrounding areas consist of remains of extinct mammoths that were unearthed during development projects. As applies to cultural resources, BLM authorizations for surface-disturbing activities would require that, in the event of a discovery, the BLM would be notified

and the work would be stopped until the BLM could evaluate the discovery and the need for scientific data recovery. Likewise, the BLM would complete a scientific evaluation of any paleontological resources discovered during cultural resource surveys.

4.13.1 From Special Designations

Alternative A (No Action)

In Agua Fria National Monument, no significant paleontological resources are known to exist. As such, impacts to paleontological resources from Special Designations are expected to be minimal. In areas of the monument where paleontological resources may be discovered, management for reduced public use would diminish potential impacts to these resources.

Paleontological resources in existing wilderness areas in the Bradshaw-Harquahala Planning Area would continue to be at low risk of inadvertent damage. Since these areas are closed to roads and are rarely visited, the impacts to paleontological resources are expected to be minimal.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts to paleontological resources in Agua Fria National Monument are expected to be the same as described for *Alternative A*.

In the Bradshaw-Harquahala Planning Area, fencing Tule Creek ACEC would prevent damage to paleontological resources caused by OHV traffic and livestock. Paleontological resources in other Special Area Designations would be protected more than under *Alternative A* as restrictions to surface-disturbing activities are implemented.

4.13.2 From Lands and Realty Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Activities allowed under valid existing rights in Agua Fria National Monument could affect paleontological resources if resources are discovered near land clearing and construction.

Under the current management of the Bradshaw-Harquahala Planning Area paleontological resources could be affected if land clearing and construction disturb the soil near paleontological sites. Additionally, construction in existing corridors and at telecommunication sites could inadvertently damage paleontological sites. Building of new utility lines could disturb paleontological resources by developing service roads and by other digging.

Building or maintaining utility and transportation corridors and telecommunication sites in Agua Fria National Monument is not expected to affect paleontological resources.

4.13.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

In Agua Fria National Monument, current management prescriptions to improve soil stability, increase vegetation cover, and reduce erosion might help preserve potential paleontological sites.

Under the current management of the Bradshaw-Harquahala Planning Area no impacts to paleontological resources are expected from management of soil, water, and air resources.

4.13.4 From Biological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Throughout the planning area, no impacts to paleontological resources are expected from biological resource management.

4.13.5 From Cultural Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Actions taken to protect cultural resources in Agua Fria National Monument would likely help preserve paleontological sites as well. Unknown paleontological resources could be unearthed or otherwise disturbed by ground disturbance in developing public access to cultural sites.

In the Bradshaw-Harquahala Planning Area no impacts are expected to paleontological resources from CRM.

4.13.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

Under *Alternative E* management actions, BLM would classify areas according to their potential to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. The classification process would result in a sensitivity map that would enable BLM to direct protection measures or research projects toward the most significant or threatened areas. The sensitivity map would also help BLM screen

proposed actions to determine potential effects on paleontological resources.

4.13.7 From Recreation Management

Alternative A (No Action)

Under the current management of both planning areas, concentrated recreation in certain areas could inadvertently damage paleontological resources. Illegal OHV use of four-wheel-drive vehicles, all-terrain vehicles, and motorcycles might damage paleontological resources on or near the surface. Paleontological resources might be destroyed as vehicles drive over them. Some people might also use these types of vehicles to drive to remote areas, where they could illegally collect paleontological resources. Limiting OHV travel and posting directional signing reduces the likelihood of inadvertent damage to paleontological resources. Yet the presence of roads open to the public can inadvertently encourage travel to remote areas.

Recreation management common to all Alternatives could damage paleontological resources through ground disturbance resulting from developing recreational facilities. In the event of discoveries, impacts would be mitigated through avoidance, redesign, or scientific data recovery.

In general, however, few impacts are expected as the geological character of the planning areas is not conducive to the widespread presence of significant paleontological resources.

Alternative B

Impacts would be the same as described in *Alternative A*. Relative to *Alternative B*, a further reduction in miles of routes could reduce the potential impacts of motorized recreation to paleontological resources in both planning areas.

Impacts would be similar to those described under *Alternative A*. However, a reduction in

miles of routes could reduce the potential impacts of motorized recreation to paleontological resources in both planning areas.

Alternative C

Impacts would be the same as described in *Alternative B*, except to a lesser degree due to the reduced amount of Front Country and Passage RMZs (42,700 acres).

In the Bradshaw-Harquahala Planning Area impacts would be similar to *Alternative B*, except the closure of more routes (382 miles would provide increased protection to paleontological over the previous alternative.

Alternative D

Impacts would be the same as described in *Alternative A*. Relative to *Alternative C*, a further reduction in miles of routes could reduce the potential impacts of motorized recreation to paleontological resources in both planning areas.

Alternative E (Proposed Alternative)

Impacts to Agua Fria National Monument would be similar to previous Alternatives, but with fewer closed routes than *Alternative D*, and fewer routes open to travel than *Alternatives B and C*.

Impacts to Agua Fria National Monument would be less than *Alternative B*, but more than *Alternatives C and D*.

4.13.8 From Visual Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.13.9 From Rangeland Management

Alternative A (No Action)

Under the current management of Agua Fria National Monument, grazing might affect paleontological resources by reducing vegetation and increasing erosion, leading to potential exposure and degradation of fossils.

Under the current management of the Bradshaw-Harquahala Planning Area, despite improved rangeland management practices from implementing the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (Land Health Standards), continued grazing might decrease vegetation growth, increase soil erosion rates, and disturb paleontological sites.

The Land Health Standards seek to maintain or promote ground cover that would provide for infiltration, permeability, soil moisture storage, and soil stability, thereby reducing the following:

- erosion rates,
- potential for exposure, and
- the degradation of paleontological sites.

Alternatives B and C

Impacts would be similar to those under *Alternative A*.

Alternative D

Elimination of grazing, as in *Alternative D*, could increase soil stabilization by increasing vegetation cover, reducing loss of paleontological resources to soil erosion.

Alternative E (Proposed Alternative)

Impacts would be similar to those under *Alternative A*.

4.13.10 From Minerals Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Under the current management of Agua Fria National Monument minerals management is not expected to affect paleontological resources. In the Bradshaw-Harquahala Planning Area, any mining might disturb such resources, but if fossils are found during cultural resources surveys or mining, BLM stipulations would require that the work cease until the BLM can evaluate the find. Potential damage, if reported, would be mitigated as suitable and practical, through avoidance or scientific data recovery.

4.13.11 From Fire Management

Alternative A (No Action)

Where prescribed burning is conducted in Agua Fria National Monument, the use of heavy equipment and mechanical thinning of trees could temporarily promote an increase in soil disturbance and affect potential paleontological sites.

Alternatives B, C, D, and E (Proposed Alternative)

In both planning areas, fire-related activities that disturb the surface, such as the use of heavy equipment to build fuel breaks, could inadvertently affect paleontological resources.

4.13.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected under any Alternative.

4.13.13 From Management of Travel Management

Alternative A (No Action)

In the Agua Fria National Monument, areas open to vehicular access could continue to cause inadvertent damage to paleontological resources.

In the Bradshaw-Harquahala Planning Area unmanaged or illegal vehicle use could destroy or degrade potential paleontological resources. Under the current management of the Bradshaw-Harquahala Planning Area, limiting OHV travel and posting directional signing reduces the likelihood of inadvertent damage to paleontological resources.

Alternatives B, C, D and E (Proposed Alternative)

Impacts in the monument would be similar to *Alternative A*, except more restrictions on routes may help preserve potential sites.

In the Bradshaw-Harquahala Planning Area limiting vehicular travel to existing routes could help preserve paleontological resources by reducing the opportunity for inadvertent disturbance through OHV travel. Further restrictions on routes as dictated by each alternative could further reduce potential damage.

4.13.14 From Management of Wilderness Characteristics

Alternative A (No Action)

Currently no areas are allocated for the management of wilderness characteristics. As a result, no impacts are expected.

Alternatives B, C, D and E (Proposed Alternative)

In areas allocated to maintain wilderness characteristics, impacts to potential paleontological resources would be reduced due to restrictions on vehicular access and the desire to retain primitive and natural characteristics.

4.14 Impacts on Recreation

This section compares the impacts of the Alternatives on outdoor recreation through changes in the recreation opportunities, settings, and access. Changes in the settings would result in a corresponding change in the opportunity to achieve a desired recreation experience in the proposed setting.

The escalating population of the Phoenix metropolitan area, coupled with the growth of other communities in the region would continue to increase recreation use of public lands. Visits to public lands are expected to grow at an annual percentage at least equal to the population growth of the region whether or not BLM provides more opportunities, facilities, or management presence.

One of the key issues affecting recreation activities is the fast growth of recreational OHV use area. The projected increase of more than two million people in Maricopa and Yavapai Counties is expected to substantially increase recreation use, especially OHV use, in the planning areas.

Agua Fria National Monument was not created for purposes of recreation, and recreation should be considered a secondary use that is permitted as long as the monument Purpose and Significance are protected.

Cultural resources in the monument would be managed according to three levels of public use for different recreation experiences (different levels described in detail in the Cultural Resources section).

Specific areas and sites for each level are described for the Alternatives.

4.14.1 From Special Designations

Alternative A (No Action)

Existing recreation opportunities and experiences in the suitable WSR corridors and wilderness areas would be retained. Increasing motorized and non-motorized recreation on public lands surrounding existing wilderness could contribute to increased wilderness visitation. Potentially growing numbers of non-motorized users could impair solitude opportunities and contribute to trailing and campsite use impacts along the edge and in the interior of the wilderness areas.

Alternative B

Designating Bloody Basin Road as a back country byway could affect the recreation setting along the byway by increasing traffic and interaction among visitors. Opportunities for more primitive recreational experiences in the suitable WSR corridor near the river crossing could be diminished. The interpretive elements of the byway would increase visitor awareness, appreciation, and enjoyment of the national monument's natural and cultural resources.

Designating a back country byway along Constellation Mine Road would have impacts similar to the same designation on Bloody Basin Road, although the Constellation Mine Road does not cross suitable wild and scenic river. The Constellation Mine Back Country Byway crosses an area of high OHV use with many miles of trails. Conflicts with OHV users could increase because of the increased traffic on the byway. Conflicts between byway users and large OHV groups could diminish the scenic drive experience. Moreover, there could be an increased potential for accidents at OHV trails and byway intersections because drivers might not expect multiple trail crossings in the area. The interpretive components would increase

visitor awareness, appreciation, and enjoyment of the mining history of the Wickenburg area.

Designating Tule Creek ACEC would reduce opportunities for vehicular recreation by closing the fenced area to motor vehicles. The total route closure would amount to 1.1 miles. The route closure would reduce conflicts among user types and enhance the opportunity for non-motorized activities in a more natural setting. Eliminating grazing would also help retain a more natural setting for recreation and reduce conflicts with livestock. Interpretive elements would increase appreciation of the natural and cultural resources under protection in the ACEC.

In wilderness areas, establishing criteria to manage larger group activities would protect wilderness values, most notably enhancing opportunities for solitude sought by wilderness visitors. Future opportunities for commercial and vending operations in wilderness areas would be forgone as these permits would be prohibited.

Alternative C

Designating the back country byways would have impacts similar to those under *Alternative B*.

ACEC designation would have little to no impacts within Agua Fria National Monument due to the coverage of the National Monument Proclamation.

The effects from ACEC designations on recreation within Agua Fria National Monument are described in the National Monument Proclamation. Route closures could limit access for some visitors in the Silver Creek area and diminish vehicular recreation opportunities. To protect the resources in the Silver Creek area, routes can be closed without ACEC designation and these impacts could be realized anyway.

Designating Tule Creek ACEC would have impacts similar to those under *Alternative B*.

Designating ACECs in the Bradshaw-Harquahala Planning Area, comprising 55,710 acres, would improve opportunities for primitive recreation experiences like hiking, hunting, wildlife observation, camping, and sightseeing in natural settings. Non-motorized trail systems could be enhanced in some areas, and conflicts among different user types would be reduced.

In the Harquahala Mountains ONA the ACEC designation would prevent the future development of recreation sites and decrease opportunities to experience the area in a more developed setting. The lack of facilities for parking, staging, and interpretation would disperse motorized activities.

Impacts to wilderness areas due to group size and permit restrictions would be the same as in *Alternative B*.

Alternative D

Alternative D proposes no back country byways, and no impacts are expected.

Designating ACECs would have impacts similar to those described for *Alternative C*, except that the ACECs would encompass 354,690.

Impacts to wilderness areas due to group size and permit restrictions would be the same as in *Alternative B*.

Alternative E (Proposed Alternative)

Bloody Basin Road and the Constellation Mine Road/Buckhorn Road would not be designated as back country byways.

Designating Tule Creek ACEC would be the same as *Alternative B*.

ACEC designations would create the same impacts as in *Alternative C*.

Outstanding opportunities for backpacking, hiking, camping, hunting, and nature study

would be maintained in the five designated wilderness areas.

Impacts to wilderness areas due to group size and permit restrictions would be the same as in *Alternative B*.

4.14.2 From Lands and Realty Management

Alternative A (No Action)

In the Bradshaw Harquahala Planning Area, disposal of lands in the Upper Agua Fria River basin, the Table Mesa area, and Skull Valley north of Highway 89 would reduce or eliminate opportunities for recreation and could affect the Black Canyon Trail. The lands in the Table Mesa area and in Skull Valley generally experience moderate to high OHV use. Those uses could potentially relocate to other areas. The higher concentration of activities in those areas could diminish the recreation experience for some users because of the higher numbers of people encountered. The Upper Agua Fria River basin lands support multiple recreation activities and provide some valuable linkages to Forest Service land to the east and west.

Utility development can affect recreation by increasing or reducing access to areas and primarily through changing the characteristics of the landscape by creating new roads or other facilities. These new facilities can change the types of recreation opportunities and settings an area might provide and the kinds of experiences and benefits recreationists would derive. Possible mitigations could include, but not be limited to: avoiding above ground facilities or long term surface modifications in areas where a primitive or undeveloped setting is desired; modifying the appearance of above ground facilities to blend into the natural landscape; utilize facilities or surface modifications to create other types of recreation experiences to replace the ones that might be lost.

Alternative B

Non-Federal lands in Agua Fria National Monument would be considered for acquisition if they become available from a willing seller. BLM would also consider acquiring adjacent non-Federal lands that enhance Agua Fria National Monument's values, if these lands become available from a willing seller. These two actions would affect recreation opportunities by improving access.

Impacts to the utility corridor in Agua Fria National Monument would be similar to *Alternative A*, except that the corridor would be narrowed.

Impacts in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative A*, except that lands in the Table Mesa area would be retained and recreation on those lands could continue. Acquiring lands that meet the criteria described for Chapter 2 could enhance opportunities for recreation by increasing connectivity and manageability of public lands. No impacts are expected until specific parcels are selected for acquisition.

Alternative C

Lands-related impacts to Agua Fria National Monument would be similar to those described for *Alternative B*, except that eliminating the utility corridor would remove any potential impacts from future utility proposals.

Due to the two methods that have been developed for determining which lands are potentially suitable for disposal through sale or exchange (2.4.2.1.1) differing impacts are expected under each.

No impacts are expected to result from disposing of lands selected under the first set of disposal criteria because parcels are small and generally in the Phoenix urban area. Because recreation on these parcels should be minimal, relocating the activities should not affect the relocation areas.

The 49,100 acres selected for disposal by the second set of criteria mainly consist of scattered lands disconnected from other BLM-managed lands. Disposal of some parcels might disrupt the connectivity of the route network if the new owner closes routes across the property. Because the lands are isolated from other BLM-managed lands, BLM could not develop new routes to mitigate the losses. Camping, target shooting, rock hounding, and other site-specific recreation could be affected for some users if such sites are on the disposed lands and are later closed. Loss of these lands would not appear to affect other recreation activities (e.g. wildlife viewing, most other motorized and non-motorized activities).

Impacts from utility and transportation corridors would be similar to those under *Alternative A*.

Alternative D

Lands-related impacts to Agua Fria National Monument would be similar to those described for *Alternative C*. Because no lands would be disposed in the Bradshaw-Harquahala Planning Area, no impacts are expected. Impacts from corridors would be similar to those under *Alternative A*.

Alternative E (Proposed Alternative)

Lands-related impacts to Agua Fria National Monument would be similar to those described for *Alternative B*.

No impacts are expected to result from disposing of lands in the Bradshaw-Harquahala Planning Area because parcels are small, isolated, or generally in the Phoenix urban area. Because recreation on these parcels is generally minimal, relocating the activities to other BLM-managed lands is not expected to have noticeable impacts.

Impacts from other lands actions on recreation would be similar to those described for *Alternative B*. An important recreation feature that may be affected by utility development is the Black Canyon Trail. Approximately 80 acres of corridor set aside by the Secretary of

Interior in 1969 could be affected by the corridor location in the Proposed Alternative. As with other resources, allocation of a utility corridor itself has no effect on the trail. However, utility development in the vicinity of the trail could affect access to the trail, the views from the trail, recreation settings along the trail, and with those, the potential benefits derived by trail users. Possible mitigations for these impacts would be the same as those described above under *Alternative A*.

4.14.3 From Management of Soil, Water, and Air Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Maintaining or improving water quality and providing for surface and subsurface flows in Agua Fria National Monument would benefit recreation. Both wildlife viewing and water-related recreation would be enhanced.

Managing air quality could affect recreation through restrictions to protect Agua Fria National Monument's values. The potential for excessive dust might result in rescheduling or redirecting recreation events authorized through SRPs.

Managing air quality could affect certain recreational activities, such as large OHV events and motorized competitive races, by restricting or rescheduling events so that they comply with county air quality rules. Failure to meet fugitive dust and PM₁₀ emission standards could cause public lands to be closed for OHV riding, permitted events, and staging for OHV and equestrian or organized group activities. Facilities and developments would have to be designed and installed with dust abatement features.

4.14.4 From Biological Resource Management

Alternative A (No Action)

Modifying fencing to allow wildlife movement would improve wildlife viewing opportunities by enhancing the ability of wildlife to move throughout Agua Fria National Monument. Developing new water sources could also enhance viewing opportunities by strengthening wildlife populations and providing areas where wildlife would congregate.

Use of prescribed burns for habitat enhancement could temporarily impair recreational experiences by disturbing the visual setting and by closing burn areas to recreation. Habitat improvements could enhance wildlife populations and viewing opportunities.

Managing Arizona night lizard and Sonoran mountain king snake habitat by closing mining roads to recreational use could limit opportunities for recreation in habitat areas.

Developing wildlife waters and protecting big horn sheep habitat as described for the Lower Gila North MFP (BLM 1983) would continue to sustain wildlife populations for wildlife viewing and hunting.

The Lower Gila North MFP (BLM 1983) limits motorized vehicles in desert tortoise, Arizona night lizard, and Sonoran mountain king snake habitat to existing routes only. This management has not been implemented. The MFP planning area is considered open to cross-country travel, and current OHV recreation would continue to be allowed.

Alternative B

Impacts in the Agua Fria National Monument would be the same as *Alternative A*.

Managing desert tortoise habitat could reduce opportunities for motorized recreation by limiting the development of new routes.

Limiting motorized special events to the period from October 15 to March 31 in Category I and II desert tortoise habitat would limit the potential number of events in some locations. Evaluating permits for impacts on desert tortoise habitat (Map 2-58) could affect opportunities for events in otherwise desirable settings if impacts on desert tortoise occur in the proposed event location. Events might have to be postponed, cancelled, or relocated to a less desirable location.

Ensuring connectivity of habitat for wildlife could affect motorized recreation by closing routes that cross sensitive areas or movement corridors. Opportunities for wildlife viewing could be enhanced because wildlife would be able to move through their traditional corridors.

Designation of Harquahala Mountains Wildlife Habitat Area (WHA) would protect sensitive wildlife habitat and enhance opportunities for wildlife viewing by strengthening populations.

Ensuring connectivity of habitat for wildlife could affect motorized recreation by closing routes that cross sensitive areas or movement corridors. Opportunities for wildlife viewing could be enhanced because wildlife would be able to move through their traditional corridors.

Alternative C

Limiting routes in pronghorn corridors in Agua Fria National Monument could reduce the connectivity of the route network and diminish the motorized recreation experience of some users. Prohibiting the development of recreational sites in pronghorn corridors could affect recreation opportunities by eliminating such facilities as restrooms, parking areas, or ramadas, which could enhance the recreation experience for some users.

Alternative C would, however, provide more areas for visitors to enjoy viewing wildlife and experiencing solitude. Wildlife corridor concerns were considered as part of the evaluation process for designating the route network for *Alternative C*.

Agua Fria National Monument has no developed recreational sites except for minimal improvements at Badger Springs and in the Cordes Lakes area. Prohibiting the development of recreational sites in pronghorn corridors would eliminate the possibility of such facilities as restrooms, parking areas, or ramadas, which could enhance the recreation experience of some users. Modifying fences to allow wildlife to move more freely could enhance wildlife viewing opportunities in the national monument.

Prohibiting new fences in the Belmont/Big Horn Mountains and Date Creek Mountains WHAs, and the Upper Agua Fria River Wildlife Habitat Corridor would maintain the current connectivity of the route network.

In the Bradshaw-Harquahala Planning Area, WHAs to protect wildlife habitat would have the same impact on recreation as described in *Alternative B*. Prohibiting construction of new routes in the Date Creek Mountains WHA and the Upper Agua Fria River Habitat Corridor could lessen motorized recreation opportunities by preventing maintenance of route connections when other routes are closed for resource protection. Fragmented route systems could diminish the recreational experience for some users and possibly lead to an increase in unauthorized cross-country travel to connect routes.

Impacts from desert tortoise restrictions would be the same as those identified in *Alternative B*.

Alternative D

Impacts from route limitations and development of sites for recreation in the pronghorn corridors in Agua Fria National Monument would be similar to those under *Alternative C*.

Removing all fences and prohibiting new ones in Agua Fria National Monument would maintain connectivity in the motorized route system developed for *Alternative D* and enhance the natural appearance of the landscape. Wildlife viewing could be enhanced because wildlife

could move throughout most of the national monument.

In the Bradshaw-Harquahala Planning Area most wildlife management would be accomplished through ACEC and WHA designation and management. Impacts would be the same as those discussed in *Alternative B* and in Section 4.14.1.

Management restrictions for desert tortoises and in the Harquahala/Belmont/Big Horn Wildlife Corridor could limit recreation developments and restrict or preclude some recreation activities, diminishing the recreation experience of some users. Impacts from other desert tortoise restrictions would be the same as those identified in *Alternative B*.

Alternative E (Proposed Alternative)

Designation of specified pronghorn corridors in the monument would have the same impacts as described under *Alternative C*.

Prohibiting the developing of recreational sites in pronghorn corridors could affect recreation opportunities by eliminating the possibility of such facilities as restrooms, parking areas, or ramadas, which could enhance the recreation experience for some users.

Prohibiting new fences in the Belmont/Big Horn Mountains WHA would help maintain the current connectivity of the route network.

Closing or limiting vehicle routes in the Belmont/Big Horn Mountains WHA, the Harquahala/Belmont/Big Horn Wildlife Corridor, and the Harquahala Mountains and Black Butte ACECs would have the same impacts as *Alternative C*.

Prohibiting the building of new routes in WHAs and ACECs would have similar impacts as described in *Alternative B*.

Impacts from desert tortoise restrictions would be the same as those identified in *Alternative B*.

4.14.5 From Cultural Resource Management

Alternative A (No Action)

Current conditions would be maintained with no significant change in interpretive opportunities. Two permittees now offer cultural resource tours and activities in Agua Fria National Monument, but BLM has devised no management procedure for controlling the number of permits. More permits could lead to allocation and protection problems if larger numbers of tours and activities visit the same sites. Increased group use could also diminish the recreation experience of the general user.

The Lower Gila North MFP (BLM 1983) called for study plots and inventories to reduce land use impacts on cultural resources and to allocate sites for scientific use and preservation for future use. The study plots have not been established and should not restrict recreation at cultural sites. Allocation to scientific use or preservation would limit certain sites for commercial or general recreation use.

Alternative B

Potential closures of routes as protective measures for sites would affect certain recreational activities, especially where such activities are influenced by the interconnectedness of the route network. However, conflicts among user types could decline, and opportunities could increase for an enhanced sense of solitude and enjoyment of cultural resources in a natural setting.

Maintaining signs and developing interpretive programs would lead to a better understanding and appreciation of the sites selected to be open to the public. Increased visitation to sites resulting from promoting public access could affect the interpretive recreational experience by (1) increasing interaction with other visitors and (2) diminishing the sense of site discovery that visitors experience before sites are allocated for public access.

Also affecting opportunities for recreation would be stipulations on SRPs to limit damage such as artifact removal or displacement, and requirements for SRP holders to implement customer education programs. The recreational experience for visitors would be enhanced by learning the value of the cultural resources and the importance of retaining their integrity and of protecting sites for future recreational opportunities.

Limiting group visits to cultural sites to 25 persons at a time, could limit opportunities for some groups to experience the cultural resources at popular sites. Such limitation could maintain an enjoyable experience for the public by reducing possible overcrowding caused by large groups at sites and preserving a more natural experience.

Developing public use areas according to the various levels of development and use described in Cultural Resources in Chapter 2, would maintain opportunities for a variety of recreational experiences relating to the cultural resources in the national monument. Specifically, sites would have interpretive and educational components. Access for multiple users (including the disabled) would be improved, and sites would be stabilized and preserved for future recreational opportunities.

Improving routes and trails would open sites to a wider variety of users. Limiting motorized access to at least a quarter mile to a half mile from sites would limit the opportunities for recreation of some users but would also reduce conflicts among user types and maintain a non-motorized setting at the resources.

Educational programs and interpretive signs would raise visitor awareness and sensitivity.

Developing areas for Moderate and Low public use would enhance the experience of the general user by limiting commercial tours and allowing increased opportunities for experiencing the cultural resources in a natural setting.

Developing five sites for High public use and four sites for Moderate public use in the national monument would affect recreational opportunities involving cultural resources by increasing access and education programs on 16,000 acres. Limiting motorized access would reduce some user conflicts at the sites. A potential increase in commercial permit use for the sites could increase interaction with large groups at Low public use sites and diminish the recreational experience of some users. Public use on 49,100 acres would remain limited, with no improvements in access or interpretive elements. This lack of improvements would allow users to experience the cultural resources through discovery.

In the Bradshaw-Harquahala Planning Area developing sites for public use in all eight cultural priority areas would increase awareness and recreational opportunities for experiencing the cultural resources on 316,000 acres throughout the planning area. Some user conflicts would be reduced through controlling access of motorized vehicles. The recreation experience of some casual users could be lessened by increased interaction with large groups at sites authorized for group tours.

Alternative C

In Agua Fria National Monument, impacts under *Alternative C* would be similar to those under *Alternative B*, except that one site would be allocated to High public use and eight sites would be allocated to Moderate public use. The total area of public use would be the same. However, developing fewer sites to High public use would decrease the publicity and awareness of cultural resources and limit opportunities for recreation for some users, especially those with mobility challenges. Allocating more sites to Moderate public use would increase opportunities to experience cultural resources in a less developed setting and reduce the potential for interaction with large groups.

In the Bradshaw-Harquahala Planning Area four priority areas, comprising 276,500 acres would be allocated for public use. In these areas

impacts to recreational opportunities would be similar to those under *Alternative B*. The opportunity to experience cultural resources through self-discovery would still exist in the priority areas not allocated for public use. For those areas *Alternative C* would not provide the educational and interpretive opportunities provided by *Alternative B*.

Restricting SRPs to educational tours involving site recording or protection could reduce recreational and educational opportunities for casual.

Alternative D

In Agua Fria National Monument no areas or sites would be developed for High public use. Only one site would be developed for Moderate public use. Awareness of cultural resources would be less under *Alternative D* than under *Alternatives B* and *C*. Opportunities for educational programs, along with the ability to experience the resources in a developed setting, would be eliminated. Lack of facilities could restrict access by certain visitors, especially those with mobility challenges. With limits on tours and group visits in Moderate public use areas, the potential for interaction with large groups would be reduced from that under *Alternatives B* and *C*. The entire national monument would be open for experiencing cultural resources through self-discovery. Opportunities for user conflicts would increase, especially at popular known sites such as Pueblo la Plata and Pueblo Pato, which would not be managed for public use.

In the Bradshaw-Harquahala Planning Area two priority areas, comprising 134,500 acres, would include sites developed for public use. Impacts would be similar to those under *Alternative B*. Educational and interpretive recreational opportunities would be reduced from those under *Alternative C* because fewer sites would be allocated to public use. Opportunities for self-discovery experiences would increase, as would potential conflict among user types.

Alternative E (Proposed Alternative)

Impacts on recreation resources from cultural resource management would be similar to those described for *Alternative B* except for the following. Potential closing of routes in the planning areas as a protective measure for sites would affect recreational activities, especially where such activities are influenced by the interconnectedness of the route network. Visitor awareness of the cultural resources and of recreational opportunities to experience the resources through improved access and education programs would increase as a result of managing cultural resources in the following areas in the Bradshaw-Harquahala Planning Area:

- Black Mesa/Bumble Bee Cultural Resource Priority Area
- Black Canyon corridor, Lake Pleasant/Agua Fria, Wickenburg/Vulture, Weaver/Octave, Harquahala, and Galena Gulch SCRMA.

Varying levels of public use development, similar to the levels used in Agua Fria National Monument would limit opportunities and access for some users. However, the levels would also reduce conflicts among user types. Future opportunities for recreation would be maintained by protecting the resources.

In the monument, impacts under *Alternative E* would be similar to *Alternative B* except that two sites would be developed for High public use and six sites for Moderate public use. The total area of public use would be less than *Alternative B* (12,440 acres). Public use limitations on 57,200 acres would increase the impacts over what is described in *Alternative B*.

In the Bradshaw-Harquahala Planning Area developing sites for public use in each cultural priority area would increase awareness and recreational opportunities for experiencing cultural resources. Although some user conflicts would be reduced by controlling access of motorized vehicles, the recreation experience of

some casual users could be impaired by increased interaction with large groups at sites authorized for group tours.

4.14.6 From Paleontological Resource Management**Alternatives A (No Action), B, C, D, and E (Proposed Alternative)**

There are no impacts expected. Although including paleontological resources in the Cultural Resource Program could increase awareness recreation opportunities, no paleontological sites are known to exist on BLM's land in the planning areas.

4.14.7 From Recreation Management**Alternative A (No Action)**

The increasing use and intensity of non-permitted/dispersed general recreation, and permitted commercial/organized activities, could diminish the recreation experience of some users. Furthermore, it could alter the recreation setting for many activities. The changes in settings could reduce opportunities for certain types of activities, such as hiking, backpacking, non-motorized camping, hunting, and wildlife viewing; especially those in primitive or semi-primitive settings.

Current management is reactive; therefore, prescriptive actions are implemented to solve problems or reduce conflicts as they occur. Moreover, a lack of proactive management for recreation could lead to an overall decline in the quality of recreation as measured by recreation settings, opportunities, and experiences on public lands.

Recreational shooters, equestrians, hikers, bicyclists, campers, hunters, OHV users, mining clubs, and other recreation users would not be directed to areas suitable or compatible for their use. The following problems could increase in

all areas, especially near expanding communities:

- heavy uses in sensitive areas,
- overcrowding,
- user conflicts,
- adverse effects on adjacent State and private lands, and
- resource conflicts.

Visitor dispersal seeks to minimize visitor impacts and social conflicts by distributing visitor use to such a large number of sites that no site develops any obvious signs of wear. Sites that are convenient or easy to access might show such signs. Pre-existing sites are more convenient, more comfortable, and require less work to use. The lack of limiting established group sizes could possibly affect users because they might have forfeit a natural experience so large groups can settle in close together; which in turn, creates noise, other disturbances, or distractions.

Campfires are now allowed at dispersed campsites in the monument. Some proliferation of fire rings has occurred, though the impact is now low. Collection of dead, down, and detached woody material is allowed for campfire use. Although such fuel is generally scarce, no noticeable impact to woody vegetation has yet occurred.

Recreational target shooting would be allowed throughout Agua Fria National Monument. Many areas which have experienced high levels of such use in the past have been notorious for trash accumulation, including large amounts of spent shell casings. In addition, as visitation has increased, visitors' complaints have escalated along with conflicts between shooters and other visitors. Under the No Action Alternative these conflicts are expected to increase.

Special Recreation Management Areas/Recreation Management Zones

The No-Action Alternative would designate no Special Recreation Management Areas (SRMAs) or Recreation Management Zones

(RMZs). Recreational mining clubs, OHV users, campers and other intensive users would not be directed to areas suitable or compatible for their use.

Off-Highway Vehicle Use

Agua Fria National Monument is closed to cross-country motorized travel to protect the monument objects; however, existing routes are open. Specifically, no impacts are likely to occur unless resources are found to be damaged. Closing OHV routes or activity areas to protect resources could limit recreation in some areas, but resources would be protected for future activities.

In the Bradshaw-Harquahala Planning Area 2,240 miles of vehicle routes would remain open, and recreation would not be affected. However, in the western part of the planning area that is covered by the Lower Gila North Management Framework Plan (MFP) (BLM 1983), cross-country travel by some users could affect others, by disrupting recreational and disturbing recreation settings. Additionally, recreation settings would shift over time to more motorized settings and opportunities.

Special Recreation Permits

Current conditions would continue. BLM would continue to issue SRPs on request in both planning areas. Growth in the number of permits requested is expected to meet the increased demand but could lead to overcrowded use areas and conflicts between the public and permit holders. In the Agua Fria National Monument, this increase could quickly result in visitor dissatisfaction as the anticipated impacts from the increased use could negatively impact the recreational experience expected in a national monument. In the Bradshaw-Harquahala planning area, the unlimited growth in the number of permits and the subsequent increased number of users and related impacts would eventually result in unacceptable social encounters and impede the quality of recreational experience for most users if left unmanaged. In some locales such as the Vulture

Mountains, San Domingo Wash, Hieroglyphic Mountains, and Black Canyon corridor, requests for permitted commercial and competitive events could encumber all or most weekends during the peak cool-weather visitor season. Visitors not engaged in these permitted activities could be displaced to other areas or have their recreation experiences and expectations diminished. With no limits on the number of motorized competitive races the number of permits could increase to a point where the races would overshadow the casual use and organized group opportunities in the intensive OHV use areas. Consequently, this would result in decreasing recreational opportunities and quality of experience for the average motorized user. In addition, by not confining the use within appropriate use areas, visitors who prefer less intensive OHV uses and more casual rural settings could be displaced as this use moves into areas where they do not currently occur.

Alternative B

Under *Alternative B* Agua Fria National Monument's Front Country RMZ would comprise 57,900 acres and the Back Country RMZ 12,700 acres. Managing Agua Fria National Monument's Back Country RMZ for more primitive recreational opportunities would retain the semi-primitive setting and benefit visitors seeking non-motorized challenge and discovery. Activities such as camping would remain dispersed, and opportunities for solitude would be enhanced because intrusion by vehicles would be minimized. In the Bradshaw-Harquahala Planning Area more remote areas could retain good to high quality non-motorized or primitive recreation opportunities and experiences.

Managing the Front Country RMZ for more visitor uses would affect opportunities for recreation by concentrating popular and more intensive uses in areas that can tolerate the higher level of use. Concentrating visitors could change the recreation setting to one offering a less primitive experience because of (1) the increased social contact and (2) the required management for more visitors. Impacts from

increased noise, litter, and vehicular use would increase in the Front Country RMZ. Access for multiple types of activities would be enhanced and interpretive and educational opportunities would be open to a broad range of visitors.

Impacts to Agua Fria National Monument from dispersed camping would be similar to those under *Alternative A* describing recreational use near expanding communities. However, dispersed camping would be restricted near some facilities such as developed campgrounds, archaeological sites, and water sources. This restriction might slightly reduce the number of sites for dispersed camping and lead to other sites being established by the public. Motorized vehicles might pull off the designated road up to 25 feet. However, this might disturb the campers' solitude if parked along Bloody Basin in a camper unit. Additionally, other vehicles passing might create dust and impair visual clarity.

In contrast to *Alternative A*, campfires would be allowed at dispersed campsites in the national monument with some limitations; for example, only in built fire rings in developed campgrounds. Collecting dead, down, and detached woody material would be allowed for campfires at dispersed campsites.

Two 20-unit campgrounds would be developed at or near the two major access roads into the national monument. The ease of pulling into an established campsite with amenities offers convenience and security. Being close to other campers would enhance security and might also affect the social setting. The developed campgrounds would create a permanent disturbance at the development; however, careful site design would reduce the impacts of the disturbance to soil, vegetation, and visual resources. Developed campgrounds could also attract more visitors to the monument, creating intensified disturbance to wildlife habitat and other resources near the developed campgrounds. Camping opportunities in a developed campground would increase by 40 planned sites.

The impacts of recreational target shooting in the monument under *Alternative B* would be similar to those under *Alternative A*, except that some areas would be closed for the safety of other visitors. Some of the most popular shooting sites are within a half mile of now popular trailheads. Shooters who use these sites (such as the area near the Badger Springs trailhead) would be displaced and would have to move their use to another location. Whether that location might be within the monument is unknown.

Prohibiting material collection and paintball activities in the monument would affect visitors who have traditionally engaged in these activities. Nevertheless, this approach would maintain the landscape in a natural setting for other visitors, especially for cultural resource interpretive and educational programs.

Developing connecting route networks for hikers, bicycles, OHVs, and equestrians would affect recreation opportunities because all types of users could enjoy activities consistently, in more areas, and with fewer user conflicts.

Alternative B would significantly reduce the overall availability of public lands for competitive OHV events. Only the Hieroglyphic Mountains, San Domingo Wash, Vulture Mountains, Table Mesa, and Stanton SRMAs would allow such events, and the number of events would be limited to 16 annually. Management actions applied to the entire Bradshaw-Harquahala Planning Area address a variety of recreation concerns, including public access, target shooting, special recreation permits, organized group activities, and firewood collection. These management actions would do the following:

- reduce impacts on recreation users,
- reduce conflicts between users,
- maintain recreation opportunities and settings, and
- attempt to maintain high-quality dispersed recreation opportunities over the long term.

Special Recreation Management Areas/Recreation Management Zones

Managing 82,690 acres of public land in SRMAs for OHV and intensive recreation would focus BLM's management efforts, as well as allocate some intensive recreation uses to the Hieroglyphic Mountain, Table Mesa, Stanton, San Domingo Wash, Yarnell, Wickenburg, and Vulture Mine SRMAs. BLM would manage SRMAs to ensure that specified recreation opportunities are maintained over the long term and to reduce conflicts between users and other resources. Development of staging areas and facilities would enhance the recreational experience for some users by providing a more developed setting.

Alternative B would significantly reduce the overall availability of public lands for competitive races in comparison to the current situation. Only the Hieroglyphic Mountains, San Domingo Wash, Vulture Mountains, Table Mesa, and Stanton SRMAs would allow races; however, the number would be limited to 14 per year.

Users interested in intensive motorized and group activities would be directed to the Hieroglyphic Mountains, Table Mesa, Stanton, San Domingo, and Vulture Mine SRMAs. Developing staging areas and facilities would enhance the recreational experience for these permitted uses by providing a compatible area for these activities.

Allocating and managing the Yarnell SRMA would affect the hang gliding community by preserving take-off and landing areas for long-term use. Potential hazards would be prevented whenever possible, thereby enhancing the safety and overall experience of users.

Managing the North Black Canyon Trail SRMA would enhance the non-motorized recreation experience in the northern portion of the planning area by providing the facilities for trail use and assuring long-term access to the trail as well as connections to public land to the south and Forest Service land to the north and east.

Off-Highway Vehicle Use

The overall effect of route management under *Alternative B* would be to maintain the existing recreation settings and opportunities and avoid greatly changing or diminishing motorized recreation experiences and opportunities throughout the Bradshaw-Harquahala Planning Area.

Special Recreation Permits

In Agua Fria National Monument issuing up to 12 SRPs would represent a four-fold increase from the current condition and could affect the ability of more visitors to access the monument under guided circumstances. The increase could also degrade the recreational experience of other users by (1) increasing their interaction with large groups during many activities and (2) diminishing their opportunity to enjoy experiences in desired settings.

In the Bradshaw-Harquahala Planning Area impacts regarding the number of SRPs issued would be the similar to those described in *Alternative A*. However, in *Alternative B* the number of motorized competitive races would be limited to 14 per year. Although this amount is nearly five times the amount of races currently held in the planning area, annual limits would be set for each SRMA which would spread the potential number of races throughout the five SRMAs allocated for such use. This would minimize potential user conflicts in those SRMAs and allow diverse OHV opportunities in these areas.

However, the allowable limits in this *Alternative* could still potentially double the number of competitive races in those management areas where races are currently held. Also, it would keep other areas open and available for races where currently none are held. In these areas, casual users could be affected by a diminished recreational experience in areas near events. The contributing factors include; the noise, the dust, the limitations and closures of routes, the possibility of large numbers of spectators, as well as other factors which could further limit

normal use of area resources which increases during the during weekends. Casual users might also be displaced from popular areas because these areas would be inaccessible or unattractive to them during scheduled events.

On the other hand, the recreation experience of some visitors might be enhanced by the unexpected opportunity to observe competitive events and interact with other visitors.

Limiting competitive, commercial, and organized group events to allocated VRM standards and recreation settings in the planning areas could limit the total area open to existing events and prevent designating locations for some new events.

Alternative C

In Agua Fria National Monument impacts would be similar those described for *Alternative B*. The Front Country RMZ would occupy 42,000 acres, and the Back Country RMZ would occupy 28,200 acres.

Impacts of dispersed camping in Agua Fria National Monument would be similar to those under *Alternative B*, except in the Front Country RMZ camping would be allowed only at designated dispersed sites. Camping on established designated sites offers visitors less flexibility in choosing a location and encourages the repeated use of a limited number of sites. Designating dispersed sites would ensure that campsite location minimizes impacts to soil, visual, and biological resources. Sites for designation could be selected for their characteristics of minimizing disturbance, while offering the visitor a quality camping experience. Dispersed campsites would no longer proliferate in the Front Country RMZ.

Campfires would be allowed at dispersed campsites in the monument with some limitations; for example, only in built fire rings in the developed campground. Collecting dead, down, and detached woody material would be allowed for campfires at dispersed campsites. The impacts are expected to be the same as under *Alternative A*.

The impacts of one campground development would be similar to those described for *Alternative B*, except there would be 20 fewer sites, and visitors would be concentrated in one place instead of two.

The impacts of recreational target shooting in the national monument would be similar to those under *Alternative B*, except that the entire Front Country RMZ would be closed to shooting. Some of the most popular shooting sites are in the Front Country RMZ as delineated by *Alternative C*. Shooters who use these sites (such as the area near the Badger Springs trailhead) would be displaced and would have to move their use to another location. Whether that location might be within the monument is unknown; however, this use is expected to shift off the monument.

Managing the Agua Fria National Monument's 42,000-acre Back Country RMZ and the Bradshaw-Harquahala lands managed for wilderness characteristics together, would offer visitors primitive recreational opportunities by retaining semi-primitive landscapes and experiences. Impact on users would be the same as described under *Alternative B*, with the exception that larger amounts of land are enclosed by these land use allocations.

Developing connecting route networks for hikers, bicycles, OHVs, and equestrians would benefit recreational opportunities by allowing all types of users to enjoy activities consistently, in more areas, and with fewer conflicts.

Management actions applied to the entire Bradshaw-Harquahala Planning Area would address a variety of recreation concerns, including public access, target shooting, SRPs, organized group activities, and firewood collecting. These actions would do the following:

- reduce impacts on natural and cultural resources,
- resolve conflicts among recreation users,

- maintain recreation opportunities and settings,
- increase public safety, and
- attempt to maintain dispersed high-quality recreation opportunities over the long term.

Special Recreation Management Areas/Recreation Management Zones

The impacts of managing SRMAs would be similar to those under *Alternative B*. Providing staging and trail areas for multiple recreation activities and creating new trails would enhance the recreation experience by increasing opportunities and reducing user conflicts.

Alternative C would significantly reduce the overall availability of public lands for motorized competitive races. Only the Hieroglyphic Mountains, San Domingo, Vulture Mountains and Stanton SRMAs would allow races, and the number would be limited to six per year.

Off-Highway Vehicle Use

The impacts of OHV management are similar to *Alternative B*.

Special Recreation Permits

Impacts in Agua Fria National Monument would be similar to those under *Alternative B*, except no more than six SRPs would be issued. This figure represents double the number of current permits and could diminish recreational opportunities for some users.

In the Bradshaw-Harquahala Planning Area impacts regarding the number of SRPs issued would be the same as in *Alternative A*, except the number of motorized competitive races would be limited to six per year. The number of races is still twice as many as the number currently held in the planning area which is expected to meet the future demands of users seeking these competitive speed opportunities. As in *Alternative B*, it would keep other areas open and available for races where currently none are held, with the exception of no

races being allowed in the Table Mesa SRMA. However, since there has not been a demand for this activity in this SRMA to date, no current use would be displaced. The annual limits set for the Hieroglyphic and Vulture Mountains SRMAs would not increase over current conditions perhaps not meeting the needs for the future increase in races in these areas. This would require additional future races to be moved to less desirable locations and possibly much further away from the Phoenix area. The remaining allowable races would be available in SRMAs that have been allocated for such use; however, these areas may not meet user preferences. In contrast, these limits in each SRMA would minimize potential user conflicts in those areas and allow for more diverse OHV opportunities.

Alternative D

In Agua Fria National Monument, impacts would be similar to those described for *Alternative B*, except the Front Country RMZ would occupy 1,530 acres and the Back Country RMZ would occupy 68,380 acres.

Impacts of dispersed camping in Agua Fria National Monument would be similar to those under *Alternative C*, except all dispersed camping would be limited to designated dispersed sites. Camping on established designated sites would (1) give visitors less flexibility in choosing a location and (2) would encourage the repeated use of a limited number of sites. Designating dispersed sites would ensure that campsite location minimized impacts to soil, visual, biological, cultural, and other resources. Sites designated available for dispersed camping could be selected for their characteristics of minimizing disturbance while offering recreation visitors a quality camping experience. Proliferating of dispersed campsites would be halted throughout the monument. Designated campsites would have designated routes leading to them, thus reducing the disturbance of vehicle pull-offs.

Campfires would be allowed at dispersed campsites in the monument. Visitors; however,

could not collect dead, down, and detached woody material for campfires. Wood for campfires would need to be brought in from outside the monument. Denying use of local material for campfires would reduce the disturbance to woody species near the dispersed camping areas. The scarcity of these species and the desire to return the national monument to desert grassland (thereby making woody species even scarcer) makes the impact of this action slight.

Alternative D would prohibit target shooting throughout the monument. Shooters who use sites within the monument would be displaced to sites outside the monument.

Most of the Agua Fria National Monument would be managed under Back Country RMZ prescriptions. About 211,840 acres in the Bradshaw-Harquahala Planning Area would be managed to maintain natural and non-motorized recreational settings to assure the continued availability of areas offering mainly outstanding primitive recreation and solitude opportunities. Limiting and reducing current levels of motorized access would impede the ability of motorized recreational users to travel some secondary routes, washes, single-track cattle paths, and little-used tertiary routes in these nine localities.

Special Recreation Management Areas/Recreation Management Zones

The total area of SRMAs and RMZs in this Alternative is 56,240 acres, of which would be managed for motorized activities. *Alternative D* would phase out motorized uses in Hieroglyphic Mountain SRMA over the planning period. Eventually, *Alternative D* would gradually manage public lands in the southern part of the Castle Hot Spring MU to non-motorized uses to be more compatible with the expected urban growth in the unit. Reducing the area open to motorized activities, especially competitive and organized events, would force the activities to move to other areas. Because most visitors are from the two adjacent counties, new locations in the planning area are likely to be established.

Motorized activities at these new locations could increase user conflicts with other recreation and alter the recreation setting for some activities. Moreover, *Alternative D* would only allow two competitive races; both races would be confined to the Vulture Mountains SRMA.

The impacts of managing SRMAs would be similar to those under *Alternative B*. Prohibiting races would slightly lower the number of permits in the SRMAs/RMZs where races are allowed in other alternatives, subsequently requiring less intensive management and monitoring in these SRMAs/RMZs. Providing staging and trail areas for multiple recreational activities and creating new trails would enhance the recreational experience through increased opportunities and reduced user conflicts.

Off-Highway Vehicle Use

The impacts of OHV management are similar to *Alternative B*.

Special Recreation Permits

Issuing no SRPs in Agua Fria National Monument would affect the availability of certain recreational experiences for some users and could reduce the ability of disabled visitors to experience the monument's resources and activities. Eliminating SRPs for conducting guided tours would affect visitors who rely on this conveyance to experience the national monument and interact with others. Eliminating commercial activities would affect recreational opportunities of other users by eliminating the potential for interaction with large groups, especially in highly popular areas.

In the Bradshaw-Harquahala Planning Area impacts regarding the number of SRPs issued would be the same as in the *Alternative A*, except limiting the number of allowable races in this Alternative to two, is less than the current situation of three races per year. However, the most critical impact would be that no races would be allowed in the Hieroglyphic Mountains SRMA which has accommodated

this use since the mid 1990's. This would be a severe negative impact to motorized racing enthusiasts by not only moving the only remaining race location much further away from Phoenix, but limiting the racing experience to one SRMA that has less diverse routes available for such use. Racing opportunities and diverse challenges offered these enthusiasts would be lost, and this demand would no longer be met.

Alternative E (Proposed Alternative)

Dispersed camping in Agua Fria National Monument under *Alternative E* would be the same as for under *Alternative B*. Impacts from vehicles engaged in dispersed camping are expected to be similar to those under *Alternative D* relative to the size of the Back Country RMZ.

Campfires would be allowed at dispersed campsites in the monument with some limitations. Collecting dead, down, and detached woody material would be allowed for campfires at dispersed campsites. The impacts are expected to be the same as under *Alternative A*.

Under *Alternative E* target shooting not involving hunting would be prohibited throughout the monument. Impacts would be the same as described under *Alternative D*.

Management actions apply to the entire Bradshaw-Harquahala Planning Area

Special Recreation Management Areas/Recreation Management Zones

Managing 384,510 acres of public land in SRMAs/RMZs would focus BLM's management and also allocate intensive recreation uses to the following SRMA and associated RMZs:

- Black Canyon SRMA,
- Castle Hot Springs SRMA,
- Hassayampa SRMA,
- Hieroglyphic Mountains RMZ,
- Table Mesa RMZ,
- Stanton RMZ,
- San Domingo Wash RMZ,

- Yarnell RMZ,
- Wickenburg Community RMZ, and
- Vulture Mine RMZ.

BLM would manage these areas to ensure that specified recreation opportunities are maintained over the long term and to resolve conflicts between users and other resources. Developing staging areas and facilities would enhance the recreational experience for some users by providing a more developed setting.

Recreationists interested in intensive motorized and group activities would be directed to the Hieroglyphic Mountains, Table Mesa, Stanton, San Domingo, and Vulture Mine RMZs. Motorized events and commercial activities would be entertained at all levels up to potential carrying capacities. These carrying capacities would be determined by Adaptive Management principles through site-specific analysis. Developing staging areas and facilities would enhance the recreational experience for these permitted uses by providing compatible areas for these activities.

The overall availability of public lands for motorized competitive races would be reduced from the current management situation. Only the Hieroglyphic Mountains, San Domingo, Vulture Mountains and Stanton SRMAs would allow motorized races, and the number would be limited to eight per year.

The allocation and management of the Yarnell SRMA would have the same impacts as those described under *Alternative B*.

Managing the North Black Canyon Trail RMZ would have the same impacts as those described under *Alternative B*.

Off-Highway Vehicle Use

The impacts of OHV management are similar to *Alternative B*.

Special Recreation Permits

Impacts in the national monument would be the same as described in *Alternative A*. This would allow people/groups to enjoy the monument in a responsible fashion.

Impacts for the Proposed Alternative are nearly the same as those identified in *Alternative C*. It would keep other areas open and available for races where currently none are held. In these areas the only difference is the limit for the Vulture Mountains RMZ would be increased to four per year. This would double the number of races currently held in the RMZ and is expected to meet the future demand for the area. However, the recreational experience for casual users, most notably the casual use miners, could be affected due to the temporary unavailability of routes and the increased crowds during the race events. Users might also be displaced from the main camping areas because these areas would be either inaccessible or unattractive to them during these events. On the other hand, the recreation experience of some visitors and OHV enthusiasts might be enhanced by the unexpected opportunity to observe competitive events and interact with other visitors.

4.14.8 From Visual Resource Management

Alternative A (No Action)

No impacts are expected.

Alternative B

In the monument, managing the 12,700 acres of Back Country RMZ and 300 acres of Passage RMZ as VRM Class II is consistent with preserving the primitive recreational opportunities intended for the zones. Managing the Front Country RMZ as Class III would allow recreational activities such as OHV use and improvements such as interpretive facilities and parking areas on 57,900 acres but might create visual impacts that could detract from recreational experiences.

In the Bradshaw-Harquahala Planning Area managing the lands allocated to maintain wilderness characteristics as VRM Class II would affect recreation by retaining the current physical setting of 56,040 acres and enhancing the primitive recreational experience. The improvements at the proposed trailhead in lands allocated to maintain wilderness characteristics at the staging areas in the Harquahala Mountains would be required to meet design criteria to integrate the color, line, form, and texture of the facilities with the surrounding landscape.

Alternative C

Impacts in Agua Fria National Monument would be similar to those under *Alternative B* except that the Front Country RMZ managed as VRM Class III would be reduced to 42,000 acres and the Back Country and Passage RMZs managed for VRM Class II would increase to 28,200 acres.

In the Bradshaw-Harquahala Planning Area 107,843 acres of lands allocated to maintain wilderness characteristics would be managed as VRM Class II and would affect recreational opportunities similarly to *Alternative B*.

Managing Sheep Mountain ONA ACEC as VRM Class I would enhance the visual setting by maintaining 4,270 acres with minimal visual impacts from any proposed projects.

Alternative D

Impacts in Agua Fria National Monument would be similar to those under *Alternative B*, except that the Front Country RMZ managed for VRM Class III would be reduced to 1,530 acres and the Back Country and Passage RMZs managed for VRM Class II would be increased to 69,370 acres.

In the Bradshaw-Harquahala Planning Area impacts would be similar to those under *Alternative B*, except that 140,235 acres of lands allocated to maintain wilderness characteristics and 98,500 acres in ONA ACECs

would be managed as Class I. Such management would enhance the visual landscape by maintaining the areas with minimal to no visual impacts from any proposed developments.

Alternative E (Proposed Alternative)

Impacts in Agua Fria National Monument would be similar to those under *Alternative B*, except that VRM Class III in the Front Country RMZ would be 67,279 acres, 59,000 acres of VRM Class II would be managed in the Back Country and Passage RMZs. These allocations would maintain the natural appearance of the monument landscapes while meeting other resource management objectives.

In the Bradshaw-Harquahala Planning Area impacts would be similar to those under *Alternative B* except that 55,480 acres of lands allocated to maintain wilderness characteristics would be managed as VRM Class II. This management would benefit recreation by maintaining the areas with little visual impact from proposed developments, which would maintain or enhance the landscape's natural appearance and open space value, while meeting other resource management objectives.

4.14.9 From Rangeland Management

Alternative A (No Action)

As recreation use increases, conflicts with livestock grazing and operators would likely increase. Impacts to recreation could include lack of access for recreation activities as livestock operators close their private lands to reduce conflicts and vandalism. This lack of access would contribute to (1) a loss of recreation areas on public land due to a lack of access and (2) a reduction in route network connectivity. Some visitors would be bothered by waste, cattle trailing, trampled vegetation, and denuded areas near fences and facilities.

Alternative B

Limiting grazing in Agua Fria National Monument riparian areas to the winter season (November 1 to March 1) would degrade the recreational experience, especially in the Back Country RMZ. The primitive recreational experience would be enhanced for the summer season because of reduced interaction with livestock. However, because of high summer temperatures, winter is the season when most people visit the monument. Encounters between visitors and livestock during winter would increase in riparian areas. Fencing and physical control measures required to keep livestock out of the riparian areas could detract from the visual setting of primitive landscapes and diminish the recreational experience.

Fewer potential conflicts with livestock could also occur in the Front Country RMZ during summer, but the fencing and physical control improvements could disrupt the vehicular route network, restrict accessibility for people with disabilities, and diminish the recreation experience for those users. Improved riparian conditions would enhance the recreation setting for hunting, nature study, and wildlife and bird watching.

In the Bradshaw-Harquahala Planning Area riparian impacts would be similar to those in Agua Fria National Monument. Improved vegetation conditions would improve the recreation setting for hunting, nature study, and wildlife and bird watching. Some visitors would be bothered by waste, cattle trailing, denuded areas, livestock facilities, and trampled vegetation in riparian and upland areas. Others visitors would not notice.

Alternative C

In Agua Fria National Monument the permanent removal of livestock from the riparian area would eliminate potential conflicts with cattle and enhance the primitive and nonprimitive recreational experience in those areas. Fencing and physical controls of livestock would have impacts similar to those under *Alternative B*.

Impacts in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative B*.

Alternative D

Opportunities for recreation on public lands in both planning areas would benefit from the end of grazing. The potential for conflicts with livestock would be eliminated. Both motorized and primitive recreation experiences could improve as recreation settings become free of livestock facilities, cow waste, denuded areas, trampled vegetation, and the evidence of trailing. Access to some public lands could be lost if ranchers sell their private property. The number of areas where ranchers have traditionally permitted public access across private land could decline, making some public land inaccessible, particularly around Castle Hot Springs and Hieroglyphic Mountain, areas notable for interspersed private ranch and BLM-managed lands.

Alternative E (Proposed Alternative)

Impacts are expected to be similar to those described for *Alternative B*.

4.14.10 From Minerals Management

Alternative A (No Action)

Expected increases in visitor use in the Bradshaw-Harquahala Planning Area could lead to increased conflicts with mining. Mining in popular, high-use recreational areas would diminish opportunities for recreation and increase recreation in other areas as users seek new locations for activities. Mining in previously undisturbed areas would reduce opportunities for primitive recreation and change the setting to a more developed landscape.

The Lower Gila North MFP (BLM 1983) prevents “segregation” of minerals for withdrawal and keeps the planning area covered by the plan open to all mineral resource

development. Because the potential for leasable and locatable minerals is very low, most impacts would result from developing saleable minerals. Designated wilderness areas and Agua Fria National Monument, an area of 167,720 acres, are closed to mineral material disposal.

Alternative B

In addition to designated wilderness areas and Agua Fria National Monument, closing lands allocated to maintain wilderness characteristics and ACECs to mineral material disposal would improve recreational opportunities and settings on 56,680 acres. The critical physical setting would be retained, and opportunities for more primitive recreation would be enhanced. Because of very low potential, there would be no impacts from leasable minerals management and few impacts from locatable minerals management. Managing lands open to minerals to VRM Class III or IV could affect recreational experiences in adjacent areas. Mineral development would be more visible in the landscape and could alter the recreational experience of some visitors by introducing human-caused elements to the landscape.

Alternative C

Impacts would be similar to those under *Alternative B* except that closures to mineral material disposal would include 163,220 acres. Minerals projects would be managed to the VRM class for which they were inventoried. Visual settings would be better maintained because mining projects would be consistent with viewshed management objectives.

Alternative D

Impacts would be similar to those under *Alternative B* except that 480,864 acres would be closed to mineral material disposal. Closures would ensure the retaining of recreation opportunities in undisturbed natural settings over the largest area under any of the alternatives.

Alternative E (Proposed Alternative)

Impacts would be similar to those under *Alternative B*, except that mineral material disposal closures are limited to Tule Creek and reconveyed riparian areas.

4.14.11 From Fire Management

Alternative A (No Action)

Under *Alternative A* current conditions would be maintained. Prescribed burns would affect the availability of recreation activities in Agua Fria National Monument because some areas would be closed during planned burning. The enhanced habitat and general landscape setting gained through the burns would benefit recreational experiences by improving visual settings and possibly increasing wildlife abundance for viewing and hunting.

Visitors generally do not view burned areas--caused either by prescribed or natural ignition--as attractive settings for recreation. These users would be displaced for varying lengths of time from burned landscapes and would probably go to other nearby unburned areas. The burned localities would provide transient opportunities to interpret the role of natural and prescribed fires in the landscape.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts would be similar to those under *Alternative A*, except that natural fire starts would be allowed to burn in the prescribed burn areas. This practice could increase opportunities for fires to start during each season because only planned, human-set fires are now allowed to burn. More fire starts could increase disruptions to recreation by increasing the instances of area closures.

4.14.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected

4.14.13 From Management of Travel Management

Alternative A (No Action)

OHV and other mechanized users would not be directed to routes or areas suitable or compatible for their use. Heavy OHV uses in sensitive areas, overcrowding, user conflicts, adverse effects on adjacent State and private lands, and resource conflicts could increase in all areas, especially near expanding communities:

Motorized route-based recreation opportunities currently available would be generally unchanged. Most existing routes would remain open within the Agua Fria National Monument, but the monument would remain closed to cross-country motorized travel. No closures would be anticipated unless resources are found to be damaged. Closing OHV routes or activity areas to protect monument resources could limit motorized recreation in some areas.

In the Bradshaw-Harquahala Planning Area 2,240 miles of vehicle routes would remain open, and recreation would not be affected. As a result of increasing motorized and mechanized travel, some users could affect others by disrupting recreational and disturbing recreation settings. Recreation settings would shift over time to more motorized settings and opportunities. Immediately effective upon signing of this plan, restricting travel to currently inventoried routes could impact people using bicycles in a cross country manner. Vehicle use is currently limited to existing roads and trails, so most people would experience no impact to their experience. After the signing and public education through the creation of current

inventory maps, it is likely that an increased number of citations will be issued to drivers not staying on inventoried routes. Designating routes within 5 years of plan completion would limit the number of places the public could use motorized and mechanized vehicles.

Conversely, improvements to the overall network usefulness and ease of use might offset such impacts.

Alternative B

134 miles, or 76.5 percent, of routes would remain open to vehicular travel in Agua Fria National Monument. The route system would enhance opportunities for motorized recreation by creating loop trails, which would allow connected touring, provide for an increase in access, and offer extended recreational opportunities. About five miles of new routes would be developed to bypass private property and maintain the connectivity of the route system. The route system would close 37 miles of existing routes and could diminish opportunities for motorized recreation in some areas. Users of these routes would be displaced to other areas within and outside the monument.

Limiting all mechanized vehicles to inventoried routes before completing the route designation process (i.e. within 5 years of plan approval) would eliminate cross-country OHV travel throughout the planning area. According to the *AGFD Off-Highway Vehicle Strategic Plan* (AGFD 1998), cross-country travel accounts for five percent of OHV activities. Accordingly, this limitation would not affect most OHV users. Cross-country travel would also be prohibited for game retrieval, potentially diminishing or eliminating hunting opportunities.

Restricting all motorized and non-motorized vehicles to existing routes would not affect current activities but would prevent developing new routes to expand the recreational experience. Allowing cross-country travel only for non-motorized, wheeled game carriers (small two-wheeled carts for transporting game) could affect the recreational experience for some

hunters by limiting their opportunities to hunt in areas where retrieval of game would require travel over long distances.

Connecting route networks would be developed for hikers, bicycles, OHVs, and equestrians enhance recreation experiences and opportunities with fewer user conflicts. Developing connecting route networks for hikers, bicycles, OHVs, and equestrians would affect recreation opportunities because all types of users could enjoy activities consistently, in more areas, and with fewer user conflicts.

Users interested in intensive motorized trail activities would be directed to the Hieroglyphic Mountains, Table Mesa, Stanton, San Domingo, and Vulture Mine SRMAs.

Managing the North Black Canyon Trail SRMA would enhance the non-motorized recreation experience in the northern portion of the planning area.

Alternative C

In Agua Fria National Monument 123 miles, or 69.7 percent, of routes would remain open to vehicular travel. The route system developed under *Alternative C* would create loop trails for motorized touring and add new routes to bypass private property. About six miles of new routes would be developed and would affect recreation opportunities by maintaining route connectivity in the event of closures across private land. The route system would close 48 miles of existing routes and could diminish opportunities for motorized recreation in some areas.

Developing connecting route networks would have the same impacts as *Alternative B*.

Alternative D

In Agua Fria National Monument 48 miles, or 27.8 percent, of routes would remain open to vehicular travel. The route system under *Alternative D* was developed mainly for resource protection and would not add new routes. Opportunities for motorized recreation

would be limited, and loop trails would not be developed. The route system would close 123 miles of existing routes and could diminish opportunities for motorized recreation and public access in some areas. Opportunities for non-motorized recreation would be enhanced throughout the monument. There would be more opportunity to experience solitude and natural landscape settings.

Impacts from route limitations and development of sites for recreation in the pronghorn corridors in Agua Fria National Monument are similar to those under *Alternative C*.

The impacts of route designations on recreational opportunities in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative B*.

Alternative E (Proposed Alternative)

The route network in the monument under the Proposed Alternative would retain 94 miles of existing route.

About 12 miles of primary roadways exist in Agua Fria National Monument. These include Bloody Basin Road, which leads visitors through the national monument's heart, and the Badger Springs exit of Interstate 17, a road that leads visitors to a trailhead. Beyond the primary road network, 88 miles of secondary and tertiary roads would be designated as open. Closing 52 miles of route in pronghorn corridors and other habitat in the national monument could affect the connectivity of the route network and diminish the motorized recreation experience of some users. The closure would also increase the area in which visitors could have a semi-primitive non-motorized recreation experience. About 41 percent of routes in Agua Fria National Monument would be closed, limiting vehicle-based hunting; camping; and cultural, scenic, and wildlife viewing opportunities.

Limiting all mechanized vehicles to inventoried routes before completion of the route designation process (i.e. within five years of plan approval) would eliminate cross-country

OHV travel throughout the planning area. According to the AGFD *Off-Highway Vehicle Strategic Plan* (AGFD 1998), cross-country travel accounts for five percent of activities. Accordingly, this limitation would not affect most OHV users. Cross-country travel would also be prohibited for game retrieval, potentially diminishing or eliminating hunting opportunities for some hunters.

Developing connecting route networks for hikers, bicycles, OHVs, and equestrians would benefit recreational opportunities because all types of users could enjoy activities consistently, in more areas, and with fewer interruptions.

Once completed, the Black Canyon Trail from the Carefree Highway to north of Highway 69 would become a major trail of regional significance for mountain bikers, equestrians, and hikers. Moreover, the trail would link the communities of the Black Canyon corridor and the north boundary of the Phoenix-Peoria metropolis.

Recreationists interested in intensive motorized and group activities would be directed to the Hieroglyphic Mountains, Table Mesa, Stanton, San Domingo, and Vulture Mine RMZs.

Managing the North Black Canyon Trail RMZ would enhance the non-motorized recreation experience in the northern portion of the planning area by providing the facilities for trail use and assuring long-term access to the trail as well as connections to public land to the south and Forest Service land to the north and east.

4.14.14 From Management of Wilderness Characteristics

Alternative A (No Action)

Under *Alternative A* no areas would be managed specifically to maintain wilderness characteristics. Existing primitive recreation opportunities would probably be maintained in Agua Fria National Monument due to the

management guidelines defined by the proclamation (Appendix A).

In some areas of the Bradshaw-Harquahala Planning Area opportunities for primitive and non-motorized types of recreation would likely decline or become more fragmented over the life of the plan due to increasing motorized recreation and land use authorizations. Lands with semi-primitive non-motorized recreation settings and opportunities could decline in number and area. Wilderness characteristics would not greatly change over the life of the plan in the more remote parts of the Bradshaw-Harquahala Planning Area.

Alternative B

In the Agua Fria National Monument, no impacts are expected.

In the Bradshaw-Harquahala Planning Area 56,040 acres of land would be managed to maintain wilderness characteristics. Designation of these areas would impede the ability of motorized recreational users to access washes, single-track cattle paths, and little-used tertiary routes in these areas. Motorized recreationists would be displaced and forced to travel to nearby areas and routes offering motorized opportunities. Additional camping and off-road driving impacts on soils and vegetation would accrue along these periphery areas and routes, impacting scenery. More crowded motorized routes would make the driving experience less solitary and more interactive with more encounters with other motorized users. The number of social contacts between motorized users would reduce the quality of dispersed recreational experiences for some visitors.

Non-motorized users would benefit from the limitation on vehicles in areas designated to manage wilderness characteristics by being able to recreate in a more natural setting. This would assure the maintenance and availability of areas offering mainly outstanding primitive recreational and solitude opportunities.

Alternative C

In Agua Fria National Monument no impacts are expected.

In the Bradshaw-Harquahala Planning impacts would be the same as *Alternative B* except that 107,843 acres of land would be managed to maintain wilderness characteristics. This increased number of acres could create more displacement of motorized recreationists than *Alternative B*. Designation of a larger amount of area to manage for wilderness characteristics would provide non-motorized users more recreational opportunities than *Alternative B*.

Alternative D

In Agua Fria National Monument, no impacts are expected, allocation of 53 percent of the area for management of wilderness characteristics would provide non-motorized users with 37,571 acres potentially managed to maintain naturalness and outstanding solitude and primitive recreational opportunities. Motorized users would be displaced by route limitations and closures prescribed by Transportation and Public Access Section 2.5.1.8 and Map 2-60. The impacts of managing lands in the Bradshaw-Harquahala Planning Area allocated to maintain wilderness characteristics would be similar to those under *Alternative B* and *C*, except that the total area of public lands affected would be 102,664 acres. *Alternative D* would designate some of the lands identified to maintain wilderness characteristics described in *Alternatives B* and *C* as ACECs. Impacts for ACECs are described in the *Special Area Designations* Section 4.6.

Alternative E (Proposed Alternative)

In Agua Fria National Monument allocation of about 29 percent of the area for management of wilderness characteristics would provide non-motorized users with 20,900 acres potentially managed to maintain naturalness and outstanding solitude and primitive recreational opportunities. Motorized users would be

displaced by route limitations and closures prescribed by Transportation and Public Access Section 2.6.1.9 and Map 2-76.

In the Bradshaw-Harquahala Planning Area impacts would be the same as *Alternative B* except that 67,279 acres of land would be managed to maintain wilderness characteristics. This increased number of acres could create more displacement of vehicle-based recreationists than *Alternative B*, while providing areas more suitable to non-motorized recreationists.

Designation of a larger amount of area to manage for wilderness characteristics would provide non-motorized users more recreational opportunities than *Alternative B*, but fewer opportunities than proposed in *Alternatives C* and *D*.

4.15 Impacts on Visual Resource Management

Analytical Assumptions/Data Summary

BLM evaluates impacts on visual and scenic resources on a case-by-case basis when considering land use authorizations. The RMP would establish VRM classes from the inventory developed during the planning process. The basic descriptions of the class objectives are outlined below; the results of the inventory are shown in Map 3-7.

- VRM Class I Objective: The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes, but it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

- Generally, the impact of implementing VRM Class I is that the scenic character of those lands are preserved as viewed from the key observation points selected when any management activity is proposed. In the long term, the aesthetics of VRM Class I landscapes are maintained as natural views.
- VRM Class II Objective: The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities might be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
 - VRM Class II does not provide quite the level of protection to visual landscapes as Class I. The usual affect of Class II is to maintain visual landscapes in a natural appearance. But, since management activities can be seen in this standard - although they would not be allowed to attract attention - the character of visual landscapes could degrade over time.
- VRM Class III Objective: The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities might attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
 - VRM Class III allows management activities to be visible and they could attract attention of casual observers, though they shouldn't dominate the view from the selected key observation points. This Class allows continuation of existing and development of new needed activities, such as utility lines, mineral material sales, and other activities with visible surface disturbance. The long term affect on the visual landscape is generally a degradation of its natural appearance.
- VRM Class IV Objectives: The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities might dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.
 - VRM Class IV is designed to allow management activities that can result in major modifications of the visual landscape. The effect of VRM Class IV can be a rapid and quite large modification to the visual landscape from as few as one proposal. An example could be development of a major open pit mine. Yet, even within VRM Class IV allocations, BLM would negotiate with project proponents to try to minimize the visual intrusion of any project proposal.

Table 4-6 shows the area of each VRM class in the planning areas as found during the inventory and the area of each class for each alternative. The total area of each class is reported as the acres of that class on BLM. The VRM inventory process assesses the visual character of the entire landscape, but management to meet VRM class objectives would apply only to BLM-managed lands. When VRM classes are in place, visual resource evaluations are addressed in the environmental reports prepared for each proposed project. These evaluations would employ the contrast rating process as described by BLM Manual 8430.

standards. These ACECs have little impact on VRM because the monument management guidance is more restrictive than that of the ACECs.

In the Bradshaw-Harquahala Planning Area, five wilderness areas (totaling 96,820 acres) would be managed by policy to VRM Class I standards. VRM Class I would allow preservation of the scenic landscapes within the wilderness areas consistent with management to preserve naturalness and areas with few human intrusions. The Harquahala Mountain Summit Road Back Country Byway has been allocated to VRM Class III as a result; it could allow an

4-6. VRM Classes by Alternative (BLM acres)					
Class	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E (Proposed)
I	96,820	96,820	100,456	109,570	298,310
II	593,450	437,579	449,022	502,610	340,880
III	162,000	284,720	282,720	260,020	220,790
IV	114,730	98,660	98,660	94,800	107,020

4.15.1 From Special Designations

Alternative A (No Action)

In the Agua Fria National Monument the nonimpairment standard for suitable Wild and Scenic river segments would be managed to maintain the current visual character. Proposed activities within these corridors would be restricted from degrading the character of the river corridor from the conditions that made it eligible for wild designation. Some management activities may be precluded.

In the Larry Canyon and Perry Mesa ACECs, no VRM standards were set by previous plans and they have been managed to VRM Class III

eventual degradation of the visual character by allowing visual intrusions into the landscape.

Alternative B

In Agua Fria National Monument, management of WSR corridors generally prohibits or minimizes uses and activities that could affect visual resources. Management to protect the values for WSR would thus preserve visual quality along the river. Designating the Bloody Basin Road as a Back Country Byway would include the possibility of facilities such as vehicle pull outs and information kiosks for visitor enjoyment. These would be designed to conform to the local visual landscape and to be visually pleasing. Impacts from Back Country Byway designation are expected to be very low. The Larry Canyon and Perry Mesa ACEC designations would be dropped. Removing

these designations should not affect visual resources because the national monument's current management provides for a higher level of protection than ACEC designation, thereby preserving the existing scenic quality.

In the Bradshaw-Harquahala Planning Area retaining the Harquahala Mountain Summit Road would not affect the existing scenic quality. Retaining the visual character of the surrounding landscape would be important to maintain the current recreation experience offered by the scenic route. Wilderness areas would remain VRM Class I areas.

Designating Tule Creek ACEC (640 acres) in the Bradshaw-Harquahala Planning Area could also affect visual resources. Withdrawing the ACEC from mineral entry would benefit visual resources by limiting the opportunity for mines and improvements to alter the visual landscape.

Alternative C

In Agua Fria National Monument, impacts of managing WSR corridors would be the same as for *Alternative B*.

Four ACECs (totaling 810 acres) would also be designated in Agua Fria National Monument. These designations could result in actions degrading visual resources by altering the landscape with fences to eliminate livestock grazing. Impacts would also result from closing, limiting, or mitigating motorized vehicle routes. Such actions could improve visual quality by minimizing disruptive recreation and restoring the natural landscape in some areas.

In the Bradshaw-Harquahala Planning Area, impacts of retaining the Harquahala Mountain Summit Road would be the same as for *Alternative B*. The five designated wilderness areas would not be affected.

Seven ACECs, totaling 55,710 acres, would be designated in the Bradshaw-Harquahala Planning Area. These designations could result in minor management actions. The actions, in turn, would slightly affect visual resources by

altering the landscape with fences (1) to exclude livestock and motorized vehicles and (2) to protect cultural sites. The following actions would help maintain scenic quality by minimizing opportunities for disturbances to the natural landscape:

- prohibiting mineral development (all forms of mineral entry or mineral material disposal);
- closing, limiting, or mitigating motorized vehicle routes that conflict with maintenance of wildlife habitat and cultural resources;
- not allowing the building of new recreational sites; and
- prohibiting construction of grazing improvements in certain areas.

Alternative D

In Agua Fria National Monument, impacts of managing WSR corridors would be the same as for *Alternative B*.

Alternative D would designate the Agua Fria River Riparian Corridor ACEC in the monument. The ACEC would encompass 13,070 acres and would represent a large increase in special area designation over *Alternatives B* and *C*. Impacts from the ACEC management could result from closing, limiting, or mitigating motorized vehicle routes that conflict with maintenance of riparian and wildlife values. These actions could improve visual quality by minimizing opportunities for disruption, although general management for protecting the Purpose and Significance of the monument already affords a similar level of protection. Acquiring lands along Indian Creek could enhance scenic quality by enabling BLM to manage newly acquired parcels in accordance with proposed VRM standards. *Alternative D* would designate the Agua Fria River Riparian Corridor ACEC in Agua Fria National Monument. The ACEC would encompass 13,070 acres and would represent a large increase in special area designation over *Alternatives B* and *C*. Impacts from the ACEC management could result from closing, limiting,

or mitigating motorized vehicle routes that conflict with maintenance of riparian and wildlife values. These actions could improve visual quality by minimizing opportunities for disruption. But general management for protecting the Purpose and Significance of the Agua Fria National Monument would afford a similar level of protection for the area and would limit disruptive activities. Acquiring lands along Indian Creek could enhance scenic quality by enabling BLM to manage newly acquired parcels in accordance with proposed VRM standards.

In the Bradshaw-Harquahala Planning Area, impacts of retaining the Harquahala Mountain Summit Road would be the same as for *Alternative B*.

Eight ACECs (totaling 205,870 acres) would be designated. Impacts on visual resources from these ACECs would be similar to those described for *Alternative C*, except that the protected area would represent more than a threefold increase over the area protected under *Alternative C*.

The Wilderness areas would remain under VRM Class I.

Alternative E (Proposed Alternative)

In Agua Fria National Monument the WSR eligibility would be retained for the Agua Fria River. Impacts would be the same as described for *Alternative B* except for the exclusion of the Back Country By-way. . In addition, eight tributaries of the Agua Fria River are determined to be eligible for analysis as potential additions to the national Wild and Scenic Rivers System. BLM policy requires protection of the outstandingly remarkable scenic values along Silver, Bishop, Tank, Lousy, and Larry Creeks.

In the Bradshaw-Harquahala Planning Area retaining the Harquahala Mountain Summit Road Back Country Byway would have impacts similar to those described under *Alternative B*.

In the Bradshaw-Harquahala Planning Area four ACECs (totaling 89,970 acres) would be designated. Impacts on visual resources from these ACECs would be similar to impacts described for *Alternative C*.

4.15.2 From Lands and Realty Management

Alternative A (No Action)

Under the current management of Agua Fria National Monument some potential impacts to visual resources are expected from lands and realty management. Land acquisitions, rights-of-ways and utilities would be evaluated for visual resource management under a project-specific environmental review. Land disposal is prohibited by the National Monument Proclamation (Appendix A). New utility proposals such as power lines or pipelines could affect the visual character of the landscape by the adding facilities and ground-disturbing activities. New towers would be built for power lines, and pipeline construction would disturb the ground along the pipeline route. The impacts would generally be limited to the western area of the monument where there are existing visual impacts from previous utility projects developed before the national monument's designation.

Under the current management of the Bradshaw-Harquahala Planning Area no impacts to visual resources are expected from land acquisition. Acquisitions would be evaluated for visual resource management under a project-specific environmental review. Land disposals of up to 54,370 acres could affect visual resources by eliminating BLM's management control over the parcels. Future utility, mining, or development projects would no longer be required to conform to existing or "default" VRM class standards. Developing disposed parcels for residential, commercial, or recreational uses would diminish the open space setting of the remaining adjacent public lands.

Aesthetically incompatible or obtrusive projects could be introduced onto the public lands by the following:

- land use authorizations,
- easements,
- supporting access to or use of valid existing rights, and
- meeting access and utility needs.

These projects and authorizations could degrade or mar the recreation settings, viewsheds, and open space qualities of public lands.

Alternative B

In both planning areas visual resources would benefit from land acquisitions because newly acquired parcels would be inventoried and managed according to BLM's VRM system. Land disposal could impair visual resources by eliminating BLM's management control over the disposed parcels.

Adding designated utility corridors could affect visual resources by increasing the potential installation of utility poles and power lines, as well as ground disturbance along pipeline routes. Before construction; however, future corridor projects would undergo an environmental review that would analyze visual resources. Narrowing the existing utility corridor in Agua Fria National Monument could also affect visual resources by confining new utilities to areas already visually affected by existing utilities, thereby retaining undisturbed visual landscapes. A corresponding expansion of the corridor one mile west would potentially extend utility impacts into the Bumble Bee area and to sites visible from the Sunset Point Scenic Overlook but allow flexibility in alignment to reduce visual impacts.

Adding communication infrastructure could impair visual resources by altering the visual landscape. Before construction; however, future telecommunication infrastructure projects would undergo environmental review that would analyze impacts on visual resources. Requiring projects to be designed in keeping with the

VRM class in which they occur would minimize impacts on the visual landscape.

Impacts of land disposal in the Bradshaw-Harquahala Planning Area would be similar to *Alternative A*, except 58,400 acres have been determined to be suitable for disposal.

In response to projected regional transportation demand, all highway system routes (interstates, U.S. routes, and Arizona State routes) and the proposed corridor southwest of Wickenburg are designated as transportation corridors in the Bradshaw-Harquahala Planning Area. The proposed Wickenburg Bypass corridor, which would mainly cross lands managed for VRM Class II level management, would be inconsistent with VRM objectives for the area and would interfere with BLM's ability to manage this area's visual resources.

Alternative C

Impacts to visual resources from land and realty management would be similar to those discussed for *Alternative B* except as described below.

Eliminating the existing utility corridor in Agua Fria National Monument could affect visual resources by eliminating the possibility of installing new utilities. This constraint would preserve the existing visual landscape and preclude future impacts on the viewshed. Expansion of the corridor two miles west could extend impacts of utility development even further into the Bumble Bee area and into the line of sight from the Sunset Point Scenic Overlook, but may also give enough room within the corridor to site any utility so its impact was either screened from view or minimized.

Impacts of land disposal in the Bradshaw-Harquahala Planning Area would be similar to *Alternative A*, except *Alternative C* would decrease the lands found suitable for disposal to 49,100 acres, 9,300 acres less than proposed under *Alternative B*.

Impacts to visual resources from transportation corridors would be similar to those described for *Alternative B*.

Alternative D

Impacts to visual resources from land and realty management actions would be similar to those discussed for *Alternative B* except as described below.

Impacts in Agua Fria National Monument from utility corridors would be similar to those under *Alternative C*.

In the Bradshaw-Harquahala Planning Area no acreage has been found to be suitable for disposal. BLM would retain management of all public lands, and projects would be subject to design review to ensure compliance and consistency with the VRM class objectives allocated in *Alternative D*. BLM would not approve inconsistent land use authorizations or rights-of-way.

Alternative E (Proposed Alternative)

Impacts to visual resources from land and realty management actions would be similar to those discussed for *Alternative B* except as described below.

Impacts from utility corridors would be similar to *Alternative B* for the monument and to a combination of *Alternative B* and *C* for lands west of Interstate 17. The boundary of the Black Canyon Utility corridor was purposely kept west of the rim of Black Mesa so as to minimize the potential visibility of future utility developments from both Interstate 17 and the Sunset Point Rest Area, a popular scenic overlook for the area. Though the revised corridor has more acreage visible from either I-17 or sunset Point than the corridor proposals in Alternatives A, B, C, or D, (as calculated using a GIS viewshed analysis) the chance to place above ground facilities above the rim is eliminated, reducing the opportunity to create skylined facilities as viewed from either of these locations. In addition, more of the proposed corridor is of

greater distance from Interstate 17 and Sunset Point, reducing the overall visibility of any utility related facilities from those locations. Specific utility project development would include mitigations for visual resources which could include, but not be limited to: siting to reduce visibility from key observation points; use of project designs that reduce visibility by incorporating colors, textures, lines and other characteristics of the natural landscape; and reclamation to suitable vegetation in a reasonable time.

4.15.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Under current management preventing or reducing impacts on air quality by developing mitigation measures (e.g. dust control and the use of best management practices) during project planning could benefit visual resources by maintaining the local clarity of the visual landscape. Managing soil and water resources is not expected to affect visual resources.

4.15.4 From Biological Resource Management

Alternative A (No Action)

Under current management, wildlife habitat improvements are designed to minimize visual impacts, but outside of Wilderness areas, projects are designed to comply with VRM Class III standards. Though few projects are constructed, compliance with VRM Class III could result in steady degradation of visual landscapes. The contribution to that from biological resources management would be negligible.

Alternative B

Impacts on visual resources from the general management of biological resources would be similar to those described for *Alternative A*, except wildlife related projects would be designed to comply with VRM Class I or II standards in many places, which would minimize visual impacts from those projects. Closing routes and prohibiting new fences in the Harquahala Mountains WHAs (64,220 acres) could benefit visual resources by reducing existing visual disruption and minimizing future disturbances to the visual landscape.

Alternative C

Impacts on visual resources from biological resources would be similar to those described for *Alternative B* except that in Agua Fria National Monument 39,330 acres of WHAs for pronghorn antelope would be allocated. Potential closure or mitigation of routes in the WHAs could enhance the visual landscape by removing existing disturbances.

In the Bradshaw-Harquahala Planning Area impacts would be similar to those under *Alternative B* except that the total area of WHAs would increase to 156,120 acres.

Alternative D

Impacts to VRM from Biological resource management in the monument are the same as described for *Alternative C*.

Impacts on visual resources from biological resources would be similar to those described for *Alternative C* except that the Date Creek Mountains and Upper Agua Fria River Basin WHAs, encompassing 24,290 acres, would also be included. Other management for biological resources is prescribed in ACECs.

Alternative E (Proposed Alternative)

Impacts to visual resources from biological resources would be similar to those described for *Alternative C*.

4.15.5 From Cultural Resource Management

Alternative A (No Action)

No impacts are expected.

Alternative B

Implementing physical and administrative protection measures to stop, limit, or repair damage and vandalism to sites could affect visual resources. Protective actions could reduce vandalism activities, such as destruction of ancient walls, which are detrimental to site settings and visual resources. Building fences or other barriers could impair visual resources.

Additionally, the following potential management actions could affect visual resources by altering the visual landscape:

- building new visitor facilities (including gravel parking areas, restrooms, picnic tables, trash receptacle, or benches), and
- route improvements with the addition of signs.

In Agua Fria National Monument levels of public use determine the level of intensities and interpretive development permitted for archaeological sites. High public use could disturb visual resources by the following:

- adding visitor facilities,
- improving routes including sign additions, and
- developing a motorized and non-motorized loop trail system.

In Agua Fria National Monument, five sites would be allocated to High public use for

cultural resources and could have impacts described under Cultural Resources section of Management Common to Both Planning Areas: Pueblo la Plata complex, Badger Springs Pueblo, the Arrastre site, Badger Springs rock art, and the Rollie site.

In the Bradshaw-Harquahala Planning Area the allocation of eight SCRMAAs as open to public use sites could affect visual resources. Impacts could result from building visitor facilities (parking areas, restrooms, tables, benches, signs) in addition to completing actions to stabilize, repair, and maintain sites in good condition (including fencing and barriers). Impacts on visual resources could also result from concentrating visitors in a specific area. Such concentrations could cause more ground disturbance (e.g. new trails and vehicular routes) and lead to increased litter.

Alternative C

In Agua Fria National Monument one area would be allocated to High public use, with two sites that could experience impacts similar to those described under the Cultural Resources section of Management Common to Both Planning Areas: Fort Silver and the Pueblo la Plata complex. Compared to *Alternative B*, there would be a reduction in potential impacts associated with the reduced number of areas allocated to the High public use level of development.

In the Bradshaw-Harquahala Planning Area the allocation of four SCRMAAs to public use could result in actions affecting visual resources. Compared to *Alternative B*, there would be a reduction in potential impacts associated with the reduced number of areas available for potential interpretive development and visitor use.

Alternative D

In Agua Fria National Monument no sites would be allocated to High public use. With limited development to support visitation and site

interpretation, management of cultural resources would have little impact on Visual Resources.

In the Bradshaw-Harquahala Planning Area the allocation of two SCRMAAs as open to public use sites could result in actions affecting visual resources. Only the Black Canyon and Harquahala Management Units could contain sites developed for public visitation. Compared to *Alternatives B and C*, there would be a reduction in potential impacts associated with the reduced number of areas available for interpretive development and visitor use.

Alternative E (Proposed Alternative)

Impacts in Agua Fria National Monument would be would be similar to those in *Alternative C*.

Impacts in the Bradshaw-Harquahala Planning Area would be most similar to those in *Alternative B*, except that two SCRMAAs would be closed to allocating sites to public use.

4.15.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.15.7 From Recreation Management

Alternative A (No Action)

Under current management of Agua Fria National Monument visual resources could be impacted by installing signs at national monument boundaries and posting other relevant information, in addition to disturbances and potential damage caused by target shooting.

Under current management of the Bradshaw-Harquahala Planning Area installing more signs could degrade visual resources. Such signage

could lead to localized reductions in visual quality, especially in remote and undeveloped areas.

Alternative B

In Agua Fria National Monument recreational activities would be divided into three resource management zones: Front Country (57,900 acres), Back Country (12,700 acres), and Passage (300 acres). In the Front Country RMZ maintaining or enhancing both non-motorized and motorized visitor travel could affect visual resources by the following actions:

- introducing human facilities into the viewshed,
- developing cultural sites, and
- building visitor amenities such as developed campgrounds.

In the Back Country RMZ current conditions would be maintained, and no impacts are expected.

The Passage RMZ would contain the major vehicle routes that traverse across the Back Country RMZ. VRM objectives would maintain the current visual character while providing limited management activities. Some visitor related development could occur, but it would not impact the surrounding landscapes that would attract attention from observers.

In the Bradshaw-Harquahala Planning Area all lands in MUs would be allocated as Extensive Recreation Management Areas (ERMAs) unless superseded by management actions for SRMAs or RMZs. Visual resources could be affected by management prescriptions for ERMAs. The following actions could impact visual opportunities by altering visual landscape:

- installing recreation management facilities for resource protection, and
- adding visitor facilities such as water, toilets, scenic turnouts, interpretive sites, kiosks, signage, parking areas, staging areas, and trailheads.

Besides the physical changes from the developments themselves, the improvements could promote activities and increase disturbance in concentrated areas. The developments could thus increase visual impacts in those areas while leaving other areas less disturbed and reducing visual impacts.

In the Bradshaw-Harquahala Planning Area, management prescriptions for nine SRMAs (149,760 acres of BLM-managed lands) could affect visual resources. SRMAs managed to develop designated staging/camping areas and visitor facilities (parking areas, horse facilities, and signs), could affect visual opportunities by altering the visual landscape. Commercial and motorized competitive events could alter the visual landscape by doing the following:

- increasing litter,
- disturbing the natural landscape, and
- reducing local visual clarity with concentrated dust and vehicle emissions.

Impacts to visual resources from managing two locations where lands are allocated to maintain wilderness characteristics (56,040 acres of BLM-managed lands) would be minimal. Management would emphasize semi-primitive non-motorized with semi-primitive motorized settings along boundaries and along routes within that allocation.

Motorized commercial and competitive events in the Harquahala Mountains could alter the visual landscape by reducing local visual clarity. Impacts, however, would be minimized by the restrictive timeframe for holding events.

Alternative C

Impacts to visual resources from recreation management would be similar to those discussed for *Alternative B*, except in Agua Fria National Monument, Front Country RMZ would decrease to 42,000 acres, Back Country RMZ would increase to 28,000 acres and Passage RMZ would decrease to 700 acres.

In the Bradshaw-Harquahala Planning Area, impacts would be similar to *Alternative B*, except *Alternative C* would increase the allocation of nine SRMAs to 164,780 acres, and increase areas allocated to maintain wilderness characteristics to seven, totaling 107,843 acres.

Alternative D

Impacts to visual resources from recreation management would be similar to those under *Alternative B*, except in Agua Fria National Monument where Front Country RMZ would be further decreased to 1,530 acres, Back Country RMZ would be increased to 68,380 acres, and Passage to 990 acres.

Impacts to visual resources in the Bradshaw-Harquahala Planning Area would be similar to *Alternative B*, except BLM would decrease the allocation of SRMAs to seven, totaling 56,240 acres. Areas allocated to maintain wilderness characteristics would increase to fifteen, totaling 102,664 acres.

Alternative E (Proposed Alternative)

Impacts to visual resources in Agua Fria National Monument would be similar to *Alternative B*, except Front Country RMZ would increase to 11,900 acres, Back Country RMZ would decrease to 57,650 acres, and Passage would increase to 1,350 acres.

Impacts in the Bradshaw-Harquahala Planning Area would be similar to *Alternative B*, except BLM would allocate seven SRMAs, increasing the acreage to 384,510, and six areas allocated to maintain wilderness characteristics, increasing the acreage to 67,279.

4.15.8 From Visual Resource Management

Alternative A (No Action)

Alternative A would maintain current conditions. Wilderness areas are Class I and all remaining areas are managed by designation or default as

Class III. The visual landscape is expected to gradually decline. VRM Class III could allow visual intrusions that are inconsistent with public interests. A lack of clear management direction for current planning has led to visual resource management being inconsistently applied in the analysis of proposed projects, accelerating the potential degrading of the aesthetic landscape.

Alternative B

VRM allocations for both areas can be viewed on Map 2-15.

Impacts on visual resources from visual resource management would occur as VRM class standards are implemented and future projects are subject to conformance with design standards to meet class objectives.

In Agua Fria National Monument all Front Country RMZs (57,900 acres) would be managed as VRM Class III. All Back Country and Passage RMZs (13,000 acres) would be managed as VRM Class II.

In the Bradshaw-Harquahala Planning Area VRM Classes would be allocated as described below:

- The area of Class I lands would be 96,820 acres.
- The area of Class II lands would increase to 486,800 acres.
- The area of Class III lands would increase to 284,720 acres.
- The area of Class IV lands would decrease to 98,660 acres.

Establishing VRM management classes described above would allow management consistent with resource objectives described for *Alternative B* while protecting the aesthetic landscape. Proposed projects over the life of the plan are expected to create some visual intrusions in places where they now don't exist. Any change to the visual landscape is expected to be minimized by the following:

- developing VRM management classes,
- applying a consistent approach to analyzing new projects, and
- using visually sensitive design techniques.

Alternative C

VRM allocations for both areas can be viewed on Map 2-36.

In Agua Fria National Monument visual resource impacts would be the same as those discussed for *Alternative B*, except that 42,000 acres of Front Country RMZ would be managed as VRM Class III and 28,900 acres of Back Country and Passage RMZs would be managed as VRM Class II.

In the Bradshaw-Harquahala Planning VRM Classes would be allocated as described below:

- The area of Class I would be 109,570 acres.
- The area of Class II would be 502,610 acres.
- The area of Class III would be 260,020 acres.
- The area of Class IV would be 94,800 acres.

Impacts under *Alternative C* would be similar to those described for *Alternative B*, except that more land would be included in VRM Class II. This increase in Class II land is expected to preserve the existing open, natural landscapes in a larger area for the life of the plan.

Alternative D

VRM allocations for both areas can be viewed on Map 2-59.

In Agua Fria National Monument visual resource impacts would be the same as those described for *Alternative B*, except that 1,530 acres of Front Country RMZ would be managed as VRM Class III and 68,380 acres of Back Country and Passage RMZ would be managed as VRM Class II.

In the Bradshaw-Harquahala Planning Area VRM Classes would be allocated as described below:

- The area of Class I would be 298,310 acres.
- The area of Class II would be 340,880 acres.
- The area of Class III would be 220,790 acres.
- The area of Class IV would be 107,020 acres.

The impacts of *Alternative D* would be similar to those described for *Alternative C*, except that the increase of land in VRM Class I would place a higher standard for managing potential visual intrusions across a larger landscape. Under *Alternative D* preserving broad natural-appearing landscapes is a high priority. The extent of the landscape preserved under *Alternative D* would be greater than under *Alternative C*, and the potential for a gradual decline of the aesthetic landscape would greatly decrease.

Alternative E (Proposed Alternative)

VRM allocations for both areas can be viewed on Map 2-75.

In Agua Fria National Monument visual resource impacts would be similar to those described under *Alternative B*, except that 12,440 acres of Front Country RMZ would be managed as VRM Class III, and 37,560 acres of Back Country and Passage RMZ would be managed as VRM Class II,

In the Bradshaw-Harquahala Planning Area VRM Classes would be allocated as described below:

- The area of Class I would be 98,820 acres.
- The area of Class II would be 488,250 acres.
- The area of Class III would be 278,540 acres.

- The area of Class IV would be 103,390 acres.

The impacts of *Alternative E* would be similar to those described for *Alternative C*.

4.15.9 From Rangeland Management

Alternative A (No Action)

Installing more fences or livestock improvements (cattle guards, water developments, and roads needed to access improvement sites) on BLM-administered lands or adjacent State and private lands could contribute to the steady decline of visual quality throughout the planning area.

Alternative B

Impacts to visual resources from rangeland management would be similar to those discussed for *Alternative A*, except:

Additional fencing requirements to meet seasonal riparian area restrictions and fencing modifications to facilitate wildlife movement could increase the total number of proposed livestock control projects. Conformance with VRM Classes established in this plan would result in project designs that are less visually intrusive, reducing the visual impact of new projects. Restricting access to riparian areas could improve the visual setting in those areas by increasing vegetation health and density.

Alternative C

Impacts to visual resources from rangeland management would be similar to those described under *Alternative B*. Prohibiting grazing in riparian areas could further enhance the visual setting by accelerating increases in the health and density of vegetation.

Alternative D

Making all livestock allotments unavailable for grazing and canceling livestock authorizations in the planning areas could affect visual resources. Unnecessary livestock facilities could be removed as funds and workforce allow, reducing the visual intrusions of fences, corrals, water tanks, and other livestock related facilities. Prohibiting grazing could also modify the visual landscape through increased vegetation health and density as utilization of forage decreases.

The elimination of grazing on BLM-administered lands could affect the visual landscape through fencing developed on adjacent non-Federal lands to control livestock from trespassing onto BLM-managed lands and through other grazing improvements to meet livestock needs that may have been lost from BLM-managed lands. In addition, since the closure of BLM-managed lands to grazing may force ranchers out of business, they may be forced to convert their adjacent properties to residential or other development, further degrading the visual landscapes in the region.

Alternative E (Proposed Alternative)

Impacts to visual resources from rangeland management would be the same as those discussed under *Alternative B*.

4.15.10 From Minerals Management

Alternative A (No Action)

Under current management in Agua Fria National Monument only lands encumbered by mining claims are open to mining. No activity beyond casual use as defined in 43 CFR 3809 would be allowed without determinations of valid existing rights. Therefore, mineral development on existing claims would have minimal impacts on visual resources because of the typical scale of these operations.

In the Bradshaw-Harquahala Planning Area BLM administers mining on a case-by-case basis, but most of the planning area would remain open to mineral location and development. Mining would alter the existing visual landscape by adding surface disturbance, facilities for operations, and routes. Localized degradation of air quality and visual clarity could result from mine emissions and increased dust emissions.

The five designated Wilderness areas (96,820 acres) would continue to be closed to any mineral development. In *Alternative A*, visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):

- 172,510 acres would be closed to development of saleable minerals
- 171,680 acres would be closed to development of locatable minerals
- 171,680 acres would be closed to development of leasable minerals

Alternative B

In Agua Fria National Monument impacts to visual resources from minerals management would be the same as those discussed for *Alternative A*. In the Bradshaw-Harquahala Planning Area minerals management could affect visual resources over most of the planning area. BLM would attempt to make the mining or eventual reclamation requirements consistent with the affected VRM class. *Alternative B* would protect the visual landscape more than would *Alternative A*.

In the Bradshaw foothills, the area surrounding Wickenburg, and south of White Tank Mountain Regional Park, a conflict could result from areas being managed at a VRM Class II level but being largely open to mineral development. Visual resources could be affected by developing new mines and by such improvements as roads.

In *Alternative B*, visual impacts from the different types of mining would be eliminated on

the following lands (including Wilderness acres):

- 224,400 acres would be closed to development of saleable minerals
- 101,100 acres would be closed to development of locatable minerals
- 101,100 acres would be closed to development of leasable minerals

Alternative C

Impacts on visual resource management from minerals management would be similar to those under *Alternative B*, except visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):

- 330,940 acres would be closed to development of saleable minerals
- 188,450 acres would be closed to development of locatable minerals
- 188,190 acres would be closed to development of leasable minerals

Alternative D

Impacts to visual resource management from minerals management would be similar to those under *Alternative B*, except visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):

- 452,000 acres would be closed to development of saleable minerals
- 457,664 acres would be closed to development of locatable minerals
- 464,734 acres would be closed to development of leasable minerals

Alternative E (Proposed Alternative)

Impacts to VRM from minerals management would be similar to those under *Alternative B*, except visual impacts from the different types of mining would be eliminated on the following lands (including Wilderness acres):

- 167,720 acres would be closed to development of saleable minerals
- 171,940 acres would be closed to development of locatable minerals
- 171,680 acres would be closed to development of leasable minerals

4.15.11 From Fire Management

Alternative A (No Action)

Prescribed burning would remove existing vegetation and leave blackened woody material that would degrade the visual landscape in the short term. In addition, any mechanical treatment to establish fuel breaks or pretreat fuels would also create short term disturbances that could degrade visual quality. Plant communities in areas where prescribed fire is used are fire-adapted. Periodic fires enhance habitat health and can slow or prevent the invasion of undesired vegetation. Any scars from mechanical treatments are reclaimed as well as possible to minimize their visual impact. Long-term improvement of visual resources would result from healthier vegetation communities.

Wildfires have similar affects to the visual landscape as prescribed fires, except the area affected is less predictable. In some years fires occur in non fire adapted plant communities. In those places, the visual disturbance from fires lasts longer, potentially affecting the character of plant communities for decades.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts to visual resources from fire management would be similar to those described for *Alternative A* except that in the monument some natural start fires may be allowed to burn where they are currently suppressed. In this case, the size and frequency of fire related impacts may increase for awhile. It would be the goal to reestablish natural fire cycles as much as possible, resulting in long term fire

frequency approximately the same as current prescribed burn frequency.

4.15.12 From Wild Horse and Burro Management

Alternatives A (No Action) and B

No impacts are expected.

Alternatives C, D and E (Preferred Alternative)

Although there are do direct or indirect impacts to wild burros from visual resource management removing all burros from the Harquahala HA has a potential to minimally affect visual resources. A small increase in vegetation cover could occur as a result of decreased utilization from burros. Given the relatively small impacts to the area within the Harquahala Management Unit from the existing transient burro herd this increase in vegetation could essentially be discounted.

4.15.13 From Management of Travel Management

Alternative A (No Action)

New roads and routes authorized or pioneered in the Bradshaw-Harquahala Planning Area could eventually create varying levels of visual disturbances in the planning area. Roads cause long-term soil and vegetation damage which would impact visual resources over both the short and long-term. Impacts would be most significant on lands proposed for consideration as major highway corridors, especially in the Vulture Mine area, Hassayampa Plains, and the Hieroglyphic Mountains.

There would be no impacts within the Agua Fria National Monument since the lands are under special protection provided by the proclamation (Appendix A).

Alternative B

A wide range of impacts from none to adverse are anticipated from management of travel, travel management. Small transportation projects would be mitigated and consistent to the appropriate VRM classes. Impacts would be most substantial on lands proposed for consideration as major highway corridors, especially in the Vulture Mine area, Hassayampa Plains, and the Hieroglyphic Mountains.

There would be no impacts within the Agua Fria National Monument. Visual impacts to the public lands, overall, would be less than presented under *Alternative A*.

There would be visual impacts from proposed developments, but overall the alternative would mostly maintain or enhance the appearance of the public land landscapes and its open space values. Visual resources would degrade over time in some areas from reasonably projected levels of road, highway and utility development. The most substantial visual impacts projected would accrue from county, State and Federal highway projects, including the Wickenburg Bypass, the NAFTA Highway, Highway 74, and other realignments of county and State roads.

Alternative C

The impacts are similar to those in *Alternative B*.

Alternative D

Far less adverse impacts are anticipated from management of travel management under *Alternative D* due to the lands allocated as VRM Class I and Class II areas. All visual impacts would be mitigated and consistent to the appropriate VRM classes. VRM allocations would maintain the natural appearance of the monument landscapes while meeting other resource management objectives. In the Bradshaw-Harquahala Planning Area impacts would be greatly reduced than those considered under *Alternatives B* and *C*. There would be little to no visual impacts from small scale transportation and travel developments. As

described in *Alternative B*, there could be visual impacts from major county, State and Federal highway projects. Overall, Allocated VRM classes would maintain or enhance the appearance of the public land landscapes and open space value, while meeting other resource management objectives.

Alternative E (Proposed Alternative)

In the Bradshaw-Harquahala Planning Area, impacts would be similar to those under *Alternative B* and projects would be installed mostly consistent with VRM objectives.

4.15.14 From Management of Wilderness Characteristics

Alternative A (No Action)

No areas are under consideration for management of wilderness characteristics. Therefore, there are no impacts on visual resources.

Alternatives B, C, D and E (Proposed Alternative)

Visual and scenic resource conditions would be maintained, enhanced, and additionally protected within landscapes allocated to maintain wilderness characteristics. Light pollution could be less, and dark skies would be effectively maintained.

4.16 Impacts on Rangeland Management

4.16.1 From Special Designations

Alternative A (No Action)

Grazing is prohibited in Larry Canyon ACEC, which is located entirely in a steep canyon that is inaccessible to cattle. Livestock exclusion on the small acreage of the ACEC has a negligible effect on the total amount of Animal Unit Months (AUMs) of forage available for livestock grazing in Agua Fria National Monument.

If suitable WSR segments of the Agua Fria River are designated, management actions would include seasonally restricting livestock grazing to winter use only (November 1 to March 1). On riparian segments, where grazing would be seasonally restricted, riparian vegetation and vegetation cover would increase from present levels, but a decreased amount of forage would be available to livestock. This decrease could adversely affect upland livestock distribution and increase the utilization of forage surrounding livestock waters. Range improvements, such as pumping stations to fill storage tanks, would continue and would be crucial to provide water to upland areas while livestock are excluded from the riparian areas. Without these water sources, forage utilization by livestock could increase around improvements such as dirt tanks or springs.

There is a minor risk of livestock-vehicle collisions increasing along the Harquahala Mountain Summit Scenic Road.

Alternative B

In Agua Fria National Monument designating Bloody Basin Road as a back country byway

would likely increase traffic and recreation uses of the area. Potential for animal-vehicle collisions would increase with increased use.

In the Bradshaw-Harquahala Planning Area, the 640-acre Tule Creek ACEC would exclude livestock grazing from fenced areas. This exclusion would increase riparian vegetation and vegetation cover. The small size of the enclosure would negligibly decrease AUMs for the grazing allotment, and permitted numbers of livestock would be unaffected.

Impacts of designating Constellation Mine Road as a back country byway would be similar to the impacts described for the Harquahala Summit Scenic Road in *Alternative A*.

Alternative C

In Agua Fria National Monument, designating four new ACECs would prohibit grazing on 810 acres of riparian habitat. This area represents one percent of the 72,305 acres allotted to grazing in the monument. Though the AUMs lost have not been calculated, riparian areas generally produce more forage per acre than uplands; therefore, forage lost to grazing would likely exceed one percent of total available AUMs. Riparian areas are also critical livestock water sources. Riparian vegetation and vegetation cover would increase with the exclusion of livestock grazing in these areas.

In the Bradshaw-Harquahala Planning Area seven ACECs are proposed for designation. These designations would protect 55,710 acres from surface disturbance due to mining or materials extraction, which would reduce damage to range vegetation and lessen mining traffic on the access roads. The possibility of livestock injury and mortality from vehicle collisions would be lowered.

Impacts on designating the Constellation Mine Road as a back country byway would be the same as *Alternative B*, which refers to Alt. A and risks of vehicle collisions.

Alternative D

In Agua Fria National Monument, designation of the 13,070-acre Agua Fria River Riparian Corridor ACEC would reduce traffic volume, damage to range vegetation, and penetration of recreational users into more remote areas. These actions would reduce stress to wildlife and potential vectoring of noxious weeds.

In the Bradshaw-Harquahala Planning Area, eight ACECs comprising 192,800 acres are proposed for designation. Vehicle restrictions would reduce damage to range vegetation, stress to wildlife, and vectoring of noxious weeds. Restrictions on mining and mineral material extraction would result in less damage to of range vegetation and reduced volumes of mining traffic.

Alternative E (Proposed Alternative)

In the national monument, there are no ACEC proposals under this Alternative.

In the Bradshaw-Harquahala, impacts from ACECs would be similar to *Alternative C*, the ACEC acreage in the Bradshaw-Harquahala would then be 89,970 acres.

4.16.2 From Lands and Realty Management***Alternative A (No Action)***

Any future land acquisition in Agua Fria National Monument could increase the forage available for livestock grazing. Private land amounting to 1,444 acres makes up less than two percent of the land in the monument. Any increase in AUMs would be negligible, and grazing authorizations would not be increased to reflect the change in ownership. Therefore, no impacts are expected from management of lands and realty.

New utility construction and maintenance of existing utilities might have short-term vegetation impacts, although maintenance and

construction projects have not typically impacted the amount of forage for livestock use.

Acquiring privately owned and State-held lands would create large blocks of federally managed lands in the following areas:

- Black Canyon and Lake Pleasant RCAs,
- Cordes Junction, Bumble Bee, and Williams Mesa MRMAs, and
- the 4-mile reach of State land along the Hassayampa River.

These blocks would consolidate management and help develop healthy native plant communities in upland and riparian communities. These additions to the BLM's land base might increase the total AUMs that can be offered through grazing authorizations. The acreage of the area that might be added is unknown since acquisition is generally on a willing seller or willing buyer basis and it is impossible to predict future opportunities.

Lands available for disposal (54,370 acres) through sale, conveyance, or R&PP actions might have range improvements of various types. These actions typically have a slight effect on the total AUMs available for livestock grazing. Any land tenure reduction could decrease the amount of forage or range improvements for livestock. Depending on the size of the area disposed of, or number of range improvements involved, authorized AUMs might need to be adjusted. In this Alternative six custodial allotments with public land grazing authorizations would be closed; A Bar V, Foraker, Rancho Santa Ynez, Kirkland, Thompson Lease, Cross Mountain..

Alternative B

In Agua Fria National Monument narrowing the utility corridor to existing rights-of-way would restrict impacts to vegetation from new utility construction. Other lands and realty related impacts would be the same as under *Alternative A*.

Construction and maintenance of facilities in planned transportation and utility corridors and communication sites would have similar impacts to those described for Alternative A.

Impacts of land acquisitions would be the same as under *Alternative A*.

The proposed disposal through sale, conveyance, or R&PP actions of as much as 58,400 acres would reduce the acreage contributing to AUMs for allocation under BLM's grazing permits. Depending on the size of the action in a grazing allotment, authorized AUMs might need to be adjusted. The total acreage from these actions would represent a potential loss of less than six percent of the lands available for livestock grazing in the Bradshaw-Harquahala Planning Area. In this alternative 16 custodial allotments with public land grazing authorizations would be closed; Texas Gulch, Dewey, Osborne Spring Wash, U Cross, Poland Junction, Galena Gulch, Chapparal Gulch, Rancho Santa Ynez, Whitehead, Oso Ranch, Kirkland, Square M, Auza, Cross Mountain., Hackberry Mine, and Hackberry Gulch.

Alternative C

Eliminating the Black Canyon utility corridor would remove the following potential impacts from new utility development:

- short-term vegetation disturbance,
- stress to livestock and wildlife,
- animal-vehicle collisions, and
- vectoring of invasive weeds.

In the Bradshaw-Harquahala Planning Area, the impacts on grazing use from acquiring non-Federal lands would be similar to those described under *Alternative A*. Impacts of the land tenure adjustment of 49,100 acres of BLM-managed Federal lands would be similar to those described under *Alternative B*, except that the total acreage from these actions would represent a potential loss of five percent of the lands available for livestock grazing in the Bradshaw-Harquahala Planning Area. In this alternative 11 custodial allotments with public land grazing

authorizations would be closed; Rancho Santa Ynez, Foraker, Kirkland, Square M, Whitehead, Oso Ranch, Thompson Lease, Grantham Brothers Lease, Auza, Cross Mountain, and Wellik.

Alternative D

In Agua Fria National Monument eliminating the Black Canyon utility corridor would have impacts similar to those described for *Alternative C*, except that impacts to grazing and livestock would end with cessation of grazing.

In the Bradshaw-Harquahala Planning Area, impacts to grazing and livestock would end with the cessation of grazing.

Alternative E (Proposed Alternative)

In Agua Fria National Monument, narrowing of the utility corridor would have impacts similar to *Alternative B*.

Future land acquisition in Agua Fria National Monument would have impacts similar to *Alternative A*.

Impacts of proposed land tenure adjustment through sale, conveyance, or R&PP actions of as much as 38,755 acres of land outside the MUs, would be similar to *Alternative A*. The total acreage from these actions would represent a potential loss of four percent of the lands available for livestock grazing in the Bradshaw-Harquahala Planning Area. In this Alternative nine custodial allotments with public land grazing authorizations would be closed; A Bar V, Quarter Circle J, W Diamond, Foraker, Rancho Santa Ynez, Kirkland, Thompson Lease, Cross Moutain, and Wellik

New utility construction and maintenance of existing utilities would have similar impacts to *Alternative A*.

4.16.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Implementing activity plans to address soil and water issues might require mitigation that would affect livestock grazing authorizations. If reducing or eliminating livestock grazing is a management action used to reach desired conditions, the rate of improvement to vegetation would be accelerated. These actions could result in reduced authorized livestock numbers for grazing permits. Promoting increased vegetation cover and reduced soil erosion should decrease localized emissions of naturally occurring windblown fugitive dust.

4.16.4 From Biological Resource Management

Alternative A (No Action)

In Agua Fria National Monument the use of fire as a treatment to improve vegetation composition would have short-term impacts to vegetation from burning. Fire use would affect grazing authorizations by requiring a pasture to be rested before and after treatment. Grazing use could increase on other nontreated pastures, or authorized grazing use could be reduced. The fire treatment could result in improved vegetation quality, quantity, and increased vegetation cover. Limits on the use of mechanical vegetation treatments methods; such as soft tire tractor mounted chainsaws, could increase the potential for invasive species, like junipers, to encroach as a result of smaller treated areas with hand methods. Water sources accessible to livestock and wildlife would improve animal distribution and localized vegetation impacts from grazing. Modifying fencing to allow for wildlife movement could improve across pastures and allotments. These livestock movements would increase the

time and work for grazing permittees/lessees to control livestock.

In the Bradshaw-Harquahala Planning Area, changes to livestock season of use for cattle during bighorn lambing season, could result in increased livestock use in other portions of the grazing allotments. Restrictions to construction of range improvements including fences or water facilities could preclude livestock distribution improvement. Reliance on herding or other methods for restriction of livestock movement may not be as effective in achieving vegetative objectives. Restrictions to sheep grazing within bighorn sheep habitat could adversely affect sheep operators by excluding them from grazing allotments. Full enclosure of livestock to waters could lead to increased livestock use in other portions of grazing allotments, negatively impact livestock distribution, and may restrict the length of time a grazing allotment is authorized for livestock use. Construction of small exclosures to monitor vegetative changes in various ecological sites is not anticipated to impact any grazing authorization

Alternatives B, C, D, and E (Proposed Alternative)

In the national monument, impacts would be similar to those described under *Alternative A*.

In the Bradshaw-Harquahala Planning Area, prohibiting the building of rangeland improvements in Browns Canyon and the Inner Basin would limit the potential to improve current livestock distribution on the Aguila allotment. Upland vegetation could improve with the lack of livestock grazing in the area. Closing, limiting, or mitigating motorized vehicle routes in the 64,220-acre Harquahala Mountain WHA could reduce access to range improvements, which would increase costs for maintenance. Reduced vehicle access could limit the risk of animal collisions, and vegetation damage.

Prohibiting domestic sheep and goat grazing within 9 miles of occupied desert bighorn sheep

habitat would affect a portion of the Garcia Grazing Allotment (3905), where sheep are currently authorized as a class of livestock. In order to implement the above decision, the class of livestock on the grazing permit would be changed to reflect cattle only, for the affected portion of the allotment. The Garcia allotment consists of two discrete parcels that are separated by approximately 8 miles. The southern portion of the Garcia allotment, approximately 25,600 acres, would continue to be authorized to stock cattle year-long. The northern parcel could stock cattle year-long and/or sheep by ephemeral permit. Implementing the change in class of livestock may adversely affect the livestock operation on the Garcia allotment as sheep have been stock ephemerally in recent years. The economic affect of the change would depend on market prices, operating costs, and availability of alternate replacement pastures.

4.16.5 From Cultural Resource Management

Alternative A (No Action)

Implementing protective measures and excluding livestock grazing would reduce AUMs of forage, which is directly proportional to the protected surface area. If the protected area contains existing livestock water sources, locations, or facilities, they would need to be developed outside of these areas to maintain a proper distribution of livestock. Impacts are expected to be negligible.

Alternatives B, C, D, and E (Proposed Alternative)

For both planning areas, High public use development would damage vegetation in the immediate area of the site construction. Depending on the level of public use, surrounding vegetation could also be damaged by increased vehicular use and visitor trampling. In addition, High public use development might require excluding livestock from large areas in the vicinity of

developed sites. Though some AUMs might be removed from the available forage, the size of the areas would be negligible, and livestock numbers should not need to be adjusted. If the protected areas contain existing livestock water sources, more watering locations or facilities would need to be developed outside of these areas.

Moderate public use impacts to vegetation would be minimal, and Low public use impacts would even be smaller. Impacts to grazing use would be similar to those under *Alternative A*.

4.16.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.16.7 From Recreation Management

Alternative A (No Action)

Confining vehicles to designated routes in the Multiple Use Resource Areas would reduce the potential for vegetation damage by unauthorized cross-country OHV travel. Within the boundaries of the Phoenix RMP, limiting vehicles to existing roads and trails has lead to a proliferation of vehicle routes being created by users. Use on these routes increases as recreational users increase, disturbing more vegetation, increasing vandalism of private property and range improvements, and increasing vehicle-animal encounters. Within the boundaries of the Lower Gila North Management Framework Plan, open use for vehicles would lead to faster proliferation of routes as OHV users are pushed further into the few remaining remote areas. As routes proliferate and use increases, vegetation disturbance and animal-vehicle encounters would increase, as would vandalism of range improvements.

Activities authorized through Special Recreation Permits (SRPs) are expected to have impacts similar to those from use by the general public. Growth in the number of special use permits issued for motorized events and races could increase the risk of potential mortality to public land users and livestock from collisions with vehicles both traveling to and from these events and during the event. The permit process allows BLM to control where the permittees go and places stipulations on how they conduct their events or businesses. These factors help to reduce the potential effects on disturbance of livestock and range resources.

Alternative B

In Agua Fria National Monument, 57,900 acres would be allocated as Front Country RMZ, and 12,700 acres would be allocated as the Back Country RMZ. Increased visitation within the Front Country could bring increased vehicle numbers, which would increase the potential for animal-vehicle collisions.

Increased OHV use could increase the vectoring of invasive weeds, which could displace native vegetation.

For both planning areas; limiting vehicle use to designated routes would allow route location and network design to address impacts to range resources. This could help reduce the effects of increasing recreation use on vegetation, livestock, and range improvements, reducing the potential for upland vegetation damage by cross-country OHV travel. The OHV travel restriction would decrease the potential for animal-vehicle collisions. Other recreation impacts in the Bradshaw-Harquahala Planning Area would include:

- Recreational target shooting would be prohibited on and other high public use areas, resulting in a decreased risk of animal stress and mortality.
- Depending on the size of the campground/staging areas to be developed in support of motorized use,

authorized livestock grazing might need to be adjusted.

- New trails established for pedestrian, non-motorized, and motorized use could increase the risk of animal stress and potential mortality from collisions with vehicles.

Activities authorized through Special Recreation Permits (SRPs) are expected to have impacts similar to those in *Alternative A*.

Alternative C

Impacts in Agua Fria National Monument would be similar to those described for *Alternative B*. The area of Front Country would decrease and Back Country would increase, reducing the potential for encounters between people and livestock. Reductions in route miles may make some areas difficult to access, increasing operating costs of grazing permittees.

In the Bradshaw-Harquahala Planning Area recreation impacts would be similar to those described for the monument and described for *Alternative B* with these additions:

- Restricting target shooting near high-use areas would decrease the risk of animal stress and mortality.
- Reduced special use permits issued motorized race events could reduce the risk of disturbance to livestock and mortality from collisions with vehicles.

Activities authorized through Special Recreation Permits (SRPs) are expected to have impacts similar to those in *Alternative B*.

Alternative D

Impacts to rangeland resources, including developments that remain and range land vegetation would be similar to those described under *Alternative C*.

Impacts to livestock operations would not be applicable because grazing ceases in this Alternative.

Activities authorized through Special Recreation Permits (SRPs) are expected to have impacts similar to those in *Alternative B*.

Alternative E (Proposed Alternative)

Impacts in Agua Fria National Monument would be the same as *Alternative B*, except that the Front Country RMZ would decrease to 11,900 acres, the Back Country RMZ would increase to 57,650 acres, and the Passage RMZ would increase to 1,350 acres.

For both planning areas, impacts of confining vehicles to designated routes are expected to be similar to *Alternative C*.

Activities authorized through Special Recreation Permits (SRPs) are expected to have impacts similar to those in *Alternative B*.

4.16.8 From Visual Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Alternative D eliminates grazing from the planning area, so no impacts are expected from VRM management.

Under *Alternatives A, B, C, and E*, impacts to rangeland resources, particularly grazing management, resulting from VRM management classes, could include the following:

- increased cost of range project development to conform to VRM class objectives,
- location of some projects in less desirable places, or
- possible denial of some projects that cannot conform to VRM class objectives.

These impacts are expected to be small.

4.16.9 From Rangeland Management

Alternative A (No Action)

In both planning areas, allowing winter-only grazing in riparian areas would increase riparian vegetation. Areas where livestock are preventing attainment of Proper Functioning Condition (PFC) are expected to recover. With the seasonal restriction of use, upland vegetation utilization could increase, and authorized livestock use could be reduced. The need for livestock number adjustments would involve a number of factors, including the number and size of pastures affected, period of use, and current livestock numbers.

Implementation of Land Health Standards and Guidelines for Grazing Administration would impose an allotment evaluation process as a step to continue grazing permit or lease renewal. These evaluations would determine where the Land Health standards are not being met and livestock management actions that may be needed to achieve them. It is possible stocking rates could be adjusted, pastures may be rested, or some pastures or allotments may be converted to ephemeral use only based on the Special Ephemeral Rule. (See Chapter 2, Section 2.7.3.10 for a discussion of the Special Ephemeral Rule.)

Alternative B

Impacts would be similar to those described in *Alternative A*.

Alternative C

Impacts would be similar to those described in *Alternative A*, except:

Prohibiting grazing in riparian areas in Agua Fria National Monument would close 25,989 acres to livestock grazing. This acreage would represent a loss of 36 percent of the lands available for livestock grazing in the national monument. Prohibiting grazing in riparian areas

in the Bradshaw-Harquahala Planning Area would potentially close 249,400 acres to livestock grazing. This acreage would represent a loss of 26 percent of the lands available for livestock grazing in this planning area, mainly in the Black Canyon, Castle Hot Springs, and Hassayampa MUs.

For both planning areas a reduction in authorized livestock use could be proportional to the land removed from livestock grazing in allotments. Riparian areas are also critical livestock water sources, and the potential loss in availability to livestock grazing from riparian closure would be greater than for closing upland areas. The loss of water sources in some instances could preclude any grazing on upland pastures, effectively resulting in no grazing on public lands. Riparian vegetation and vegetation cover would increase with the excluding of livestock grazing in these areas more rapidly than under *Alternative A*.

Alternative D

Making all grazing allotments unavailable for livestock use and canceling all permits/leases would result in the loss of forage to livestock grazing of 13,492 AUMs from Agua Fria National Monument and 69,568 AUMs, along with any authorized ephemeral livestock use, from the Bradshaw-Harquahala Planning Area. Should alternative forage locations not be found on State, private, or other lands; grazing operators on 11 allotments on the national monument and 93 allotments in the Bradshaw-Harquahala Planning Area would be out of business. Removing unnecessary range improvements would increase BLM's administrative costs until the improvements are removed. BLM would bear the cost for long-term maintenance of the remaining improvements.

With the cessation of livestock grazing, both upland and riparian vegetation would increase in amount and quality until it reaches stability with environmental factors.

Alternative E (Proposed Alternative)

Impacts would be similar to those in *Alternative A*.

4.16.10 From Minerals Management

Alternative A (No Action)

Agua Fria National Monument is closed to new mineral entry.

Impacts to rangeland resources from mining include the potential disruption of livestock movement and distribution of use from hauling material, from fencing mines, and in the case of very large mines, closure of large portions of grazing allotments. Mining has been of small consequence in the planning area in the last 10 to 20 years and is expected to continue to have negligible impacts to rangeland resources.

Alternatives B, C, D, and E (Proposed Alternative)

There are no impacts in Agua Fria National Monument from minerals management.

In the Bradshaw-Harquahala Planning Area closure to different types of mining would vary by Alternative. Even though the area over which the mining could occur is large, the actual area of impact is expected to be relatively small and that impact to rangeland management even smaller. Only negligible impacts are expected.

4.16.11 From Fire Management

Alternative A (No Action)

In both planning areas the use of fire as a treatment to improve vegetation composition and cover would have short-term impacts to vegetation from burning. Prescribed fire would also affect grazing authorizations by the

requiring pastures to be rested before and after the treatment. Grazing use could reduce or increase on other nontreated pastures. The fire treatment could improve vegetation quality and quantity and increased vegetation cover.

Fire suppression activities typically impact rangeland management by the use of water from range improvements. In the event the water is not replaced in these developments, livestock grazing could potentially be restricted and management options may include the removal of grazing. Depending on the size of the wildfire and the acreage involved that is burned livestock grazing may be restricted or precluded for a sufficient period of time to allow for regrowth of forage species.

Alternatives B, C, D, and E (Proposed Alternative)

In the Agua Fria National Monument some naturally ignited fires would be allowed to burn if defined prescriptive conditions are being met. Impacts from fire management would be similar to those described for *Alternative A*.

4.16.12 From Wild Horse and Burro Management

Alternative A (No Action)

There are no impacts expected in Agua Fria National Monument as burros do not inhabit the area.

Current conditions for burros would be maintained in the 80,800-acre Lake Pleasant HMA. Burros, wildlife, and livestock would continue to compete for forage and water at an expected constant level due to environmental constraints and management control of burro numbers (e.g. herd gathers).

If all animals in the Harquahala herd are gathered and permanently removed, upland vegetation would slightly increase, and the riparian area would slightly improve in Browns Canyon. Competition with livestock and

wildlife for water would also decline. Because burros use this area only seasonally, impacts from their use would vary on a yearly basis. A corresponding small decrease in soil erosion could be anticipated with the decline in trailing of the animals between their forage areas.

Alternatives B, C, D, and E (Proposed Alternative)

Continued management actions in the Lake Pleasant HMA and the Harquahala HA over a combined area of 237,055 acres would not significantly change present use patterns or affect rangeland resources or livestock use.

4.16.13 From Management of Travel Management

Alternative A (No Action)

Vehicle limitations in Perry Mesa ACEC have reduced the potential for upland vegetation damage by unauthorized cross-country OHV travel.

Damage to roadside vegetation has increased due to unauthorized OHV travel around poorly maintained segments of roadway. Decreased OHV travel would reduce the potential for animal stress. The OHV travel restriction has also decreased the potential for animal-vehicle collisions.

Alternatives B, C, D and E (Proposed Alternative)

For *Alternatives B, C and E* in both planning areas, limiting vehicular travel in these same areas would reduce damage to upland and riparian vegetation, stress to animals, risk of animal-vehicle collisions, and potential vectoring of noxious weeds.

No impacts under *Alternative D*, since grazing is terminated from the planning areas.

4.16.14 From Management of Wilderness Characteristics

Alternative A (No Action)

There are no impacts, there are no areas are under consideration for management of wilderness characteristics.

Alternatives B, C, D and E (Proposed Alternative)

For *Alternatives B, C and E* in both planning areas, discretionary surface disturbing activities not compatible with achieving the DFC for each management unit could result in varying degrees of impacts to rangeland management. If range improvements that would improve livestock distribution are prevented from being constructed there could be increased soil erosion and decreased forage vegetation associated with concentrated livestock use. No impacts under *Alternative D*, since grazing is terminated from the planning areas.

4.17 Impacts on Minerals and Energy Resources

This analysis discusses the impacts of the Alternatives on developing valuable minerals on public lands. In addition to the land surface in Federal ownership, this plan addresses lands where BLM retains subsurface (mineral) rights—an area of 346,300 acres within the planning area's boundaries and 181,200 acres to the north and east of the planning areas.

BLM manages three categories of minerals:

- leasable minerals: which include oil, natural gas, coal, sodium, and geothermal resources;

- saleable minerals: also known as mineral materials, which include sand and gravel, decorative rock, and other common minerals; and
- locatable minerals: which include precious metals such as gold, silver, copper, and some industrial minerals such as gypsum and clay.

Several approaches to mineral leasing are available under 43 CFR 3100 to 3500, the regulations for issuing mineral leases. The options include opening areas to leasing, subject to the following:

- the terms and conditions of a standard lease,
- minor constraints such as seasonal restrictions, or
- major constraints such as denying surface occupancy.

For locatable minerals, governed by the regulations in 43 CFR 3802, 3715, and 3809, and for saleable minerals, according to the regulations in 43 CFR 3600, the Alternatives determine which areas are to be open to the operation of the mineral leasing laws, mining laws, and mineral material disposal. In open areas, the Alternatives define any area-wide terms, conditions, or other special considerations needed to protect resources.

LEASABLE MINERALS

Oil and Gas

Background Information and Assumptions

Although the potential for oil and gas leasing is low to medium throughout the minerals planning area, the potential for leasing is low. The potential is somewhat higher in the areas north of 35 degrees north latitude.

Oil and gas exploration was active in the Bradshaw-Harquahala Planning Area from 1913 to the 1980s. No oil and gas development has occurred on public lands, and no proven reserves have been documented. There is now no leasing

interest. However, areas of moderate oil and gas potential do exist (Map 3-14).

The price of crude oil was a significant driving force for increased oil and gas exploration in the 1970s. The 1980s saw active exploration in the Basin and Range Physiographic Province of Arizona to test the Laramide Overthrust Trend. There has been no drilling since the 1980s. A trend toward increasing exploration is occurring throughout the United States as the active rig count increases with rising crude oil prices. Thus, there is potential for domestic crude demand to stimulate oil and gas exploration in the mineral planning area.

The following assumptions were considered when evaluating the Reasonable Foreseeable Development (RFD) for oil and gas in the decision area:

- Oil and gas drilling would increase in the next 20 years in response to increasing crude oil and gas prices, domestic demand, and decreasing domestic production.
- Advances in three-dimensional seismic acquisition and processing technology would improve the resolution of subsurface structural and/or stratigraphic traps and delineate potential reservoir targets.

Reasonable Foreseeable Development

The RFD for oil and gas in the Bradshaw-Harquahala Planning Area estimates that ten exploratory wells would be drilled on BLM-administered land in the decision area.

Disturbance to the Bradshaw-Harquahala Planning Area

The extent of land disturbance from exploration drilling is estimated from the mean generalized impact values presented by the Rocky Mountain Federal Leadership Forum (RMFLF 2002).

Those assumptions are as follows:

- The exploration well site would occupy 10 acres, and each development or production well site would occupy 5 acres, including roads.
- Pad reclamation would reclaim 50 percent of the exploration well drill pads for the long term.

Coal Potential

No coal deposits have been reported in the minerals planning area.

Geothermal Resources

Background Information and Assumptions

Five low-temperature geothermal resource regions are recognized in the Bradshaw-Harquahala Planning Area. These regions are shown as moderate potential areas on Map 3-14. There has been no significant development of geothermal resources. These low-temperature resources might be used for small-scale space heating and for resort spas.

The Bradshaw-Harquahala Planning Area has no geothermal energy leases and no indications for future leasing. The absence of geothermal leasing probably results from the limited uses for low-temperature resources and the great expense to explore and develop them.

The following assumptions were considered when evaluating the RFD for geothermal energy in the Bradshaw-Harquahala Planning Area:

- There would be no leasing interest in the next 20 years.
- Drilling costs to explore and develop subsurface geothermal energy would be comparable to costs for oil and gas exploration and would probably be too high for the limited revenue that a low-temperature geothermal energy would generate.

Reasonable Foreseeable Development

The RFD for geothermal energy in the decision area expects that no leasing, exploration, or development would occur in the next 20 years. Costs to develop low-temperature geothermal energy are prohibitive compared to the potential revenue generation and limited uses of those resources.

Disturbance to the Bradshaw-Harquahala Planning Area

No disturbance to public lands from geothermal development is foreseeable in the decision area during the next 20 years.

Sodium

Five areas of potential sodium exist in the planning area's subsurface. There has been no significant development of those resources and no indications for future leasing and development. The absence of sodium leasing in the planning area (except in the Luke Basin) is probably due to the limited demand for sodium and the great expense of exploring and developing it. Morton Salt is solution mining salt for industrial purposes from the Luke salt deposit. BLM has one lease with Morton for solution mining on the Luke deposit.

Reasonable Foreseeable Development

The RFD for sodium expects that no more leasing, exploration, or development would occur in the planning area in the next 20 years. Costs to explore and extract by drilling are considerable compared to the local demand and limited uses of sodium in Arizona.

Disturbance to the Bradshaw-Harquahala Planning Area

No disturbance to public lands is foreseeable from sodium development in the decision area in the next 20 years.

LOCATABLE MINERALS

Background Information and Assumptions

Mineral districts in the Bradshaw-Harquahala Planning Area are regions of known occurrences of and high potential for locatable metallic and non-metallic minerals (Map 3-15). Most of the mines have been inactive for many years because the cost to mine the commodity exceeds the commodity's market value. Several small-scale locatable mines now operate in the planning area. These mines generally operate on a sporadic base, depending on market conditions and financial support. These operations focus on placer gold, lode gold, and some industrial minerals.

The following assumptions were considered when evaluating the RFD for locatable minerals in the Bradshaw-Harquahala Planning Area:

- There would be three to five new small mines per year for the next 20 years and one to two large operations over the next 20 years. There would be 10 or fewer exploration-level operations per year.
- Each new small locatable mineral discovery would occupy less than 20 surface acres, including access. Exploration would disturb an average of 1 to 3 acres. The large mines are expected to be gold heap leach, which might disturb between 200 and 300 acres.
- Most mining would be on the surface, from recent trends in new mine permit applications to BLM.
- The commodity ore would be transported by surface road.
- Most of the surface would not be reclaimed during the life of the mine.

Reasonable Foreseeable Development

There would be three to five new small mines per year for the next 20 years and one to three large mines over the next 20 years. There would be 10 or fewer exploration-level operations per year.

Disturbance to the Decision Area

Each new small locatable mineral discovery would occupy less than 20 surface acres, including access. Exploration on an average would disturb 1 to 3 acres. The large mines are expected to be gold heap leach, which might disturb between 200 and 300 acres.

SALEABLE MINERALS

Background Information and Assumptions

The Bradshaw-Harquahala Planning Area has many locations for saleable mineral resources. Known occurrences (quarries and pits), prospects, and potential locations for saleable material on BLM-administered lands are shown on Map 3-16. Those locations have high potential for saleable mineral resources because they are known to occur. Most of the locations are actively used for dimension stone, decorative rock, or local construction.

The following assumptions were considered when evaluating the RFD for saleable minerals in the decision area:

- The demand for saleable minerals would increase during the next 20 years as population increases stimulate the building of new roads, structures, and infrastructure.
- An estimated 20 new saleable mineral pits would be permitted in the next 20 years.
- New quarry or pit access would require new road building because those locations are usually sited some distance from existing paved roads.

Reasonable Foreseeable Development

An estimated 20 new saleable mineral pits or quarries would be permitted or reactivated in the next 20 years. The type and volume of saleable minerals disposed are uncertain and would depend on the increase in community development and construction. The Bradshaw-Harquahala Planning Area now has seven decorative rock operations, three sand and gravel operations, and three free use permits. The

average disposal tonnages for three types of saleable mineral pits are as follows:

- Decorative rock – an average of 33,000 cubic yards/year/pit for seven active pits that average 40 acres per contract/permit.
- Sand and gravel – 50,000 cubic yards/year/pit from three active pits that average 40 acres per contract/permit.
- The free use permits operate sporadically, producing borrow sand and gravel, averaging less than 10,000 cubic yards/year.

The average annual current sales volume from those active BLM's saleable mineral pits in the Bradshaw-Harquahala Planning Area is 380,000 cubic yards. From the estimated average disposal of 38,000 cubic yards/year/pit from each of 20 new pits during the next 20 years, the disposal of 8 to 10 million cubic yards of saleable mineral materials is projected.

Disturbance to the Decision Area

Each saleable mineral pit would occupy 40 acres, which is the average area for the 10 saleable mineral pits that have active sales records. About 400 total acres would be disturbed by 20 new pits. Disturbance of the land surface would require reclamation at the end of the life of the pits.

4.17.1 From Special Designations

Alternative A (No Action)

Under current management in Agua Fria National Monument, in designated Wilderness Areas, and in other areas closed to mineral entry, any potential mineral or energy resource that might have been opened to development would not be developed. Impacts would be long term, but minor. The affected areas are closed to mineral development; therefore, no exploration would occur, and any undiscovered mineral resources would remain undiscovered. In these

areas, the potential is low for leasable minerals, moderate for saleable minerals, and varied for locatable minerals. No withdrawn areas have a high potential for locatable minerals and demand for saleable minerals could be met from other sources.

Maintaining the acres now withdrawn from locatable mineral entry and closed to leasable and saleable mineral development would continue to preclude mineral development. Current needs and future demands of public users would be affected. Table 4-4 shows how many acres are closed to the various mining types in each Alternative and Table 4-7 shows the mineral potential closed by mineral type for each alternative.

Alternative B

For Agua Fria National Monument, impacts would be similar to those described for *Alternative A*.

Because Tule Creek ACEC in the Bradshaw-Harquahala Planning Area would be closed to mineral leasing, mineral material disposal, and recommended for closure under the mining laws, any potential minerals or energy resources that might have been available for development would not be developed. Impacts would be long term but are expected to be negligible because of the ACEC's small size. Valid existing rights would be maintained.

If minerals were to be discovered here, they would not be developed, resulting in a loss of economic contribution to local communities, missed opportunity for jobs, missed opportunity for adding revenue to the national fund from the sale of mineral materials, and missed opportunity for extraction of energy resources. Based on current mineral production and demand in the area, the magnitude of impacts would be small.

Withdrawals and closures of this area from mineral activities would prohibit future mineral development and could inhibit the expansion of adjacent mining. Management decisions could

lead to effects on developing mineral and energy resources. These effects would affect the local economy. The current needs and expected future demands of public users and county, State, and Federal agencies could be adversely affected under this Alternative, although impacts are expected to be small.

Alternative C

Impacts in Agua Fria National Monument would be the same as those described for *Alternative A* despite potential additions to the existing Wild and Scenic River designation or proposed ACECs.

Impacts would be similar to those described in *Alternative B*, except more area would be closed to mining. Any potential mineral or energy resources would not be developed in the following places in the Bradshaw-Harquahala Planning Area because of (1) their withdrawal from location under the mining laws and (2) closure to leasing and mineral material disposal:

- Tule Creek ACEC and
- Sheep Mountain RNA ACEC.

The prohibition against mineral materials disposal would prevent sale of sand, gravel and decorative rock in:

- Vulture Mountains Raptor Area ACEC, and
- Black Butte ONA ACEC.

Alternative D

Impacts under *Alternative D* would be similar to those described for *Alternative C* in Agua Fria National Monument.

In addition to impacts similar to those described for *Alternative C* in the Bradshaw-Harquahala Planning Area, except that this Alternative has the largest acreage of Special Area Designations. Any potential mineral or energy resources that might have been open to development would not be developed in the following areas:

- Black Butte ONA ACEC,
- Harquahala Mountains ONA ACEC,
- Vulture Mountains ACEC, and
- Sheep Mountain RNA ACEC.

Also, any potential mineral leasing and mineral material sales that might have occurred would not occur in the Belmont-Big Horn Mountains ACEC.

Alternative E (Proposed Alternative)

In the Agua Fria National Monument, impacts under *Alternative E* would be similar to those described under *Alternative A*.

In the Bradshaw-Harquahala Planning Area, acreages closed to various mineral activities is similar to those for *Alternative A*. However, DFCs for the four ACECs would make many types of mining difficult or cost prohibitive to do. Impacts from this alternative are more similar to *Alternative C*.

4.17.2 From Lands and Realty Management

Alternative A (No Action)

Because the Agua Fria National Monument is closed to mineral entry, no impact is expected.

Under the current management of the Bradshaw-Harquahala Planning Area acquiring non-Federal mineral estate underlying Federal surface holdings in the two RCAs would constitute a net gain of potentially developable mineral resources.

Reconveyed lands in the Black Canyon Corridor are closed to leasing, location, and mineral material disposal. These areas have moderate to high potential for production of small quantities of precious minerals, sand, and gravel. Keeping them closed precludes opportunities for mineral development and a potential stimulus to the economies of Black Canyon City and Cordes Lakes.

Small tract lands are also closed to location. Most are of low potential, but some opportunities to develop locatable minerals may be forgone. Small tract lands are private surface/Federal mineral; therefore, any development could cause conflicts with the surface owner.

Development of specific utilities can potentially interfere with removal of mineral resources. Limitations of access to minerals along with the physical facilities associated with the utility can affect potential mineral extraction. These potential conflicts cannot be addressed until specific utility projects and/or specific mining plans-of-operation are proposed. Methods to minimize such conflicts include, but are not limited to: avoiding known mining activities when locating utility projects; accounting for utility facilities in development of mining plans-of-operation; and keeping communications open between mining and utility companies throughout the life of any mining operation.

Alternative B

Impacts in the national monument are the same as under *Alternative A*.

Under management of the Bradshaw-Harquahala Planning Area, issuance of rights-of-ways, leases, and patents would establish superior rights to later mineral development. These rights-of-way, leases, and patents could also cause temporal or spatial access restrictions. Segregations and withdraws for leases/patents could inhibit mineral development. Authorization of rights-of-way for facilities such as roads, highways, and power lines would benefit locatable mineral operations by providing access and infrastructure.

Land ownership adjustments could result in BLM acquiring or disposing of lands with mineral value and could either increase or decrease opportunities for development. Acquiring more legal access across private or other lands would increase opportunities to explore and develop areas that might not be accessible by other routes.

The opening of reconveyed lands to leasing, location, and mineral material disposal could provide opportunities for mineral development.

The opening of small tract lands to location could provide opportunities to develop locatable minerals. Because small tract lands are private surface/Federal mineral, any development could cause conflicts with the surface owner.

Alternative C

Impacts would be similar to those described under *Alternative B*, except:

Within the Bradshaw-Harquahala Planning Area, the opening to leasing, location, and mineral material disposal of only those reconveyed lands with high potential for minerals could provide fewer opportunities for developing mineral resources than under *Alternative B*.

The opening to location of only those small tract lands with high locatable mineral potential would provide fewer opportunities for developing locatable minerals than would *Alternative B*. There would also be less conflict with surface owners.

Alternative D

Impacts would be similar to those described in *Alternative B*, except impacts of keeping all reconveyed lands and small tract lands closed to minerals development would be the same as *Alternative A*.

Alternative E (Proposed Alternative)

Impacts would be similar to *Alternative B*, except small tract lands would remain closed to mineral entry, denying opportunities for locatable mineral development on those parcels, like in *Alternative A*.

In addition, reconveyed lands would be opened to mineral development as in *Alternative B*,

except riparian areas would be closed to mineral material sales. No impacts are expected from this closure.

4.17.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

No impacts are expected in the Agua Fria National Monument, since the monument is closed to mineral entry.

In the Bradshaw-Harquahala Planning Area, managing soil resources requires mitigating impacts to topsoil by removing, stockpiling, and replacing soil and/or reclamation requirements to develop suitable substitutes. This mitigation would increase the cost of mining and in some cases might make mining uneconomical. Management objectives seeking to enhance soil stability would limit mining in areas with highly erodible soils and steep slopes.

Other requirements can be placed on mineral operations to protect ground and surface waters and to limit impacts on riparian areas. These requirements would increase exploration and mining costs, potentially making some locations uneconomical.

Managing air quality imposes limits on the impacts of mining by requiring reduced particulates, dust, and emission of hazardous air pollutants. As with soil and water requirements, air quality requirements would increase the cost of mineral exploration and development and might make some locations uneconomical.

4.17.4 From Biological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected in the Agua Fria National Monument, since the monument is closed to mineral entry.

In the Bradshaw-Harquahala Planning Area, tortoise habitat restrictions decrease opportunities for developing mineral material resources, especially boulder sales. Required mitigation to eliminate or reduce impacts from mining could result in more expenses and longer permitting times for developers.

Wildlife stipulations and mitigation would increase operating costs and permitting timeframes and; to a lesser extent, might require relocation of discretionary mineral actions. Development locations near important wildlife habitat might be constrained by the following:

- seasonal use restrictions,
- buffer zones, and
- noise controls.

Mineral development is restricted in areas known to contain Threatened and Endangered (T&E) species. The discovery of T&E species on a site might interrupt operations.

4.17.5 From Cultural Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected in the Agua Fria National Monument, since the monument is closed to mineral entry.

In the Bradshaw-Harquahala Planning Area, increased costs of mineral development and delays in the evaluation and approval of proposed activities could result from the following requirements:

- surveying for cultural resources before any surface disturbance and

- mitigating impacts on cultural resources found before or during surface disturbance.

4.17.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Paleontological resource management is not expected to affect minerals and energy resources. The discovery of paleontological resources during development could increase the costs of mineral extraction.

4.17.7 From Recreation Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected in the Agua Fria National Monument, since the monument is closed to mineral entry.

Protecting important recreational areas through recreation resource allocations such as SRMAs might limit potential surface disturbances from mineral development. They also limit the area where development can occur. Though most of these allocations do not close areas to mining, compliance with management prescriptions would increase development costs, making some locations uneconomical to develop.

4.17.8 From Visual Resource Management

Alternative A (No Action)

Under *Alternative A* no VRM classes have been established. For the most part, visual resources have been managed to Class III. Visual resource management is not expected to affect minerals and energy resources.

Alternatives B, C, D, and E (Proposed Alternative)

While the impacts of VRM Class III and Class IV to mining would be similar and comparable to what is already required in current reclamation standards, Class IV management provides added flexibility. VRM Class I or II objectives and mandatory compliance with them would increase the costs of any potential mineral development. In many cases, discretionary mineral development and related infrastructure would not be compatible with VRM objectives, which would result in excluding those forms of mineral development. Table 4-6 shows the VRM Classes that would be allocated in each Alternative.

4.17.9 From Rangeland Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Rangeland management is not expected to affect mineral and energy's resources.

4.17.10 From Minerals Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Impacts to mineral exploration and development result from prescriptions intended to manage and protect other resources; therefore, no impacts are expected.

4.17.11 From Fire Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Current conditions would be maintained. Fire management would be a benefit for mining by

providing more protection against devastating wildfires. Such impacts would generally be short-term and would not affect the long-term development potential for minerals and energy.

4.17.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Wild horse and burro management under any Alternative is not expected to affect minerals and energy resources.

4.17.13 From Land Health Standards

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Compliance with Land Health Standards would require more stringent reclamation standards, resulting in higher reclamation and bonding costs and a greater delay in bond release.

4.17.14 From Management of Travel Management

Alternative A (No Action)

No impacts are expected.

Alternatives B, C, D and E (Proposed Alternative)

Transportation management requirements impose more limits on the number and location of roads and require mitigation to reduce impacts. Travel management provisions under all Alternatives would require authorization to drive off-road to access mining claims or conduct exploration. Fewer access roads would inhibit access for prospecting. Improved road conditions leading to improved access would facilitate operating existing and potential mines.

4.17.15 From Management of Wilderness Characteristics

Alternative A (No Action)

There are no expected impacts.

Alternatives B and C

Lands allocated to maintain wilderness characteristics would be closed to mineral material disposal. This would help preserve the natural and primitive characteristics of these areas.

Alternative D

Impacts would be the same as *Alternative B* except that in addition to closing mineral material disposal, lands allocated for management of wilderness characteristics would also be closed to mineral and geothermal leasing. Under this Alternative lands allocated to manage wilderness characteristics would be withdrawn from mining laws. Closing these areas to mining activities would prevent the exploitation of potential resources, but would ensure preservation of natural and primitive characteristics more than other Alternatives.

Alternative E (Proposed Alternative)

All public lands within the planning area would be open to mining activities except for legislatively withdrawn areas and other withdrawn and segregated areas. As a result areas allocated to manage wilderness characteristics would have no impact.

4.18 Impacts on Fire and Fuel Resources

4.18.1 From Special Designations

Alternative A (No Action)

Two ACECs under current management limit motorized vehicles. This management is not expected to affect wildfire response, suppression, or fuel management, because traffic restrictions would not apply to either emergency or administrative needs.

The one RCA and two MRMAs, within Agua Fria National Monument, would be replaced by Agua Fria National Monument management. The area of limited development and access would increase. These limitations would affect fire by decreasing opportunities for accidental human-caused ignition. Also, fewer improvements and structures would affect suppression.

Wilderness designations could restrict the amount and type of fire suppression. A total of 11 percent (96,820 acres) of the Bradshaw-Harquahala Planning Area is wilderness. Motorized equipment may be used in wilderness in emergency circumstances, guided by MIST and minimum tool concepts, making use of the least damaging equipment and methods consistent with the safety of the public and firefighters.

Alternative B

In Agua Fria National Monument designating the Bloody Basin Road Back Country Byway would likely increase recreation use of the area and would proportionally increase opportunities for human-caused ignitions.

In the Bradshaw-Harquahala Planning Area designating the Constellation Mine Road Back Country Byway could increase recreation use of

the area and would proportionally increase opportunities for human-caused ignitions.

Alternative C

In Agua Fria National Monument designating four new ACECs would limit vehicular travel and vehicular access to all or portions of the ACECs. *Alternative C* is not expected to have any short-term impacts on wildfire response suppression or fuel management because the traffic restrictions would not apply either to emergency or administrative needs.

The Harquahala Mountains ACEC prohibits grazing and prohibiting grazing could increase fine fuels on the surface. This buildup could result in easier ignition and create a more continuous fuel bed that could increase the spread of fire.

The Vulture Mountains, Black Butte, and Sheep Mountain RNA ACECs would increase the area of limited development and access. These limitations could affect fire by decreasing opportunities for accidental human-caused ignition. They would also decrease improvements and structures that would affect suppression.

Alternative D

Impacts to fire under *Alternative D* would be similar to those described under *Alternative C*.

Alternative E (Proposed Alternative)

The impacts to fire management from Special Area Designations would be similar to those described for *Alternative C*.

4.18.2 From Lands and Realty Management

Alternative A (No Action)

Continued use of the existing utility rights-of-way is expected to temporarily affect fuels and

fire because of ground disturbance and increased opportunities for ignition during operation and maintenance.

Building more utilities, transportation corridors, and communications sites would affect fire by increasing opportunities for accidental human-caused ignition. More improvements and structures would do the following:

- affect suppression and costs by placing on the ground more features that could require protection from a wildfire,
- present more hazards, such as flight hazards from overhead power lines or explosion hazards of buried gas pipelines, and
- create restrictions to prescribed burning or fire suppression operations.

Historically, maintaining and building new utility projects have had minor impacts to the Fire Management Program. Impacts to vegetation and increases in fine fuels due to ground disturbance would be minimal and short term. Increased opportunities for ignition during operation and maintenance are expected to have negligible effects. Development of utilities within a corridor has the potential to increase fire occurrence and have both short and long term effects to fuels. In the short term, construction activities may create fuel breaks that could help suppression actions during a wildfire. In the long term, construction activities can provide disturbed areas and vectors that encourage establishment of invasive plant species that can increase fire occurrence, even to the point of changing fire regimes. Mitigation actions could include, but not be limited to: restrictions on vehicle parking to minimize likelihood of vehicle related fire starts; stipulations for metal welding and cutting operations that separate the activities from possible flammable fuels; construction and reclamation planning that minimizes the invasion of highly flammable non-native plants.

Impacts from disposal of as much as 54,370 acres of Federal land outside the MUs could include redistributing the overall Federal

land ownership and consolidating Federal lands into more contiguous management blocks. This disposal could reduce fire suppression and management responsibilities and increase their effectiveness. Suppression costs could decrease. Management would be more contiguous across the landscape (not broken by parcels of non-BLM ownership) with a resultant increase in the efficiency of operations. Depending on post-disposal land use, land disposal could affect both fire suppression and fuels conditions. Continued wildland uses and management would probably have negligible impacts. However, conversion to development uses would increase human populations and change ignition potential, fire behavior, and risk decisions. Additionally, visitor use on adjacent public lands could increase which could increase the potential for accidental human-caused fire starts. Developing these parcels would also do the following:

- expand the WUI,
- potentially increase fire suppression complexity, and
- costs increase the risk of public loss of life or property in the event of a wildfire.

Alternative B

Impacts would be similar to *Alternative A*, except potential disposal acres would be 58,400.

Alternative C

Impacts would be similar to *Alternative A*, except potential disposal acres would be 49,100.

Alternative D

Impacts would be similar to *Alternative A*, except no acres would be selected for disposal, so there would be no impacts related to land disposal.

Alternative E (Proposed Alternative)

Impacts would be similar to *Alternative A*, except potential disposal acres would be 38,755.

4.18.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Management objectives include meeting air quality standards. Meeting air quality standards limits the amount of prescribed burning in both planning areas. Every prescribed fire requires an approved prescribed burn plan that lists predetermined prescription criteria for weather and fuel conditions. The plan also includes smoke management criteria, which are important to determining the complexity of the prescribed fire. These criteria define measures that would be taken to reduce smoke impacts on sensitive receptors from prescribed fire. All prescribed fires must be approved by the ADEQ before being implemented. State air quality regulations enforced by ADEQ meet or exceed Federal standards.

Implementing prescribed fire in fire-adapted environments and fuel treatments in other high-risk locations would improve watershed conditions, increase soil cover, and promote proper water flows.

4.18.4 From Biological Resource Management

Alternative A (No Action)

In Agua Fria National Monument, fire management is affected by the area where endangered fish exist. The size of prescribed fires is limited by a restriction in the biological opinion that not more than half of a watershed can be burned during prescribed fires. Also, canyon areas cannot be burned. These restrictions affect fire by limiting the areas where prescribed fires can occur. After a burn, fish habitat must be monitored for erosion and soil movement into streams, which might affect water quality.

The impacts of biological resource management on fire suppression would consist of restrictions imposed on suppression strategies to protect priority habitat and species from disturbance from heavy equipment. Examples of these restrictions would be (1) prohibiting heavy equipment such as dozers in building firelines and (2) restricting fire vehicles to existing roads.

In both planning areas, sensitive and T&E species might limit actions on fuel treatments (such as what vegetation types can be treated in specific areas or at specific times), surface disturbances, and fuel treatment methods allowed. Seasonal restrictions to protect sensitive and T&E species affect fire management by not allowing for prescribed burning and fire suppression during certain times of the year or in some areas such as in fawning habitat during pronghorn fawning season.

The allocation of WHAs also affects Fire Management. They would do the following:

- limit or mitigate vehicular access;
- prohibit development of new recreational facilities, improvements, and structures; and
- reduce public visitation in these managed areas.

These actions are expected to affect fire by decreasing the occurrence of human-caused fire ignitions and overall suppression costs

Alternatives B, C, D, and E (Proposed Alternative)

Impacts under *Alternative B* would be the same as under *Alternative A*, except that some closures of vehicle routes that conflict with biological resource management might affect fire management by (1) reducing visitor use to the area and (2) decreasing the opportunity for human-caused fire ignitions.

4.18.5 From Cultural Resource Management

Alternative A (No Action)

Minimum Impact Suppression Tactics (MIST) are used to protect cultural resources during suppression. When implementing MIST, fire managers use the fewest fire suppression resources, and least-impacting tools and equipment to effectively manage and suppress fire, while (1) meeting fire management protection and resource objectives and (2) minimizing the impact to cultural resources and the landscape. Examples of MIST used by fire managers include the following:

- limiting fire vehicles to established road rights-of-way;
- burning out from existing roads, trails, and natural breaks; and
- placing firelines and retardant lines away from known cultural sites.

MIST applies indirect attack strategies more often than direct attack strategies. Where areas are not surveyed, cultural sites could be unintentionally damaged, especially flammable structures. Mitigation measures taken by fire managers to protect cultural sites in suppression and prescribed fire would reduce the known and unknown impacts to cultural resources. The expected results include more area burned by wildfires and increased suppression costs.

In prescribed fires, protecting cultural resources results in the following measures:

- relocating planned firelines,
- adjusting the size of burnblocks,
- mitigating adverse effects by removing vegetation around cultural sites to protect them, and
- determining where prescribed fires might or might not be planned from known cultural resources.

Such measures would have the following results:

- increasing project costs to protect cultural sites;
- spending more time and cost in planning, and
- excluding some areas from burning because of the presence of cultural resources.

Alternatives B, C, D, and E (Proposed Alternative)

In Agua Fria National Monument developing High and Moderate public use cultural site interpretation would affect fire and fuel management because of increased recreation use of the area and the developing of visitor services, including structures. This outcome would affect fire management by increasing the risk of accidental human-caused ignition. This increased risk would be minimal during the peak fire season (summer) because most visitor use would occur during the late fall, winter, and early spring. Increased visitor use is expected to only slightly affect opportunities for fire use or prescribed fire.

The number of improvements and structures could also increase, which could lead to changes in suppression decisions and commitments of suppression resources. *Alternative B* would have the most sites and facilities open to visitation and public use. *Alternative B* is also expected to have the most public visitation of all Alternatives.

In the Bradshaw-Harquahala Planning Area, allocating SCRMA and developing sites for interpretation would increase the risk of accidental human-caused ignition. These measures would also increase the number of improvements and structures, which could change suppression decisions and commitments of suppression resources. The relative size of impacts would be as follows:

- greatest under *Alternative B* (316,103 acres of SCRMA, representing 35 percent of the planning area)

- intermediate under *Alternative C* (276,527 acres of SCRMA, representing 31 percent of the planning area)
- least under *Alternative D* (125,292 acres of SCRMA, representing 14 percent of the planning area)

See Tables 2-3, 2-4, and 2-5 to view the different areas allocated to different use levels under each Alternative.

4.18.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected from paleontological resource management.

4.18.7 From Recreation Management

Alternative A (No Action)

Current recreation access poses a risk of human-caused fire ignitions. As recreation use increases, fire frequency would increase..

In addition, target shooting anywhere would increase the potential for accidental human-caused ignitions. Shooting is a common cause of wildfire in some areas.

Alternative B

Increases in recreation visitation would result in increased occurrences of human-caused ignition. Allowing dispersed camping with few limitations could also increase the risk of human-caused ignitions.

In both planning areas allocations of Front Country RMZs, Back Country RMZs, and SRMAs would result in allocating roads and trails for commercial and motorized competitive events as well as motorized recreation. In

addition, staging and camping areas would be developed to meet the high demand for recreation. These measures would affect fire by increasing the risk of accidental human-caused ignition. The potential for human-caused fire starts would increase as a result of increases in the following:

- visitor use,
- target and recreational shooting,
- motorized recreation use confined to designated routes, and
- unauthorized off-road use.

The potential for accidental human-caused fire starts would increase as a result of dispersed non-motorized non-commercial individuals, group activities, and public camping not under SRPs. The presence of improvements and increased visitor use could change suppression decisions, prioritization of resources, and resulting costs.

Alternative C

Impacts in planning areas, Front/Back Country RMZs and SRMAs, would be similar to those described for *Alternative B*. In SRMAs where vehicles use is restricted potential human-caused ignitions would decline.

Alternative D

Impacts in planning areas, Front/Back Country RMZs and SRMAs would be similar to those described for *Alternatives B*, except there would be more restrictions on vehicle use and risk of human-caused ignitions would decline.

Alternative E (Proposed Alternative)

Impacts for *Alternative E* are the same as those described for *Alternative B*.

4.18.8 From Visual Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.18.9 From Rangeland Management

Alternative A (No Action)

Current grazing practices affect fire management in many ways. Improvements designed for managing livestock, such as water facilities, fences, corrals, and other structures, present a risk of property loss in the event of a wildfire, as well as potential hazards to fire fighters and fire operations. On the other hand, many wildfire suppression actions depend on water from range improvements.

Livestock removing forage, especially light fuels in the form of grasses and forbs, can reduce the potential of a site to carry fire and result in fewer fires of lower intensity or lower rates of spread. A history of grazing, especially improper grazing, can convert ecological types. Conversion of grasslands or ecological types with naturally high grass components to types with higher woody species can result in lower fire frequencies but higher fire intensities when these converted types do burn. In these cases, wildfires might not burn as often, but the likelihood of a catastrophic fire increases.

Livestock grazing in the Sonoran and other western desert ecosystems has led to rapid invasion of Mediterranean annual grasses and forbs, most notably red brome (*bromus rubens*) and downy brome (*bromus tectorum*), which have increased the fire frequency in ecosystems where the natural vegetation is not fire adapted. The potential outcome of this invasion is the possibility of creating a fire-dependent plant community consisting mainly of non-native

invasive annual plants, and the eventual loss of native desert vegetation in those places.

Woody species have encroached on the natural desert grasslands, reducing natural fire frequency and reducing light fuels to carry natural fires. As a consequence, a prescribed burning program has been developed to reduce woody species and encourage recovery of natural grasses. Many factors affect the success of the prescribed fire program, not the least of which is the assurance of adequate amounts of fuel to carry a fire. Livestock grazing in areas planned for burning can remove enough fuel to reduce or eliminate the opportunity to successfully burn. Rest from livestock of a season or more in those same pastures can also increase the opportunity for natural fire starts from lightning or from unplanned human ignition.

In Sonoran desert vegetation communities, prescribed burning is confined to the fire adapted Arizona Interior Chaparral vegetation communities, mainly in the foothills of the Bradshaw Mountains. Livestock grazing in those areas would have little effect on prescribed or wildland fire operations. In desert scrub and other desert communities, wildfires depend on large volumes of ephemeral annual grass and forb production, generally after winters with above-average precipitation. Livestock operators commonly apply for increased livestock numbers to take advantage of abundant forage. In years where the amount of ephemeral production is marginal, high livestock numbers can reduce the potential of large fires. In years with extraordinary ephemeral production, perhaps 1 year in 10, livestock would not affect fire potential.

Riparian areas are not typically in a prescribed burn treatment area, but specific vegetation objectives might allow for prescribed fire use.

Alternatives B, C, D, and E (Proposed Alternative)

In Agua Fria National Monument *Alternative B* would allow some naturally ignited fires to burn

if defined prescriptive conditions are being met. This could reduce the cost of prescribed burning, but may increase the risk of escaped wildfires. Nevertheless, impacts would be similar to those under *Alternative A*.

4.18.10 From Minerals Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

The Bradshaw-Harquahala Planning Area allows new mineral entry as well as development of existing mineral rights. The result is an increase in human activity and in the probability of human-caused fire ignitions. Development associated with mining also increases the risk and complexity of wildland fire suppression operations. Since the Agua Fria National Monument is closed to new mineral entry, there are no fire impacts related to mineral development.

4.18.11 From Fire Management

Alternative A (No Action)

In both planning areas current fire management practices require full suppression using suitable management response on all wildfire starts (both human and natural ignition caused). Fire suppression on small-fire starts can prevent fires from becoming large and harming resources but does not allow for wildland fire use under a predetermined fire prescription. However, current management practices allow only for implementing management-ignited prescribed fire.

In the Bradshaw-Harquahala Planning Area, 14,000 acres have been selected for prescribed fire treatments in the Weaver Mountains. Prescribed fire objectives are to conduct multiple prescribed fire treatments over 5 to 10 years to treat hazardous fuel accumulations in interior chaparral vegetation. The treatments

would create a diverse mixed-aged stand of interior chaparral. Creating a mosaic pattern of burned and unburned areas in the treatment area would reduce the threat of large catastrophic wildfires and maximize benefits to wildlife and livestock grazing.

Existing roads and disturbed areas would be used in fire suppression and prescribed fire to avoid impacts to other resources, especially cultural resources.

The encroachment of urban development on adjacent private lands could affect wildland fire suppression strategies and tactics, depending on the time of year and intensity of wildfires. Wildland Urban Interface areas (WUI) would not allow the option of using wildland fire. WUI would also affect the following aspects of prescribed fire operations on public lands:

- limiting the location of burnblocks,
- altering firing operations,
- increasing the sensitivity to smoke and smoke management,
- impairing visibility and public health, and
- increasing prescribed fire cost because of the added work to protect WUI areas, such as building new firelines and adding fire resources (engines, firefighters, helicopters).

Alternatives B, C, D, and E (Proposed Alternative)

In both planning units some wildland fire would be allowed if defined prescriptive conditions are being met. Wildland fire use would allow for fire to play its natural role, especially in the Agua Fria National Monument tobosa grasslands. Wildland fire use would do the following:

- help to maintain and enhance this grassland ecosystem,
- encourage perennial grass species, and
- reduce the encroachment of woody species.

Wildland fire use would be beneficial in both planning areas except in the Sonoran Desert vegetation communities, which constitute the majority of vegetation communities in the Bradshaw-Harquahala Planning Area.

Suppression impacts would be similar to those described for *Alternative A*.

4.18.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Wild horse and burro management would not affect fire management under any of the Alternatives.

4.18.13 From Management of Travel Management

Alternative A (No Action)

Restricting vehicles to existing roads and trails in the Phoenix Resource Management Plan (BLM 1988a), would reduce the potential for accidental human-caused ignitions. The limits on motorized vehicles could reduce the potential for human-caused wildfire ignitions. This restriction affects fire suppression strategies as well as options for fuel treatment. Limits on vehicle access also affect the number and type (OHV versus pedestrian) of visitors to these areas, thus reducing the probability of human-caused ignitions.

The probability of human-caused fire continues to increase as a result of an expanding human population. Initially, no major impacts to the Fire Management Program are expected, but as increases in vehicle travel on designated routes continue, the potential for human-caused fire would also increase.

Alternative B

Impacts to fire under *Alternative B* would be similar to those described for *Alternative A*.

In both planning areas confining vehicles to designated routes would reduce the potential for accidental human-caused ignitions. This restriction is especially important in grassland fuel types. In SRMAs where vehicle use is restricted potential human-caused ignitions would be reduced.

Alternative C, D and E (Proposed Alternative)

The impacts would be the same as under *Alternative B*.

4.18.14 From Management of Wilderness Characteristics

Alternative A (No Action)

There are no areas under consideration for management of wilderness characteristics; therefore, there are no impacts on fire management.

Alternatives B, C, D, and E (Proposed Alternative)

For both planning areas, management of wilderness characteristics may impact fire suppression by constraining the construction of new firelines using heavy equipment. Implementation of appropriate management response for values at risk would offset the impacts from the potential loss of heavy equipment. Management of wilderness characteristics is not anticipated to have a negative impact on either fire suppression or fuels treatment within the designated areas.

4.19 Impacts on Wild Horses and Burros

4.19.1 From Special Designations

Alternative A (No Action)

No impacts are expected to the animals present or their habitat elements as a result of continuing to implement current management of the Hells Canyon or Hummingbird Springs Wilderness Areas. In the event of a gather in these areas, a site-specific analysis would be completed for the use of motorized equipment. The Harquahala burro herd is small. According to the manageability analysis in Appendix G, the herd is probably too small to contain enough genetic diversity to be a viable population. Removing any burros would reduce the herd's genetic diversity even further.

Alternative B

Tule Creek ACEC would be fenced to deny livestock access. Burros would continue to use the area.

No other Special Designations would be created under *Alternative B* in the Harquahala HA.

Alternative C

Under *Alternative C*, Tule Creek and Sheep Mountain RNA ACECs would be designated in or near the Lake Pleasant HMA but would not affect the burro herd.

Designating the Harquahala Mountains ONA ACEC would not affect the burro herd.

Alternative D

Impacts to the Lake Pleasant HMA would be the same as described for *Alternative C*.

Alternative D would designate two ACECs in the Harquahala HA: the Harquahala Mountains ONA ACEC and the Belmont-Big Horn Mountains ACEC. Despite the larger area in ACEC designations, impacts to burros would be the same as described for *Alternative C*.

Alternative E (Proposed Alternative)

Impacts to the Lake Pleasant HMA would be the same as described for *Alternative C*.

Designating the Harquahala Mountains ACEC would not affect the burro herd.

4.19.2 From Lands and Realty Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.19.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

No impacts to burros are expected from the management of soil, water, or air resources.

4.19.4 From Biological Resource Management

Alternative A (No Action)

Under No Action wild burros would continue to compete with native wildlife for forage and water. Developing water resources such as springs and seeps, which are designed to protect ecological functions, could affect wild burros by improving the habitat in the Lake Pleasant HMA and Harquahala HA. Projects that encourage developing a more reliable water source could

increase the forage production in the vicinity. Improvements, however, could include the installing of fences to prohibit cattle and wild burros from using the water sources, leading to a decrease in available water supply and less available habitat.

Alternatives B, C, D, and E (Proposed Alternative)

In the Lake Pleasant HMA impacts would be the same as described for *Alternative A*.

In the Harquahala HA allocation of the Harquahala Mountain WHA would not affect burros.

4.19.5 From Cultural Resource Management

Alternative A (No Action)

Reducing or eliminating impacts of land uses on cultural resources as identified through study plots could require installing fences, which could affect the wild burros by limiting their available range. The potential fenced areas would be small, only negligibly affecting available burro forage or habitat.

Alternatives B, C, D, and E (Proposed Alternative)

Wild burros could be affected by allocating the following:

- Lake Pleasant/Agua Fria SCRMA in the Castle Hot Springs MU, which includes 21,342 acres of the Lake Pleasant HMA, and
- Harquahala Mountains SCRMA in the Harquahala Mountains MU, which includes 24,299 acres of the Harquahala HA.

Any installing of fences to protect areas could limit the available range of wild burros. Any fence is expected to be small and to negligibly affect burros. Increasing visitor facilities could

pressure wild burros to migrate to less developed areas, possibly increasing human–burro interactions. Wild burros that become accustomed to human interactions are more likely to congregate around public areas, increasing the likelihood of injury to both wild burros and people. Additionally, with the increase in travel routes, recreational trails, and above-ground features (restrooms, picnic tables, benches, trash receptacles, interpretive signs), wild burros would be affected by the quality and quantity of diminishing wild burro habitat.

4.19.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.19.7 From Recreation Management

Alternative A (No Action)

Increasing OHV use could affect wild burros by increasing the possibility of vehicle-burro conflicts. Also, increases in recreation use could slightly reduce the amount of available forage from disturbance caused by camping, cross-country vehicular travel, and other recreation activities. The incidence of burro-human encounters could also increase, increasing the risk of injury to both people and burros.

Alternatives B, C, D, and E (Proposed Alternative)

Recreational use on designated motorized vehicle routes, in organized competitive events, and in developed staging/camping areas could decrease the amount of available habitat for wild burros and increase the risk of bodily injury to the wild burros during these events.

Areas allocated to non-motorized settings could help minimize impacts to vegetation from

motorized recreation, increasing available forage.

4.19.8 From Visual Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.19.9 From Rangeland Management

Alternative A (No Action)

Implementing Rangeland Health Standards (Land Health Standards) and Guidelines for Grazing Management (Rangeland Management) could improve overall vegetation, soil, and water conditions in Lake Pleasant HMA and Harquahala HA.

Maintaining existing authorized grazing allotments could give burros more water sources. Grazing practices, however, increase competition for available forage and water.

Alternative B

Impacts are expected to be the same as *Alternative A*, except building fences or implementing other barrier restrictions to riparian grazing during winter (November 1 to March 1) could affect wild burros. Areas excluded from livestock use would restrict wild burro access as well. These restrictions could affect the availability of forage and water for wild burros by increasing competition and decreasing available range size.

Alternative C

Expected impacts would be similar to those under *Alternative B*.

Alternative D

Eliminating all livestock grazing in the Bradshaw-Harquahala Planning Area would eliminate burro-cattle competition for forage and water. Unneeded grazing improvements would also be eliminated, which could lead to a decrease in available water sources for wild burros. Fences and cattleguards would likely be removed, which could expand the wild burros' available range.

Alternative E (Proposed Alternative)

Impacts would be similar to those under *Alternative B*.

4.19.10 From Minerals Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.19.11 From Fire Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected.

4.19.12 From Wild Horse and Burro Management

Alternative A (No Action)

Retaining the current Lake Pleasant HMA and managing the wild burros on BLM-administered public lands consistent with the Wild Horse and Burro Act of 1971 (WHBA) would potentially enhance the genetic viability of this herd by maintaining a thriving ecological balance. The social structures of the herd could be disrupted by removing nuisance animals when they are

reported and by gathering excess burros from the Lake Pleasant HMA to achieve the AML. Current plans prescribe removing all burros from the Harquahala HA.

Alternatives B, C, D, and E (Proposed Alternative)

Impacts to wild burros in the Lake Pleasant HMA would be similar to those described under *Alternative A*.

According to the herd manageability analysis in Appendix G, the Harquahala HA is not manageable. The herd area would not become a HMA. Nuisance burros and burros damaging sensitive habitats can be removed as funds are available. The impact of this action could be eventual removal of all burros in this HA.

4.19.13 From Management of Travel Management

Alternative A (No Action)

Increasing OHV use on existing and undesignated route networks, and increasing levels of OHV use in the western part of the Bradshaw-Harquahala Planning Area, could affect wild burros by increasing the possibility of vehicle-burro conflicts and cause a loss of habitat. Also, increases in motorized recreation use could slightly reduce the amount of available forage from disturbance caused by cross-country vehicular travel. Moreover, the incidence of burro-human encounters could also increase, elevating the risk of injury to both people and burros.

Alternatives B, C, D, and E (Proposed Alternative)

Wild burros and their movement and behavior are influenced by the presence of motorized and non-motorized trail users. Recreational use on designated motorized vehicle routes and route systems could decrease the amount of available habitat for wild burros and increase the risk of bodily injury to the wild burros during these

events. Increasing levels of use by visitors on designated non-motorized trails would further fragment burro habitat and cause burro to move to other areas. Burros would also be harassed by both motorized and non-motorized visitors.

Areas allocated to non-motorized settings could help minimize impacts to vegetation from motorized recreation, increasing available forage.

4.19.14 From Management of Wilderness Characteristics

Alternative A (No Action)

There are no impacts to wild burros, because no lands are allocated to the management of wilderness characteristics.

Alternatives B, C, D and E (Proposed Alternative)

The maintenance and enhancement of lands with wilderness characteristics could reduce the number of motorized vehicle routes, end cross-country vehicle travel, and maintain ecological conditions. Overall, this allocation would have minimal impacts on the number or location of wild burros. Areas allocated to non-motorized settings could help minimize impacts to vegetation from motorized recreation, which would increase the available forage. The level of

harassment of wild burros would be less in areas managed for wilderness characteristics since most of the areas have few trails and overall lower levels of visitation than motorized settings. Increased levels of primitive recreation into burro use areas could lead to the harassment of burros and their movements away from hikers, equestrians, and campers. This would be significant only if the visitors occupy critical burro watering areas during periods of heat stress.

4.20 Impacts on Travel Management

A route network for access and recreation would be designated for Agua Fria National Monument as part of the RMP. For the Bradshaw-Harquahala Planning Area, designating routes is to be completed in 5 years after the plan is approved. To understand the impacts of routes and access in the Bradshaw-Harquahala Planning Area for the RMP Alternatives, a model route system was developed. The model system is partially based on the inventory and the evaluation process that was performed to develop the alternative route networks for Agua Fria National Monument. The preliminary route model and general approach to the route designation process are in Appendix N. The general assumptions for developing the model route system are outlined below

- The routes total 2,240 miles, excluding highways.
- The route total is based on the new route inventory where it has been completed and on Arizona Land Resource Information System (ALRIS) and county data where the inventory is not complete.

The approximate miles of routes in management zones are shown in the route distribution on Table 4-8.

Table 4-8. Route Distribution (in miles)

Management Area	Alt A	Alt B	Alt C	Alt D	Alt E
ACECs	0	0.2	19	0	143
Areas alloc to maintain wilderness characteristics	0	47	9	0	35
ERMA and SRMA	2,240	2,086	1,889	1,645	2,028

4.20.1 From Special Designations

Alternative A (No Action)

Two ACECs are within the monument. The Larry Canyon ACEC (80 acres) would remain closed to motorized vehicles and the Perry Mesa ACEC (9,580 acres) would limit motorized vehicles to designated roads and trails.

The five designated wilderness areas encompassing 96,820 acres within the Bradshaw-Harquahala Planning Area would remain closed to motorized vehicle use.

Motorized uses associated with the Harquahala Mountain Summit Backcountry Byway would continue to be positively impacted due to the interpretation, staging areas, amenities, route markings and periodic maintenance.

Continued management of proposed Wild and Scenic River segments for non-impairment may restrict use of some route segments.

Alternative B

Most motorized routes would remain open to vehicular travel in Agua Fria National Monument (see Section 2.3.1.8), but monument lands would remain closed to cross-country motorized travel to protect the monument's objects. All travel by motorized and mechanized vehicles would be restricted to designated routes as in *Alternative A*.

Impacts from suitable Wild and Scenic Rivers segments would be similar to *Alternative A*.

Bloody Basin Rd would be studied to decide whether to not to pursue designation of a Backcountry Byway in a plan amendment. If Bloody Basin Rd was designated, this would focus more attention on maintenance and interpretation.

Designated wilderness areas in the Bradshaw-Harquahala Planning Area and the Harquahala

Mountain Summit Backcountry Byway would have similar impacts as *Alternative A*.

The Constellation Mine Road Backcountry Byway would have a positive effect on the travel and transportation network. Increased management would result in more positive visitor experiences. Use would likely increase on the road area which may negatively impact local residents since additional litter, trespass and dust are likely. Improved management by signing, mapping and volunteers could lessen the impacts to local residents. Most use would be confined to areas adjacent to the byway, so effects are expected to be minimal beyond the road. BLM maintenance on Constellation Road would be continued at the current standard.

Special Area Designations would likely cause the alteration of the route network. Closing washes, vehicle pullouts and routes to campsites are likely actions in some areas as a result of the route evaluation/designation process. In the Tule Creek ACEC, all routes within the fenced area would be closed to vehicles as they are currently.

Alternative C

In AFNM, the designation of four ACECs for Gila Chub protection, would close approximately ½ mile of route at Silver Creek. The ACECs generally include streams located in incised canyons that contain no routes or motorized access.

Impacts on the suitability of the Agua Fria River and additional tributaries for Wild and Scenic River eligibility are similar to those in *Alternatives A*.

The Tule Creek ACEC would have impacts similar to *Alternative B*.

Impacts from designation of additional ACECs would be determined through the route evaluation/designation process described in Appendix D. Some ACEC prescriptions limit construction or establishment of new routes which limit the ability of BLM and user groups

from planning and installing a vehicle-based long distance route network. Specifically, the Harquahala ONA ACEC (41,670 acres), Black Butte ACEC (800 acres) and Vulture Mountain ACEC (2790 acres) all specify no new route building.

The five designated wilderness areas within the Bradshaw-Harquahala Planning Area and the Harquahala Mountain Summit Backcountry Byway would have impacts similar to those described under *Alternative A and B*.

Alternative D

The Bloody Basin Road Backcountry Byway would not be established and current conditions would be maintained.

Designation of the Agua Fria River Riparian Corridor ACEC within the monument would have impacts similar to the Wild and Scenic River eligibility study and suitability determination as described in *Alternative A*.

The model route system for *Alternative D* would close 412 miles of routes in ACECs within the Bradshaw-Harquahala Planning Area. The quality and quantity of motorized recreational experiences and opportunities could diminish by imposing restrictions in ACECs. These ACEC route closures could significantly diminish opportunities for visitors using motorized vehicles and lead to the disconnection of multiple routes in the travel network. These impacts are described in detail below.

The Tule Creek ACEC would have similar effects as described in *Alternative B*.

Impacts from designation of additional ACECs would be determined through the route evaluation/designation process described in Appendix D. Some ACEC prescriptions limit construction or establishment of new routes which limit the ability of BLM and user groups from planning and installing a vehicle-based long distance route network.

The five designated wilderness areas within the Bradshaw-Harquahala Planning Area and the Harquahala Mountain Backcountry Byway would have impacts similar to *Alternative A*.

Nominating the Black Canyon Trail as National Recreation Trail would have a positive impact to non-motorized trail users. Motorized and non-motorized users would be separated along many parts of the trail. This separation would improve the experience of both motorized and non-motorized trail users in the Black Canyon Trail area.

Alternative E (Proposed Alternative)

Under the model route system for the Bradshaw-Harquahala Planning Area 114 miles of vehicle routes within ACECs would be closed. Impacts of route closures in ACECs would be similar to those described in *Alternative D*.

Nominating the Black Canyon Trail as National Recreation Trail would have similar impacts as those described in *Alternative D*.

The five designated wilderness areas within the Bradshaw-Harquahala Planning Area and the Harquahala Mountain Backcountry Byway would have similar impacts as those described in *Alternative A*.

4.20.2 From Lands and Realty Management

Alternatives A (No Action), B, C, D and E (Proposed Alternative)

Additional lands and realty authorizations would gradually expand the route and travel network. This would happen over the life of the plan as new rights of ways for private and State land access, land disposals and installation of new utilities, continues. These lands and realty actions and associated route construction would increase the motorized route network less than 1 percent annually over the life of the plan. These actions would directly and indirectly increase route connectivity and links with other route

networks for motorized recreation. On the other hand, subsequent development of these state and private lands could lead to the disruption or loss of public access. Historically, much of the public access to BLM-lands has been through private and State lands available for motorized and non-motorized user access to public lands. Development of State and private lands usually results in the loss or restriction of this traditional access.

During construction and during the operation and maintenance of equipment and facilities, existing access points may be closed or restricted and some new routes may be created. Actions could include, but not be limited to: closures of some areas to protect public safety and/or facilities or equipment associated with the utility; maintaining important route connections across or along utility rights-of-way where compatible with the utility facility and suitable for the type of access use (equestrian, hiking, bicycling, motorcycle, ATV, or full size vehicles); and stabilization of routes to optimize use.

Compliance with the Monument Proclamation would add requirements of such routes to minimize resource damage and would likely increase costs associated with new routes.

4.20.3 From Management of Soil, Air, and Water Resources

Alternative A (No Action)

Impacts from complying with land health standards, EPA water quality standards and other air quality standards such as PM₁₀ non-attainment may include site-specific route closures or mitigation to offset undesired effects of routes and their use to soil, air and water.

In the Bradshaw/Harquahala areas, vehicle route and OHV ‘play’ area closures on BLM-administered lands, required for protecting and mitigating resource damage; or to address adverse effects to soil, water and air resources,

could diminish the motorized route network over the life of the plan, especially near private property, residential and commercial land developments, city and community boundaries and State lands. Moreover, these actions would occur on a case-by-case basis as problems arise. Appendix T, Off-highway Vehicle Mitigation Examples, shows the typical type of mitigation that would be taken for common resource conflicts.

County, State and private owners would apply existing law or legal measures to curtail damage to their property from the effects of BLM-administered resources. Examples of potential resources issues affecting private and State lands include fugitive dust and PM₁₀ emissions from public roads and OHV travel, soil erosion from hill climbs and cross country OHV travel; and changes in water courses or water quality due to OHV travel and the public use of poorly engineered travel routes. Route and area closures enacted under 43CFR8342.1 and 43CFR8364 would impact the amount of motorized recreation activity and could diminish the overall route network’s linkage and connectivity to other travel route systems.

Alternatives B, C, D and E (Proposed Alternative)

Impacts on Transportation and Access management from localized case-by-case responses to soil, air and water damage or complaints would be similar to *Alternative A*.

Since route designation has not been completed, further analysis would be required on routes in the Bradshaw/Harquahala planning area.

On most public lands under all action Alternatives, BLM would take direct action during and upon designation of the Travel and Access network to reduce, eliminate or avoid impacts on both public and private soil, water and air resources. The designation of travel and access networks, the application of dust suppression technology, the rerouting and specific closure of problem routes, the application of buffer zones, the application of

SRMA prescriptions, and improving the engineering of the existing and new routes would reduce impacts to soil, water and air resources. Potentially, the existing route networks would be slightly reduced over time in order to protect air, water and soil resources; however, this reduction would not be significant.

4.20.4 From Biological Resource Management

Alternative A (No Action)

Resource conflicts are evaluated on a case by case basis

Alternative B

In the Bradshaw-Harquahala Planning Area 64,220 acres would be managed as Wildlife Habitat Areas (WHA) emphasizing wildlife habitat conservation. Managing WHAs could limit transportation access and vehicle routes that interfere with the conservation of the wildlife habitat. This limitation on access could shift transportation to other areas and concentrate vehicle usage on routes that remain open. New route construction for recreation purposes could be prohibited, while routes for resource management, such as wildlife waters, could be allowed on a case by case basis. Route connectivity in WHAs would be secondary to the wildlife management

Route closure or mitigation may be required to resolve conflicts between biological resources and public access management during the route evaluation/designation process.

Desert tortoise habitat management prescriptions may restrict construction of new routes and designation of existing routes.

Alternative C

In AFNM, impacts of managing biological resources, specifically Pronghorn Antelope, would cause the limitation of some routes to only administrative use. In the monument,

39,330 acres would be managed as WHA, reducing access more than previous Alternatives. Due to the current low use of areas away from Bloody Basin Rd, Pronghorn issues would not be an immediate cause for area closure, although use level changes may prompt further review.

Protection of riparian resources is the largest impact to the route network causing closure of 1.34miles in Badger Springs Wash, and 2.2 miles along Sycamore Creek.

This Alternative would also provide more active management of biological resources than *Alternatives A or B*. As a result, management of biological resources under *Alternative C* would have slightly more impact than *Alternative B*

In the Bradshaw/Harquahala area, impacts of WHA would be the same as *Alternative B except* that *Alternative C* would provide management of more WHA than *Alternative B*. 156,120 acres in the Bradshaw Harquahala Planning Area would be managed as WHAs.

Alternative D

In AFNM, impacts due to riparian area and wildlife management would be similar to Alt C.

Impacts of managing WHAs would be the same as *Alternative C* except that in the Bradshaw Harquahala Planning Area 18,020 acres would be managed as WHAs.

Alternative E (Proposed Alternative)

In AFNM, management of Pronghorn Antelope fawning and movement habitat could have the effect of possibly causing restrictions to the route network in the future if negative impacts are documented between human use of routes and Pronghorn behavior and or habitat fragmentation. There are 34.9 miles of designated open routes inside Pronghorn movement corridors and 23.7 miles inside fawning areas.

In Bradshaw/Harquahala area, impacts of managing WHAs would be similar to *Alternative C* except that in the Bradshaw Harquahala Planning Area 140,310 acres would be managed as WHAs. New route construction for recreation purposes could be prohibited, while routes for resource management, such as wildlife waters, could be allowed on a case by case basis. Route connectivity in WHAs would be secondary to the wildlife management purpose during route designation. Some routes, if determined to be incompatible with wildlife management, may be closed.

Management of biological resources under this Alternative would restrict less motorized access than *Alternative D*, but more than *Alternative C*.

4.20.5 From Cultural Resource Management

Alternative A (No Action)

Cultural resource management would have little impact on the existing Transportation and Access network. A few specific vehicle travel routes could be closed in the Agua Fria National Monument to protect cultural sites or mitigate existing resource damage, but the extent of such closures would have little overall impact on motorized opportunities and the current state of route connectivity.

Alternative B, C and D

Vehicle travel networks could be adversely influenced in some areas of the Agua Fria National Monument as some routes would be closed for cultural site protection. Route connectivity could be diminished and the quality of vehicle-based recreation pursuits would decline in the involved areas as the closures are implemented. Routes on Perry Mesa, Sycamore Mesa, and Black Mesa would be closed or partially closed to maximize protection of cultural resources. Specifically, a route north of Joe's Hill will be closed to public use to protect cultural resources. The route to Pueblo La Plata would be shortened to create more distance

between vehicle parking and known archeological sites.

In Bradshaw/Harquahala area, routes may be closed through the route evaluation/designation process if determined at that time to impact cultural resources.

Alternative E (Proposed Alternative)

Impacts on the Transportation network and public access for AFNM would be similar to those described under *Alternative B*. The potential closing of routes in the planning areas as protective measures for cultural sites would diminish or displace users in affected areas and possibly reduce the connectivity of the involved route networks. Opportunities for access to some cultural sites would be reduced or eliminated for motorized users, especially in parts of the Agua Fria National Monument. In the Bradshaw-Harquahala Planning area, the Black Mesa/Bumble Bee Cultural Resource Priority Area, and the Black Canyon Corridor, the Lake Pleasant/Agua Fria, Wickenburg/Vulture, Weaver/Octave, Harquahala and Galena Gulch SCRMA's could have reduced motorized access as a result of route designation after the plan.

4.20.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected because no paleontological sites are known to exist in the planning areas.

4.20.7 From Recreation Resource Management

Alternative A (No Action)

The Agua Fria National Monument is closed to cross-country motorized travel to protect monument resources; however, most existing

routes would remain open. In areas where vehicles are used, opportunities would remain unchanged since existing routes would be designated as open.

Most use of routes for vehicle based special recreation permits (SRPs) would be displaced to the Bumble Bee Area. Conversely, approved SRPs on AFNM would only use approved routes, regardless of transportation method, and would likely have a negligible effect on travel and transportation volumes.

In the Bradshaw-Harquahala Planning Area, nearly 100 percent of the 2,240 miles of vehicle routes would remain open. Existing types of motorized and vehicle-based recreation opportunities would continue unchanged.

Intensive vehicle based recreation, such as OHV driving, would be marketed to Special Recreation Management Areas established for such use. The Hieroglyphic Mountains, Table Mesa, Stanton, San Domingo and Vulture Mountains SRMAs are destinations for OHV recreation. The effect on Travel/Transportation would be an expected use increase proportionate to regional population increase over the life of the plan. Maricopa and Yavapai county populations are expected to grow by approximately 50 percent by 2025.

Alternative B

As in *Alternative A*, most routes would remain open to vehicular travel in Agua Fria National Monument. Recreational shooting restrictions could displace this use to other areas where it would be allowed. Most recreational shooting areas occur along roads, so the mix of route users could change in a given area. This is a key component in managing conflict among different public land uses.

The proposed route system, developed through an interdisciplinary evaluation process would enhance recreational opportunities for motorized users by creating loop trails, which would allow connected touring, provide for greater access, and offer more extended and dispersed

recreational opportunities. General access for motorized users would be improved by the development of about 5 miles of new routes needed to bypass private property and maintain route system connectivity. The proposed route system would retain 134 miles, close 37 miles of existing routes and could diminish opportunities for motorized recreation in some areas. Users of the routes that would be closed could be displaced to other areas within and outside the monument.

Under the model route system (Appendix N) for the Bradshaw-Harquahala Planning Area, about 93 percent of existing routes would remain open. A total of 169 miles of routes within the planning area could be closed to (1) protect resources, (2) reduce redundancy, and (3) limit routes for administrative use. The closures represent 6.9 percent of the routes in the planning area. Current motorized users would be displaced to other State and public lands. Up to 14 miles of new routes would be established to mitigate losses from the closures and to achieve better route connectivity. The total distance of open routes would eventually reach 2,086 miles. The overall effect of route management under *Alternative B* would be to maintain the existing recreation settings and opportunities and avoid greatly changing or diminishing motorized recreation opportunities and public access throughout the Bradshaw-Harquahala Planning Area.

Alternative C

In Agua Fria National Monument, 123 miles of routes would remain open to vehicular travel. The route system developed under *Alternative C* would create loop trails for motorized touring and add new routes to bypass private property. About 6 miles of new routes would be developed and would affect motorized recreation opportunities and public access by maintaining route connectivity in the event of private land closures.

The impacts on opportunities for motorized recreation in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative*

B, but the model route system for *Alternative C* could close 382 miles of routes in the planning area, 1,889 miles of routes would remain open, and 382 miles of potential closures would be mitigated by up to 26 miles of new routes. The total distance of open routes would be 1,915 miles or 15 percent less than the existing routes and 9 percent less than in *Alternative B*.

The impacts on opportunities for motorized recreation in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative B*, but the total distance of open routes would be 1,915 miles or 15 percent less than the existing routes under *Alternative A* and 9 less than in *Alternative B*.

Alternative D

In Agua Fria National Monument, 48 miles, of routes would remain open to vehicular travel. The route system under *Alternative D* was developed mainly for resource protection and would not add new routes. Opportunities for motorized recreation would be limited or foregone, as loop trails would not be developed. The route system would close 123 miles of existing routes and this action would displace or eliminate opportunities for motorized recreation and public access to some areas.

The impacts on opportunities for motorized recreation in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative C*, but the model route system for *Alternative D* could close 723 miles of routes in the planning area, 1,645 miles of routes would remain open, and 723 miles of potential closures would be mitigated by up to 62 miles of new routes.

Route closures would diminish or displace opportunities for traditional users, and route and area closures could result in the disconnection of multiple routes in the network. Some motorized use and public access would be foregone all together.

As a result of changing recreational settings in the Bradshaw/Harquahala area, the Hieroglyphic Mountains area could be gradually changed to

low dust generating recreation. This could make motorized recreation use routes further from the area to prevent dust in the PM₁₀ non-attainment area.

Alternative E (Proposed Alternative)

The route network within the Agua Fria National Monument under the proposed *Alternative* would retain 94 miles of existing route. About 52 miles of route would be closed and another 25 miles would be limited to administrative access (closed to the public). Impacts to the travel network from the proposed recreation management would be similar to *Alternative*

Restriction to existing campsites would have a minimal effect on the use of designated route network since most campsites that would be allowed for use are within 100 feet of a designated route. Most of the regularly used campsites occur along main routes such as Bloody Basin Rd and Forest Road 14. The free permit requirement for dispersed tent camping would have no effect on the route network.

The restriction of motorized campers/ RV units in Backcountry areas would have little effect on access since camping would be restricted to existing sites already used by these type of vehicle. Backcountry areas that have passage zones would still allow camping within the passage zone. The zone is 200ft wide, 100ft either side of the route. Many routes in the passage zones are rough and would not appeal to those driving campers or RVs.

The impacts on opportunities for motorized recreation in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative B*, but the model route system for *Alternative E* could close 211 miles of routes in the planning area, 2,028 miles of routes would remain open, and 211 miles of potential closures would be mitigated by up to 39 miles of new routes. The total distance of open routes would be 2,067 miles

Developing connecting route networks and public access for hikers, bicycles, OHVs, and

equestrians would benefit recreational opportunities because all types of users could enjoy activities consistently, in more areas, and with fewer interruptions. Once completed, the Black Canyon Trail from the Carefree Highway to north of Highway 69 would become a major trail of regional significance for mountain bikers, equestrians, and hikers. Moreover, the trail would link the communities of the Black Canyon corridor and the north boundary of the Phoenix-Peoria metropolis.

Managing the North Black Canyon Trail RMZ would enhance the non-motorized recreation access by assuring long-term access to the trail as well as connections to public land to the south and Forest Service land to the north and east. If a parallel motorized route was implemented as described in the alternatives, the RMZ would not impact the motorized route network.

4.20.8 From Visual Resource Management

Alternative A (No Action)

Visual resource management would have no effect on the current Travel Management network. New motorized and non-motorized routes would be developed on a case-by-case basis and could probably be developed across most of the Bradshaw-Harquahala planning area. VRM would have little effect on the AFNM, as the proclamation already significantly restricts development of new travel routes incompatible with monument objects.

Alternatives B, C, D and E (Proposed Alternative)

Designation of VRM I and II classes across assorted landscape allocations and areas within the Bradshaw-Harquahala Planning Area could restrict or modify the construction of new travel routes or the realignment of existing travel routes if such routes were inconsistent with VRM management objectives. Management would be strict in designated wilderness with Class I VRM designation and with no motorized

travel routes authorized. Non-motorized trails would be easier to install than new roads due to their smaller scope and effect. Singletrack trails for motorized use would be similar to non-motorized trails due with comparative width and location on the landscape.

Some travel routes could be developed in ACECs with Class I and II VRM designations, but could be considerably restricted with recognized scenic values and landscapes. Installation of new travel routes within Class III and IV VRM class areas would usually be consistent with visual management objectives for these areas, and enable the development of reasonable levels of Travel Management to and through such areas.

4.20.9 From Rangeland Management

Alternatives A (No Action)

In both AFNM and Bradshaw/Harquahala areas, travel management would be largely unaffected by rangeland management since routes open for grazing would be open for public use. The use of routes for historical sightseeing, such as viewing stock pens, stock tanks and other improvements, is likely to increase proportionate to regional population.

Installation of new rangeland developments might slightly increase motorized public access if the routes are made available for public use. On the other hand, the closure or abandonment of rangeland developments could eventually contribute to the loss of public access, as livestock facilities are removed and access routes reclaimed. Vandalism to livestock facilities from public land visitors could potentially lead to the closure of public access routes. Over the long term, closure of travel routes in order to avoid conflicts or protect facilities from vandalism could have the greatest influence on reducing public access. Only in specific cases where range facilities are at exceptional risk from vandalism will routes to them be closed to the public.

In AFNM, 54% of the routes (by mileage) serve range management purposes. In the Bradshaw-Harquahala planning area, the number is likely to be smaller due to a larger route network and more of the routes created for historic mining access.

In AFNM, Map 2-11 shows the routes that were inventoried and that would be open under Alt A.

Alternative B

Impacts in both areas would be similar to Alternative A. In AFNM, the transportation network is impacted by rangeland management since it is the main commercial use of the monument and 54% of the routes (by mileage) serve range management purposes. Regular use by the range permittees helps to keep the routes passable.

Alternative C

Impacts in both areas would be similar to Alternative A. Exclusion of grazing from riparian pastures would have little impact on the route system since the route system already avoids or has routes closed in riparian areas and riparian pastures generally have few range improvements.

Alternative D

In both the AFNM and Bradshaw/Harquahala areas, public access could be negatively affected by the decision to eliminate grazing since many routes that access range improvements may no longer be needed. Livestock grazing permittees use maintain many routes. Without grazing, this route maintenance would depend on agency funding and may be delayed or not occur. Accessibility would be reduced over time in many areas due to route deterioration.

Alternative E (Proposed Alternative)

In AFNM, routes to range facilities are restricted to administrative access in several areas. Some administrative routes may be used by range permittees although the limitation is for another

reason. Routes limited to administrative access are:

Bob's Tank (26B), Joe's Tank(26C), pipeline to well(31S), routes to well and water tank along the Agua Fria River(30, 35), gas pipeline segment(31Y,31Z), 31T(water pipeline) unnamed dirt tank(15B, 15C), unnamed steel tanks(8C), unnamed dirt tank(1H), inter-ranch access(1Z). Map 2-76 displays the administrative routes.

In AFNM, regular use of routes for range management keeps the routes passable. As in the other alternatives, about 54% of the routes serve ranching purposes.

In the Bradshaw-Harquahala planning area impacts would be similar to Alternative A.

4.20.10 From Minerals Management

Alternatives A (No Action) , B, C, D, and E (Proposed Alternative)

Mineral management would have no impact on transportation or access on the AFNM because it is closed to mineral entry and existing claims are unlikely to be substantially developed.

In the Bradshaw/Harquahala area, new mineral sales, leases, NOIs or plans of operations may increase public access if routes are made available for public use. New mining routes could displace traditional trail users. Closure of mining could eventually contribute to the loss of public access when routes are reclaimed. Areas closed to various forms of mineral entry would preclude the need to develop mining related roads and access which would reduce potential access to new areas in the future.

Existing routes may be closed to public use if active mining operations pose a threat to public health or safety.

4.20.11 From Fire Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Impacts from fire management and suppression operations to transportation and access on public lands within the Agua Fria National Monument and the Bradshaw-Harquahala Planning area would likely be minimal.

Fire management activities are conducted using designated routes whenever possible. Temporary closures may limit access during wildfire suppression and prescribed burning. Emergency vehicles are exempt from route designation restrictions by definition in 43 CFR8340.0-5. Some rehabilitation work may be necessary in burned areas to stop continued use of cross-country tracks created by firefighting activities. Some routes may be upgraded for emergency use during fire suppression and may require some level of reclamation to be returned to the desired level of access.

4.20.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D and E (Proposed Alternative)

Travel management would not be affected by management of wild burro populations or herd areas within the Bradshaw-Harquahala Planning area. There are no wild burro populations within the Agua Fria National Monument, consequently there are no effects.

4.20.13 From Management of Travel Management

Alternative A (No Action)

The Agua Fria National Monument is closed to cross-country motorized travel to protect monument resources; however, most existing routes would remain open. In areas where vehicles are used, opportunities would remain unchanged since existing routes would be designated as open.

In the Bradshaw-Harquahala Planning Area, nearly 100 percent of the 2,240 miles of vehicle routes would remain open. Existing types of motorized and vehicle-based travel opportunities would continue unchanged.

Alternative B

As in *Alternative A*, most routes would remain open to vehicular travel in Agua Fria National Monument.

The proposed route system, developed through an interdisciplinary evaluation process, would enhance opportunities for motorized users by creating loop trails, which provide for greater access. General access for motorized users would be improved by the development of about 5 miles of new routes needed to bypass private property and maintain route system connectivity. The proposed route system would close 37 miles of existing routes and could diminish access to some areas. Appendix V details the criteria, analysis and justifications used in the route evaluation and designation process for the monument.

Under the model route system (Appendix N) for the Bradshaw-Harquahala Planning Area, about 93 percent of existing routes would remain open. A total of 169 miles of routes within the planning area could be closed to (1) protect resources, (2) reduce redundancy, and (3) limit routes for administrative use. The closures represent 6.9 percent of the routes in the planning area. Current motorized users would

be displaced to other State and public lands. Up to 14 miles of new routes would be established to mitigate losses from the closures and to achieve better route connectivity. The total distance of open routes would eventually reach 2,086 miles.

Alternative C

In Agua Fria National Monument, 123 miles, or 69.7 percent, of routes would remain open to vehicular travel. The route system developed under *Alternative C* would create loop trails for motorized touring and add new routes to bypass private property. About 6 miles of new routes would be developed and would affect public access by maintaining route connectivity in the event of private land closures. Appendix V details the criteria, analysis and justifications used in the route evaluation and designation process for the monument.

The impacts on opportunities for motorized access in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative B*, but the model route system for *Alternative C* could close 382 miles of routes in the planning area, 1,889 miles of routes would remain open, and 382 miles of potential closures would be mitigated by up to 26 miles of new routes. The total distance of open routes would be 1,915 miles or 15 percent less than the existing routes and 9 percent less than in *Alternative B*.

Alternative D

In Agua Fria National Monument, 52 miles, or 41 percent, of routes would remain open to vehicular travel. The route system under *Alternative D* was developed mainly for resource protection and would not add new routes. The route system would close 94 miles of existing routes and this action would displace or eliminate opportunities for motorized public access to some areas. Appendix V details the criteria, analysis and justifications used in the route evaluation and designation process for the monument.

The impacts on access in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative C*, but the model route system for *Alternative D* could close 723 miles of routes in the planning area, 1,645 miles of routes would remain open, and 723 miles of potential closures would be mitigated by up to 62 miles of new routes.

Route closures would diminish or displace opportunities for traditional users, and route and area closures could result in the disconnection of multiple routes in the network. Some motorized use and public access would be foregone all together.

Alternative E (Proposed Alternative)

The route network within the Agua Fria National Monument under the proposed *Alternative E* would retain 94 miles of existing route. About 52 miles of route would be closed and another 25 miles limited to administrative access only (closed to the public). Appendix V details the criteria, analysis and justifications used in the route evaluation and designation process for the monument. Impacts to transportation and access from the proposed route network would be similar to *Alternative B*.

The impacts on opportunities for motorized access in the Bradshaw-Harquahala Planning Area would be similar to those under *Alternative B*. The model route system for *Alternative E* could close 211 miles of routes in the planning area, 2,028 miles of routes would remain open, and 211 miles of potential closures would be mitigated by up to 39 miles of new routes. The total distance of open routes would be 2,067 miles.

Developing connecting route networks and public access for hikers, bicycles, OHVs, and equestrians would improve access in more areas, and with fewer interruptions. Once completed, the Black Canyon Trail from the Carefree Highway to north of Highway 69 would become a major trail for mountain bikers, equestrians, and hikers. Moreover, the trail would link the communities of the Black Canyon corridor and

the north boundary of the Phoenix-Peoria metropolis. Conflict between motorized and non-motorized trail users could arise as the new Black Canyon Trail links are created. This would be avoided by the creation of a generally parallel route to the Black Canyon Trail for motorized vehicles. By providing a long distance route specifically for motorized and non-motorized use, the uses would generally be separated. There would no impact to either group if the motorized and non-motorized routes were separated.

4.20.14 From Management of Wilderness Characteristics

Alternative A (No Action)

In the AFNM and Bradshaw/Harquahala areas, there would be no impact from this resource since no areas are allocated for wilderness characteristics.

Alternative B

In the AFNM, there are no areas to be managed for wilderness characteristics in *Alternative B*, therefore there is no impact.

In the Bradshaw/Harquahala area, the main impact would be potential long-term restrictions or limitations on building or authorizing new motorized OHV and public access routes within 87,070 acres of the Harquahala Management Unit.

Maintenance of wilderness character would be a consideration in the route evaluation and designation process.

As described in Appendix N, Motorized Route Model for the Bradshaw-Harquahala Planning Area, managing areas for Wilderness Characteristics would likely cause the alteration of the route network. Closing washes, pullouts and campsite routes is a likely action. Connecting routes in washes would likely be

closed, resulting in a loss of existing vehicle route network connectivity. Implementation level route designation would identify such routes after the completion of this plan.

Alternative C

In the AFNM, there are no areas allocated for management of wilderness characteristics. There is no impact from this resource in AFNM.

In Bradshaw/Harquahala, about 107,843 acres are allocated under Alt C. The impacts would be similar to Alternative B, except that more areas would be affected throughout the planning area.

Alternative D

In the AFNM, there are no areas proposed to be managed to maintain wilderness characteristics, therefore there is no impact to travel management.

In the AFNM, the route network would be indirectly impacted by allocation of 53 percent of the Monument (37,571 acres) for the management of wilderness characteristics. The 123 miles of vehicle route proposed for closure in Alternative D are closed for the protection of Monument Objects. New route construction for motorized use would be prohibited. Non-motorized routes are not prohibited, but construction would be avoided except when necessary to prevent resource damage. Routes in passage zones would be available for vehicle use along with vehicle based camping in the 200 ft wide passage zone. These travel routes are described in Chapter 2, Section 2.5.1.8 and depicted on Map 2-60.

In the Bradshaw/Harquahala area, 102,664 acres are allocated for management of wilderness characteristics. Cumulatively, this allocation along with the ACEC designations and WHA designations and existing designated wilderness areas, connectivity of the route system could be the most highly impacted under this alternative.

In the Black Canyon Corridor, the possibility of connecting north-south routes together, specifically the old alignment of Black Canyon Trail, for an OHV route system could be curtailed. Non-motorized routes would likely be expanded.

Alternative E (Proposed Alternative)

In the AFNM, 20,900 acres in the Perry Mesa area would be allocated. Route construction for motorized use would be prohibited. Non-motorized routes are not prohibited, but construction would be avoided except when necessary to prevent resource damage. Routes in passage zones would be available for vehicle use along with vehicle based camping in the 200 ft wide passage zone.

In the AFNM, the route network would be indirectly impacted by allocation of 29 percent of the Monument for management of wilderness characteristics. The 52 miles of vehicle route proposed for closure in *Alternative E* are closed for the protection of Monument Objects. Open and closed travel routes are described in Chapter 2, Section 2.6.1.9 and depicted on Map 2-76. In the Bradshaw/Harquahala area, 67,279 acres would be managed to maintain wilderness characteristics. The effects would be similar to those described in *Alternative B*.

4.21 Impacts on Wilderness Characteristics

4.21.1 From Special Designations

Alternative A (No Action)

There would be minimal impacts on wilderness characteristics under this *Alternative* in the Agua Fria National Monument. Wilderness characteristics would probably be maintained over the long term for lands in the Agua Fria

River segments that are recommended suitable for WSR designation. The wilderness characteristics on 9,660 acres within the Larry Canyon and Perry Mesa ACECs would remain unchanged. In the remainder of the monument, few adverse impacts to wilderness character are anticipated. No identified short and long-term management actions are anticipated that would directly impact wilderness characteristics. Special Designations would have no effect on wilderness characteristics within the Bradshaw-Harquahala Planning Area.

Alternative B

The absence of the Larry Canyon and Perry Mesa ACECs would little affect wilderness characteristics as both areas are protected within the Agua Fria National Monument. No identified short and long-term monument management actions that directly or indirectly impact wilderness characteristics are anticipated. Special Designations would have no effect on wilderness characteristics within the Bradshaw-Harquahala Planning Area.

Alternative C

No areas would be specifically managed to maintain wilderness characteristics in the Agua Fria National Monument. Wilderness characteristics would probably be maintained over the long term for lands allocated as proposed Agua Fria River WSR suitable segments. Wilderness characteristics on 460 acres encompassed by the Larry Canyon, Indian Creek, and Lousy Canyon ACECs would be conserved. Elsewhere, no short and long-term monument management actions are anticipated that would directly or indirectly impact wilderness characteristics. Wilderness characteristics extant within the Black Butte Raptor and the Harquahala Mountain ACECs/ONAs would remain relatively unchanged from current circumstances. Other Special Management Designations would not affect identified wilderness characteristics.

Alternative D

No areas would be specifically managed to maintain wilderness characteristics in the Agua Fria National Monument. Wilderness characteristics would probably be maintained over the long term for lands allocated as proposed Agua Fria River WSR suitable segments. Wilderness characteristics within the 13,070 acre Agua Fria Riparian Corridor ACEC, an ACEC overlapping the proposed Agua Fria River suitable segments, would also be maintained over the long-term. Elsewhere, no short and long-term monument management actions are anticipated that would directly or indirectly impact wilderness characteristics. Wilderness characteristics within the Baldy Mountain ONA, the Belmont-Big Horn Mountains ACEC, the Black Butte Raptor ACEC, and the Harquahala Mountains ONA would remain relatively unchanged from current conditions and in all probability would be conserved over the long-term. Other Special Designations would not affect identified wilderness characteristics.

Alternative E (Proposed Alternative)

Wilderness characteristics would almost certainly be maintained over the long term for lands allocated as proposed suitable segments of the Agua Fria River WSR proposal. In other parts of the monument with identified wilderness character, no short and long-term management actions are anticipated that would directly or indirectly impact or impair wilderness characteristics. Within the Bradshaw-Harquahala Planning Area, wilderness characteristics within the 83,210 acres comprising the Black Butte Raptor and the Harquahala Mountains ACECs would remain relatively unchanged from current conditions and be conserved over the long-term. Other Special Designations would not affect identified wilderness characteristics.

4.21.2 From Lands and Realty Management

Alternative A (No Action)

Lands and Realty management actions would have no effect on wilderness characteristics under *Alternative A*. No areas are identified to specifically manage, maintain, wilderness characteristics.

Alternative B

Lands and Realty management actions could have a minor effect on wilderness characteristics within the Harquahala Mountain range under *Alternative B*. Under this Alternative 56,040 acres would be allocated to managing wilderness characteristics. Providing rights-of-way for access to State lands, utility lines, or communication sites might impact the natural conditions and solitude opportunities within the area. Overall, such impacts would be considered minor since new lands and realty actions must be consistent with VRM objectives and Desired Future Conditions. It is likely that some discretionary lands and realty actions, deemed incompatible with maintaining wilderness characteristics, would not be allowed. In view of that, disallowed lands and realty actions would have no effect on wilderness characteristics.

Development of utilities in areas that contain wilderness characteristics could potentially degrade the quality of those characteristics. In the short term, construction activities will create sights and sounds that are incompatible with remoteness, naturalness, and could limit primitive recreation opportunities associated with wilderness characteristics. In the long term, any residual motorized access would be in conflict with the same wilderness characteristics. In addition, surface disturbance that leaves long term visible evidence along with any visible above ground facilities would especially degrade the naturalness characteristic. Mitigation measures to minimize impacts to wilderness characteristics could include, but not be limited

to: avoidance of areas allocated to maintain wilderness characteristics; design construction so no, or a minimum of; motorized access would be needed for maintenance of equipment or facilities; use design techniques to eliminate, or at least minimize, visibility of equipment or facilities.

Alternative C

Impacts are the same as described under *Alternative B*, with the exception that seven areas totaling 107,843 acres are under consideration for managing wilderness characteristics.

Alternative D

Impacts are the same as described under *Alternative B*, with the exception that 18 landscape areas totaling 140,235 acres are to be allocated for managing wilderness characteristics.

Alternative E (Proposed Alternative)

Impacts on Wilderness Characteristics from Lands and Realty Actions are similar to those described under *Alternative B*, with the exception that 88,179 acres in the Bradshaw-Harquahala Planning Area and the Agua Fria National Monument are allocated for managing wilderness characteristics.

4.21.3 From Management of Soil, Air, and Water Resources

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Management actions undertaken to protect or conserve water and soil resources, or satisfy air quality standards, would, in turn, indirectly maintain wilderness characteristics and providing healthy open space areas near communities, offer a more natural-appearing landscape, and improve primitive recreation

experiences for visitors by reducing human intrusions.

4.21.4 From Biological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

Habitat improvement actions could have a minor effect on areas encompassing wilderness characteristics. Installation of habitat improvements might impact naturalness and impair existing opportunities for solitude and primitive and unconfined recreation. Such outcomes, however, would be considered minor since new biological resource management actions would be consistent with VRM objectives and Desired Future Conditions for lands with wilderness characteristics.

4.21.5 From Cultural Resource Management

Alternative A (No Action)

There are no impacts expected from current cultural resource management or related management actions.

Alternatives B, C, D, and E (Proposed Alternative)

Lands with wilderness characteristics could benefit from potential route closures prescribed to protect cultural sites, primarily sites located in or next to lands allocated to maintain wilderness characteristics. The lands with wilderness characteristics could benefit from reductions in motorized public access, by affording increased opportunities for solitude, and offering expanded non-motorized recreation settings, all direct consequences of route closures. Limiting group size to 25 visitors at some cultural sites could reduce overcrowding and maintain a more natural experience. Development of sites for public use would allow concentrations of users in certain areas, in most cases drawing visitors

away from zones with wilderness characteristics, which would be largely excluded from interpretive development. Limiting development in other areas would preserve the natural setting of places with wilderness characteristics.

4.21.6 From Paleontological Resource Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

There are no impacts expected because no paleontological sites are known to exist in the planning areas.

4.21.7 From Recreation Resource Management

Alternative A (No Action)

Increasing use and intensity of recreation next to lands allocated to maintain wilderness characteristics could result in a loss of some of those characteristics. This effect would be most pronounced on the fringes of areas with wilderness characteristics. The solitude and quality of primitive recreation experiences could decline for some users.

Additionally, potentially growing numbers of non-motorized users could impair solitude opportunities and contribute to trailing and campsite use impacts along the edge, as well as the interior, of these wilderness characteristics areas. No SRMAs or RMZs would be allocated. As a result, intensive recreation uses would not be directed to areas suitable or compatible for such use. Visitor use would be primarily self-directed and not allocated to appropriate use areas. Both intensive and disperse recreation uses could cause the impairment or loss of wilderness characteristics along the periphery of the wilderness character areas. It is likely that recreation settings would gradually shift over time to more motorized settings and opportunities.

Current management would result in SRPs being issued upon request in both planning areas. Permit requests are expected to grow as the population grows, which could lead to increased numbers of users and conflicts between them; further deteriorating opportunities to experience solitude and wilderness characteristics.

Alternative B

Designating Front Country and Back Country RMZs within the Agua Fria National Monument could benefit wilderness characteristics through management of more intensive recreation uses. Opportunities for solitude would be maintained in the Back Country RMZ because visitor use numbers would in all probability be constrained.

The restriction of motorized access on lands allocated to maintain wilderness characteristics in the Bradshaw-Harquahala Planning Area could benefit non-motorized users by allowing them to recreate in a more natural setting. This would assure the availability of these areas for offering outstanding primitive recreational and solitude opportunities.

The reduction in lands available for competitive OHV events and competitive races could maintain high-quality opportunities to experience more natural settings over the long-term. Establishing criteria to manage larger group activities would help protect wilderness values, enhancing opportunities for solitude. Therefore, permits for commercial and vending operations would be prohibited. The number of SRPs would be limited, though this limitation would still allow for a significant increase over current conditions.

Alternative C

Impacts would be similar to *Alternative B*, except that *Alternative C* proposes a larger Back Country RMZ within the Agua Fria National Monument, and fewer SRPs overall. These management actions would offer more solitude opportunities and maintain more wilderness characteristics for visitors seeking primitive and unconfined recreation.

Alternative D

Impacts would be similar to *Alternatives B* and *C*, except that *Alternative D* proposes more Back Country RMZ acreage within the Agua Fria National Monument, and fewer SRPs overall.

Alternative E (Proposed Alternative)

Impacts would be similar to *Alternative B*, although restrictions on SRPs would more closely resemble *Alternative C*.

4.21.8 From Visual Resource Management

Alternative A (No Action)

Alternative A would maintain current conditions. Wilderness areas are Class I and all remaining areas are managed by designation or default as Class III. VRM Class III could allow visual intrusions that are inconsistent with public interests and eventually lead to some intrusions in to the visual landscape in or around lands allocated to maintain wilderness characteristics.

Alternative B

Management of lands allocated to maintain wilderness characteristics to VRM Class II would retain the current physical setting of 56,040 acres and enhance primitive recreational experiences. Improvements or developments in these areas would be required to meet design criteria to integrate the color, line, form, and texture of the facilities with the surrounding landscape. This would maintain the area with little to no visual impacts from proposed developments and maintain or enhance the landscape's natural appearance and open space values, while meeting other resource management objectives.

Alternative C

Impacts would be similar to *Alternative B*, except 107,843 acres of lands allocated to

maintain wilderness characteristics would be managed to VRM Class II.

Alternative D

Impacts would be similar to *Alternative B*, except 140,235 acres of lands allocated to maintain wilderness characteristics would be managed to VRM Class I, which would require more stringent design criteria.

Alternative E (Proposed Alternative)

Impacts would be similar to *Alternative B*, except that 88,179 acres of lands allocated to maintain wilderness characteristics would be managed to VRM Class II.

4.21.9 From Rangeland Management

Alternative A (No Action)

Wilderness characteristics would not be greatly influenced by rangeland management operations practiced within the Bradshaw-Harquahala Planning area or the Agua Fria National Monument. Site specific water projects, fencing, or vegetation projects may impact small areas and associated local recreational users. Any proposed rangeland projects would, however, be developed and installed consistent with the Desired Future Conditions for the project area's biological conditions, recreation settings, and visual resources. Accordingly, potential visual resource impacts would be mitigated and consistent with the management of wilderness characteristics.

Alternative B

Impacts on Wilderness Characteristics from Rangeland Management actions would be similar to those presented under *Alternative A*.

Alternative C

Impacts on Wilderness Characteristics from Rangeland Management actions would be similar to those presented under *Alternative A*.

Alternative D

There would be no cattle grazing on public lands under *Alternative D*. Thus, there would be no potential impacts on wilderness characteristics accruing from rangeland management practices.

Alternative E (Proposed Alternative)

Impacts would be similar as those for *Alternative A*.

4.21.10 From Minerals Management

Alternative A (No Action)

Mining operations would have no impact on wilderness characteristics within the Agua Fria National Monument as mining is not allowed and the area is closed to mineral entry, mineral sales, and leasing. Wilderness characteristics could be impaired, decline, or be foregone within the Bradshaw-Harquahala Planning Area in areas not afforded protection of their wilderness characteristics. Over a period of 10 to 20 years, reasonable levels of mining, leasing and sale of mineral materials could adversely affect the wilderness characteristics of naturalness and opportunities for solitude and primitive and unconfined recreation experiences. Without specific management actions in place to maintain areas with wilderness characteristics, degradation of those characteristics could occur from mineral management actions. In more remote and non-mineralized areas, wilderness characteristics would probably remain unchanged over the life of the plan.

Alternatives B and C

Closing the allocation to maintain wilderness characteristics to mineral material disposal would reduce the potential area for ground disturbance and maintain primitive open space. Long-term impacts on scenery and landscapes would be kept away from areas with wilderness characteristic.

Alternative D

Lands allocated to maintain wilderness characteristics would be closed to mineral sales, geothermal leasing and mineral entry. There would be little to no impact on wilderness characteristics from future mineral exploration and development as such actions would probably not occur. Natural and primitive conditions would be maintained over the long-term.

Alternative E (Proposed Alternative)

Impacts are expected to be similar to *Alternative A*.

4.21.11 From Fire Management

Alternatives A (No Action), B, C, D, and E (Proposed Alternative)

No impacts on wilderness characteristics are likely from fire management and suppression operations on public lands within the Agua Fria National Monument and the Bradshaw-Harquahala Planning area.

4.21.12 From Wild Horse and Burro Management

Alternatives A (No Action), B, C, D and E (Proposed Alternative)

Wilderness characteristics would not be affected by management of wild burro

populations or herd areas within the Bradshaw-Harquahala Planning area. There are no wild burro populations within the Agua Fria National Monument, consequently there are no effects.

4.21.13 From Management of Travel Management

Alternative A (No Action)

No areas are allocated for maintaining wilderness characteristics under this Alternative. No impacts on wilderness characteristics would be anticipated within the Agua Fria National Monument. Wilderness characteristics could be impaired, decline, or be foregone on up to 186,037 acres within the Bradshaw-Harquahala Planning Area. Over a period of 20 years, reasonable levels of road and route development, access rights-of-way and other developments requiring roads, along with a general expansion of motorized route systems, could adversely affect the wilderness characteristics of naturalness and opportunities for solitude and primitive and unconfined recreation experiences. In more remote areas, wilderness characteristics might remain unchanged over the life of the plan due to an absence or travel and transportation activities.

Alternative B

The impacts of existing or new travel and transportation activities on lands allocated to maintain wilderness characteristics would be minimal. Travel and transportation plans and affiliated roads, routes and trails would be compatible to the wilderness character allocation. Development of new non-motorized trails and routes could enhance primitive recreation activities. Wilderness characteristics could be impaired, decline or be foregone due to travel and transportation activities on lands not allocated to maintain wilderness characteristics, as described under *Alternative A*. These potentially adverse impacts on wilderness characteristics would be of a lesser scale than described under *Alternative A*.

Alternative C

Impacts are similar to those described under *Alternative B* for lands allocated and not allocated to maintain wilderness characteristics. Potentially adverse impacts on wilderness characteristics; however, would be of a lesser degree than described under *Alternatives A* or *B*.

Alternative D

Impacts are similar to those described under *Alternative B* for lands allocated and not allocated to maintain wilderness characteristics. Potentially adverse impacts on wilderness characteristics would be considerably less than described under *Alternatives A, B* or *C*.

Alternative E (Proposed Alternative)

Impacts are similar to those described under *Alternative C* for lands allocated and not allocated to maintain wilderness characteristics. The magnitude of impacts on wilderness characteristics would be comparable to the environmental effects described under *Alternative C*.

4.21.14 From Management of Wilderness Characteristics

Alternative A (No Action)

No areas are specifically managed to maintain wilderness characteristics in the Agua Fria National Monument. However, primitive or semi-primitive non-motorized settings would likely be maintained due to the management guidelines set forth in the Monument Proclamation (Appendix A), by limiting development of new vehicle routes and roads, and by employing interim protective management prescriptions for suitable WSR segments along the Agua Fria River. For that reason, few adverse impacts to wilderness characteristics are anticipated. There are no short and long-term management actions in the

Agua Fria National Monument that would directly or indirectly impair wilderness characteristics on the 37,571 acres of the area possessing such values.

Wilderness characteristics could be unprotected, impaired, decline, or be foregone on up to 186,037 acres within the Bradshaw-Harquahala Planning Area. Over a period of 10 to 20 years, reasonable levels of resource use and development, and expansion of motorized route systems, could adversely affect the wilderness characteristics of naturalness and opportunities for solitude and primitive and unconfined recreation experiences. Without specific management actions in place to maintain areas with wilderness characteristics, degradation of those characteristics could occur from motorized vehicle activities, grazing developments, lands and realty actions, utility development and mining. In more remote areas, wilderness characteristics might remain unchanged over the life of the plan due to a lack of motorized access.

Alternative B

Impacts in the Agua Fria National Monument would be the same as under *Alternative A*. Wilderness characteristics would by and large be maintained and remain unimpaired in the monument's backcountry management zones.

In the Bradshaw-Harquahala Planning Area, wilderness characteristics would be maintained on 56,040 acres. Non-motorized and natural conditions free of human influences would be conserved. Existing opportunities for solitude and primitive and unconfined recreation experiences would be maintained. Overall, the allocation of wilderness characteristics would reduce the access of motorized users. On the other hand, non-motorized visitor uses would increase in these areas as hikers, campers, hunters and sightseers are attracted to protected and non-motorized locales. These non-motorized individuals would be able to recreate in a more natural and remote setting.

Wilderness characteristics would probably be maintained over the long-term for lands

allocated as proposed WSR suitable segments, ACECs and ONA ACECs. Wilderness characteristics would probably decline, be impaired or be foregone over the long term on lands allocated to less protective resource management. Wilderness characteristics could be unprotected, impaired, decline or be foregone on over 129,997 acres within the Bradshaw-Harquahala Planning Area in areas not afforded protection of their wilderness characteristics. Over a period of 10 to 20 years, reasonable levels of resource use and development, and expansion of motorized route systems, could adversely affect the wilderness characteristics of naturalness and opportunities for solitude and primitive and unconfined recreation experiences. Without specific management actions in place to maintain areas with wilderness characteristics, degradation of those characteristics could occur from motorized vehicle activities, grazing developments, lands and realty actions and mining. In more remote areas, wilderness characteristics would probably remain unchanged over the life of the plan due to a lack of access coupled with effective OHV route designations, increased OHV education and signing, and strict OHV law enforcement practices.

Alternative C

Impacts would be similar to *Alternative B*, except 107,843 acres of land would be managed to maintain wilderness characteristics. Non-motorized users would benefit more than under *Alternative B* as additional lands are allocated to maintaining wilderness characteristics. The loss of wilderness characteristics could be potentially less under *Alternative C* than other alternatives, but could still range up to 78,194 acres over the long term. Impacts on the lands not allocated for wilderness character management are fully described under *Alternatives A and B*.

Alternative D

Impacts would be similar to *Alternative C*, except 140,235 acres would be managed to maintain wilderness characteristics. This includes 102,664 acres in the Bradshaw-

Harquahala planning area and 37,571 acres in the Agua Fria National Monument. This Alternative would designate some of the areas described under *Alternatives B* and *C* as ONA ACECs. Wilderness characteristics would also be afforded long-term protection in those ONA ACECs through the application of protective prescriptions. Impacts on Special Area Designations are described in Section 4.21.1. Wilderness values could be unprotected, degraded or lost on 83,373 acres, as described under *Alternatives A* and *B*.

Alternative E (Proposed Alternative)

Impacts would be similar to *Alternative B*, except 88,179 acres would be managed to maintain wilderness characteristics, including 20,900 acres in the Agua Fria National Monument. Non-motorized users would benefit more than under *Alternative B*, but less than under *Alternatives C* and *D*. Wilderness values could be unprotected, degraded or lost on about 118,758 acres as comprehensively described under *Alternatives A* and *B*.

4.22 Impacts on Social and Economic Conditions

The management actions for the resources that are described for each of the Alternatives would result in both social and economic impacts to people and businesses in and next to the planning areas. In many instances social and economic effects considerably overlap. In general, the greatest effect would be economic, since in most cases the actions described for the Alternatives would not have major social effects in the planning area. The economic base profile completed for this analysis considers socio-economic impacts to be most critical in recreation, livestock grazing, minerals, and lands and corridors.

BLM has collaborated with the public and local communities in developing Alternatives and a

number of management actions have been incorporated into the Alternatives to address public concerns. For this reason, substantial adverse social or economic impacts are not expected.

4.22.1 Planning Area Growth and Development

The analysis of social and economic impacts is partially based on land use modeling completed for BLM for the planning areas (Blueline Consulting Group 2004). The model uses one set of assumptions to determine which land would likely have residential growth between the years 2000 and 2025. While limited to one set of assumptions, four modeling analyses varied the vacant land base available to receive the growth according to the BLM's land disposition Alternatives. The detailed methodology, including assumptions, appears in Appendix M.

Growth in and next to the planning areas would continue to affect the resources on BLM's land. Much of the development is likely to occur on lands that the Arizona State Land Department (ASLD) might sell for private development. However, this analysis assumed (for purposes of this RMP) that no ASLD land in the planning areas would be developed. This assumption was made because the future legislative framework governing State land transactions is uncertain (including the potential for the exchange of land between the ASLD and the Federal Government).

According to Blueline Consulting Group GIS models, future development in 2005–2025 would occur on lands that are closer to BLM's lands, compared to the time period 1985–2005, when residential land was developed around and to the east of the Interstate 17 corridor. Both Maricopa and Yavapai Counties would experience continued rapid growth. A small portion of eastern La Paz County is included in the Bradshaw-Harquahala Planning Area, but that part of the county is relatively undeveloped

and is expected to experience limited growth through 2025.

In Maricopa County a large proportion of development in the Bradshaw-Harquahala Planning Area would occur on both sides of U.S. Route 60, north and east of the White Tank Mountains, extending to State Route 74 on the north. In Yavapai County, a large proportion of development would be along State Route 69.

Yavapai County would grow at a more rapid rate (70 percent) than Maricopa County (54 percent) during the planning period but would add fewer persons (140,000) than Maricopa County (1,954,000) through 2025. Although Yavapai County has a large amount of land available for development, development on BLM's land to be disposed of under the Alternatives would occur on the lands that are nearer to Yavapai County's current population centers (as described for the growth projection model prepared for this analysis).

Under *Alternatives A, B, and C*, BLM would dispose of large tracts of land, which would be available for development. Each of these tracts of BLM's land is next to large tracts of State land, which this analysis assumed would not be developed. Analysis of land disposal also assumed the following:

- the land would be disposed of within the life of the plan,
- the land would be developed mainly for residential use, and
- other uses such as commercial and light industrial development could also occur.

Population changes could result from increased or decreased economic activity and from changes in amenity values, including mining, ranching, and recreational opportunities, which might increase employment in the managed areas. The changes in population, if any, would have the most impact on the smaller unincorporated places in the planning area, such as Salome-Wenden, Dewey-Humboldt-Mayer, and Black Canyon City.

Potential effects from growth and development might be seen in the loss of ranching and the related western lifestyle.

Potential effects might occur in:

- the change in social leadership structure resulting from increases in urban values and
- reduced ranching resulting from changes in allowable grazing.

This effect could be viewed as both social and economic.

The most likely economic effects from management would result from the following:

- changes in recreation visitation levels in both planning areas,
- mining in the Bradshaw-Harquahala Planning Area, and
- ranching activities near communities.

Alternative A (No Action)

Recreation-Related Impacts

Recreation visitation levels are expected to increase from any action that enhances the quality of recreation experiences or creates more facilities or improved access. Increased visitation would be reflected in greater expenditures for goods and services in the local and regional economies. Greater expenditures, in turn, would tend to encourage added business activity and population growth. Growth in business would, in turn, stimulate construction.

The designation of the Agua Fria National Monument would most likely result in some increased visitor use to the monument and to surrounding areas, particularly given the monument's closeness to the Phoenix metropolitan area. This effect might also increase demand for use of BLM's land next to and near the monument as activities that might be less available in the monument place greater demands on surrounding BLM's lands.

In general, use of BLM's land in the planning areas for a variety of purposes would continue to increase as the population of Maricopa and Yavapai Counties, and Arizona as a whole, continues to increase. This analysis assumes that 70 percent of visitors to the planning areas would come from these counties and that this percentage would remain constant throughout the life of the plan. Additionally, visitation to the planning areas is expected to increase by the rate of the population growth in these counties, which is 55 percent by 2025 (Andreck and others 2002).

In addition to a continued overall increased interest in recreation, growth would also economically affect local communities. A continuation of current access and availability of trails for a variety of recreational purposes would yield continued economic benefit to the communities that provide services compatible with recreation. These services include eating and drinking places, OHV sales and repair businesses, horse boarding and tack businesses, campgrounds, and RV parks. These businesses are part of the services and trade industries, which in earnings and employment continue to be two of the dominant industries in the planning areas. Continued support of growth trends for these sectors of the economy would benefit communities such as Black Canyon City, the Salome/Wenden area, Prescott, Wickenburg, and Cordes Junction.

OHV use is a significant form of recreation on BLM's lands, as discussed in Section 3.15.5. Access for these users would continue to impact the OHV industry, especially in Yavapai and Maricopa Counties. OHV recreation currently accounts for more than \$2 billion per year in economic impact in these counties. The Gross Metropolitan Product (GMP) of greater Phoenix ranked 15th in the country with GMP equal to \$140.8 billion, and growing about 9% annually (<http://www.gpec.org/infocenter>). A two billion dollar contribution by the total OHV industry represents 1.4% of this figure. Not all of this, of course, can be attributed to actual OHV use on public lands. The overall economic importance of OHV, which includes driving on back roads, sightseeing, hiking/walking, picnicking, and

camping indicated in a 2002 study, "The Economic Importance of Off-Highway Vehicle Recreation" by Jonathan Silberman, PhD, Arizona State University West;" that there was a total of 12,224,707 OHV user days in Arizona. In Maricopa County, there were over 2 million OHV days resulting in over 13,000 full and part-time jobs, OHV expenditures of \$1,358.1 million, salaries and wages of \$428.9 million and state tax revenues of \$78.5 million. In Yavapai County there were almost 1,200,000 OHV days resulting in over 2,000 full and part-time jobs, OHV expenditures of \$183.0 million, salaries and wages of \$43.9 million, and state tax revenues of \$9.2 million. In La Paz County there were 344,550 OHV days resulting in 459 full and part-time jobs, OHV expenditures of \$44.1 million, salaries and wages of \$8.3 million, and state tax revenues of \$1.9 million. BLM in conjunction with other land jurisdictions contributes greatly to these statistics, but there have not been any studies on economic impacts resulting from single OHV type events, in particular race event that include from 75 to 200 participants, where most participants travel from distant locations, camp on site, and bring most of their supplies (food, vehicle parts, etc.) with them.

OHV use has a substantial economic impact in Arizona due to the large numbers of users and OHVs. On the other hand, sanctioned motorized competitive events on public lands can not be construed to be a large part of this equation due to the small number of citizens involved with these activities, relative to the large number of casual users. Assuredly, there are beneficial economic impacts from the purchase of supplies, fuel, food, and lodging in nearby communities by event participants, but this can not be quantified to any measurable degree with current information. One figure used recently is \$125 spending per participant or spectator per day, for an average of 200 to 500 participants per event. This benefit, however, is smaller in the field or the communities as many participants are self-contained and there are no towns or communities near by where events are conducted. The economic benefits would probably be greater and be more noticeable in smaller communities like Black Canyon City,

Tonopah or Wickenburg as opposed to large cities within the Phoenix metropolitan area.

Continued use of BLM's lands by equestrian users would also benefit local economies that cater to this group, as discussed in Section 3.15.5. For example, the impact from the horse industry on the broader Wickenburg area economy is about \$14 million (Beattie and others 2001).

In the long term, as recreation continues to increase through a variety of uses in the planning areas, resource conditions could deteriorate to some extent. As a result, the need for management of the area to monitor and protect the resources would increase.

Ranching, Agriculture, and Livestock Production-Related Impacts

Farming and ranching have historically been significant contributors to the Arizona economy. In recent years, extensive increases in population and urbanization in and near the planning areas have resulted in loss of agricultural land and increased conflicts with farm and ranch operations.

Livestock production resulting from grazing leases on BLM's land is an economic contributor to the local economy in the planning areas. The planning areas have 106 allotments with 932,950 acres of BLM's land that would continue to be open to grazing under current management. About 8,100 cattle, 2,470 sheep, 75 goats, and 87 horses are now grazing on BLM's allotments.

Changes in allowable grazing could affect ranchers in the planning areas. The magnitude of this effect is related to the economic viability and scale of existing ranches. An in-depth study of local ranching economics was not a part of the planning process. Because census data aggregates employment data for ranching with that for all agriculture, forestry, and fisheries, effects to this sector cannot be analyzed using employment data.

However, factors such as livestock production on BLM's land can be evaluated. The following impacts were based on this evaluation.

Prohibiting grazing in the Larry Canyon ACEC (which is currently inaccessible to cattle) in Agua Fria National Monument has minimal impact on livestock production. The number of livestock in the remainder of the planning areas would remain unchanged. Therefore, under current management the economic impacts of livestock production would not change.

Minerals-Related Impacts

A "RFD scenario," as required by BLM's Instruction Memorandum 2004-089, has been prepared to describe potential mineral resource development. This scenario forecasts the type of mineral development that might reasonably occur under No Action. It also provides a means of evaluating the impacts of management actions under the other Alternatives.

Actions that increase mining would tend to stimulate the local and regional economies through (1) increased employment and (2) increased demand for goods and services for the mine itself. The duration of this effect would depend upon the size of the mineral deposits and market demand for the products. Conversely, actions that either eliminate or discourage mining; or preclude new mining would tend to decrease, or at least not increase local and regional activity.

Agua Fria National Monument is closed to all forms of mineral entry. Minerals development in the Bradshaw-Harquahala Planning Area involves mainly saleable materials.

Locatable Minerals

In this Alternative, the Bradshaw-Harquahala Planning Area would generally be left open to mineral location and development. BLM would continue to administer mining of locatable minerals on a case-by-case basis. Unless otherwise allocated, scattered lands and other Federal minerals outside the planning area are open to mineral location and development.

Should prices of locatable minerals reach a level that makes it feasible to begin exploration or reopen mines in this area, there would be a positive economic impact in mining employment and earnings. The extent of that impact would not be known until the scope of the activity is determined in the future.

A social element has emerged in the last few years associated with the recreational aspects of prospecting for gold. Numerous prospecting clubs have formed with thousands of members dedicated to weekend casual exploration for gold. These clubs hold many mining claims within the planning area and have regular club events dedicated to finding nuggets of gold and having fun. Though the contribution to local economies from these clubs and events are relatively small, businesses have begun to cater to their needs and support their social structures. Continuation of motorized access in this Alternative would allow continued use by these groups, and the possibility of expansion to new areas.

Saleable Minerals

Continued public sales of mineral materials in the Bradshaw-Harquahala Planning Area on a case-by-case basis would have some economic impact. Unless otherwise allocated, scattered lands and other Federal minerals outside the planning area are open to mineral material disposal on a case-by-case basis, with determinations based on consistency with BLM's management policies and objectives.

Generally, BLM sells saleable minerals at market prices. BLM would continue to issue free use permits to the State and to local communities as the need arises. The result would be the continued availability of materials that are in demand for construction throughout Arizona, and particularly in the Phoenix metropolitan area.

Private sales for landscape or decorative rock are expected from within the Bradshaw-Harquahala Planning Area. Sources of comparable sand and gravel are also available on private land

throughout the planning area. Many of the private land sources are closer to markets than the BLM's sources. Therefore, the impact of mineral material sales is expected to be slight. The No-Action Alternative would not affect saleable mineral extraction and the use of these commodities.

Leasable Minerals

There are no known viable sources of leasable minerals in the Bradshaw-Harquahala Planning Area; however, all land in the area is now open to mineral leasing, except surface occupancy for oil/gas development is prohibited under current management in riparian areas of the Bumble Bee and Williams Mesa MRMA's, and the Hassayampa River RMA. This analysis assumes that over the 20-year term of the RMP up to two holes would be drilled for producing commercial amounts of gas and oil. Since the planning area has limited identified opportunities for mineral leasing, no measurable economic impacts are expected to result from exploration or development of leasable minerals except for potential areas that might be explored north of the planning area but within the Phoenix District's boundary.

Should exploration or development of leasable resources be pursued, the economic impact of the production of new wells for oil and gas would be determined once the scale of the operation could be more specifically established. Special stipulations would be incorporated into the lease agreement after the results of site-specific environmental assessments for each action are known. Economic benefits would be seen from the production of new wells, which could potentially result in jobs and revenue for the area in which the wells are drilled.

Lands and Corridors-Related Impacts

Under current management nearly 54,370 acres would be available for disposal.

Until a disposal or exchange occurs, social or economic impacts of the action cannot be easily

determined. Generally, increased development on the lands proposed for development would affect the rural lifestyle that many in the area moved there to enjoy. Increased traffic, the need for more public services such as roads and additional utilities, and a loss of rural lifestyle would likely result. Areas that typically have large lots and open spaces would likely be developed at higher densities. Potential increased development would provide added economic opportunities, including an increased tax base for the community and employment from new businesses. However, the disposition of BLM's land would not be a significant growth-inducing action since much of the planning area is growing rapidly and would continue to grow, independent of any BLM's land disposal actions in the future.

Based on the modeling conducted by Blueline Consulting Group, any land proposed for disposal along the Interstate 17 corridor in both Maricopa and Yavapai Counties would likely be developed into residential neighborhoods during the life of the plan. The residential development would lie next to or within 10 miles of Agua Fria National Monument and/or the management units along the interstate corridor. The areas that would be most affected by the land disposal and potential growth are the Dewey-Humboldt-Mayer area and the area south of Agua Fria National Monument near Black Canyon City.

Residents of these two areas are likely to intensively and frequently use nearby BLM's lands. For example, the demand for resources such as decorative rock would come from such areas and resources available near the Interstate 17 corridor are more likely to be used. However, until a known parcel is proposed for disposal or exchange, it is difficult to determine the specific social or economic impact of the action and possible subsequent development.

Continued growth and development, along with opportunities for locating future infrastructure needed for this development, would be supported by retaining the multi-use utility and transportation corridor that includes the

Interstate 17 right-of-way and other utility lines. The corridor also includes the eight multiple-use corridors along existing rights-of-way designated in the *Lower Gila North Management Framework Plan* (BLM 1983).

Opportunities to provide ample corridors would support the region's increased growth. The availability of corridors would present the opportunity for construction jobs should transmission lines, pipelines, or other facilities be built in the corridors. These jobs might benefit smaller communities close to the proposed corridors. Utility projects that would be developed within a utility corridor could have a profound effect on the economic sustainability of a region. Large energy transmission projects are extremely important in maintaining regional residential and commercial growth and development.

Development of utility projects are often controversial in nearby communities for reasons of visibility of the utility facilities and potential safety issues both during construction and long term operations. Mitigations for these impacts are developed as a consequence of site specific project analysis and could include, but not be limited to; siting to minimize visibility from communities; siting to minimize access to facilities from communities; design features to minimize visibility of the facilities similar to those described under impacts to visual resources.

Alternative B

Recreation-Related Impacts

Alternative B would offer and encourage developed and primitive recreation in both planning areas. Protecting biological and cultural resources would enhance the quality of the recreation experience and increase visitation. Increased access to cultural resource areas and developing of interpretive media would also increase public interest and visitation. More active management of visitation is intended to enhance the quality of the recreation experience and; therefore, is

expected to increase visitation. Trail building and developing facilities for horses and pack animals are expected to increase demand. *Alternative B* would meet the needs of both motorized and non-motorized recreation and would tend to increase overall recreation demand more than the other Alternatives.

Route modeling for *Alternative B* found that this Alternative would designate 2,086 miles of routes. As under *Alternative A*, a continuation of current access and availability of trails for a variety of recreational purposes would economically benefit businesses that provide services compatible with recreation and support the services and trade industries of the economy.

Alternative B proposes eight SCRMA and nine SRMA which would increase visitor use in the planning area where they are allocated and developed for public use. This would further benefit businesses that serve visitors.

Alternative B proposes one area where lands are allocated to maintain wilderness characteristics and one WHA. These areas are designed to protect the area's primitive nature and allow for more non-motorized types of recreation on a more limited basis, than more active types of uses allowed under SRMA. Nonetheless, these areas are open to recreation use and would attract visitors to the area, again benefiting economic sectors that support recreation.

Communities such as Black Canyon City, the Salome/Wenden area, Prescott, Wickenburg, and Cordes Junction provide local services to recreationists and would continue to benefit under *Alternative B*.

Alternative B proposes Bloody Basin Road, in Agua Fria National Monument and Constellation Mine Road near Wickenburg as Back Country byways. These designations would have an effect on recreation and visitor uses similar to the designation of Agua Fria National Monument; identifying them as "special" and attracting a certain population for that reason.

Long term impacts of recreation use would be the same as those listed under *Alternative A*. The social and economic impacts of OHV would remain as described under *Alternative A*.

Ranching, Agriculture, and Livestock Production-Related Impacts

The number of allotments and livestock grazing on BLM's land under *Alternative B* would be the same as under *Alternative A*. Since grazing in riparian areas would be limited to winter (November 1 to March 1), grazing would likely decline but socio-economic impacts would not measurably differ from current management. Impacts from allocating eight SCRMA cannot be determined until the areas are defined and specific actions are selected. Should areas be restricted from grazing or fenced for protection, livestock production may decrease.

Minerals-Related Impacts

Management actions under *Alternative B* would be more encouraging to mineral exploration and mining than *Alternatives C, D, or E* for the Bradshaw-Harquahala Planning Area. Thus, *Alternative B* would tend to generate more mining and greater stimulate local and regional economies than would the other action Alternatives, assuming that mining does not conflict with recreational opportunities or visitation demand.

In the Bradshaw-Harquahala Planning Area, VRM standards would be established, with potential ramifications to mining. The increased cost of compliance with VRM standards might move the impacts from public lands to nearby State or private lands. Overall, the impact to local economies would be low and mining would be expected to remain at current levels.

The evaluation of proposed mining would consider mining's effect on biological and cultural resources. This Alternative is not expected to degrade the quality of the visitor's experience, to impact casual use miners, or prospecting club activities.

Locatable Minerals

Impacts would be similar to *Alternative A*, except the 640 acre Tule Creek ACEC would be closed to mineral location and development. As under *Alternative A*, an increase in prices of locatable minerals would possibly make it feasible to begin exploration or to reopen mines in the planning area, economically benefiting mining employment and earnings. The extent of that impact would not be known until the scope of the activity is determined. These activities would most likely occur in the northern part of the planning area, affecting communities such as Wickenburg, Yarnell, and Black Canyon City.

The greatest impact to mining would potentially come from VRM. For locatable minerals, allowing mining is a nondiscretionary action outside of areas closed to mining. However, compliance with VRM standards would be imposed through rehabilitation standards. Higher costs of mine closure might be borne by mining companies, and in some cases the portion of bonds returned might be lower. Labor and material cost of increased rehabilitation could extend the economic benefits of mining to local communities if the labor and materials are purchased there.

Saleable Minerals

Impacts would be similar to *Alternative A*, except *Alternative B* would close to mineral material disposal Tule Creek ACEC and one area allocated to maintain wilderness characteristics in the Bradshaw-Harquahala Planning Area. This would somewhat limit the potential sites for mining saleable minerals. However, since locations for this mining are unknown, the potential economic impact is also unknown but it is expected to be negligible.

Leasable Minerals

Impacts would be similar to *Alternative A*, except Tule Creek ACEC would be closed to mineral leasing. This would have a negligible impact since the planning area has limited identified opportunities for mineral leasing.

Lands and Corridors-Related Impacts

Impacts and assumptions of analysis would be similar to *Alternative A*, except that 58,400 acres would open to disposal. The 58,400 acres are scattered throughout the planning area and would mainly affect the communities of Dewey, Humboldt, Mayer, and Goodyear for future potential development.

Impacts of utility and transportation corridors would also be similar to *Alternative A*.

Alternative C

Recreation-Related Impacts

Alternative C would favor primitive over developed recreation in Agua Fria National Monument, where visitor access would be more limited than under *Alternatives A* or *B*. The number of commercial and guide/outfitter permits in the monument would possibly be half of those issued under *Alternative B*. Public access to cultural resources would also be more limited than under *Alternatives A* or *B*.

Public access in the Bradshaw-Harquahala Planning Area would be more restrictive than would the *Alternatives A* or *B*, and so would tend to reduce visitation and visitor spending. Biological and cultural resources would be better protected than under *Alternatives A* and *B*, thus somewhat raising the quality of the recreation experience. However, limiting visitor access would reduce the number of people able to enjoy the experience.

The number of SRMAs--which allow more active recreation--would increase visitor use and would benefit businesses that serve visitors. The planning area would be better protected for non-motorized uses by the following actions:

- reducing SCRMAAs to four,
- increasing lands allocated to maintain wilderness characteristics, and
- applying restrictions that would result from designating 11 ACECs.

Overall the restrictions would reduce visitor use in the planning areas and economic benefits of recreation and visitation would be lower than under *Alternatives A* or *B*, but greater than under *Alternative D*.

Alternative C would designate 1,915 miles of routes. Access and availability of trails for a variety of recreational purposes would result in continued economic benefits to the communities that provide services compatible with recreation. Communities such as Black Canyon City, the Salome/Wenden area, Prescott, Wickenburg, and Cordes Junction provide local services to recreationists and would continue to benefit.

Impacts of proposing Bloody Basin Road in Agua Fria National Monument and Constellation Mine Road near Wickenburg as Back Country byways would be similar to those described for *Alternative B*.

Long term impacts of recreation use would be the same as *Alternative A*. Even though recreation use, especially motorized, would be more restricted in some of the planning area under *Alternative C*, the popularity and growth curve of this recreation activity, and its associated local and regional economic impacts from the purchase, sale, servicing and fueling of off-highway equipment, would remain essentially as described under *Alternative A*. Users would have slightly fewer routes and areas in which to ride and reduced opportunities for different landscape-based experiences. Additionally, motorized recreation activities would be more concentrated and intense as users shift to available locales.

Ranching, Agriculture, and Livestock Production-Related Impacts

Alternative C would prohibit grazing in riparian areas, reducing the number of allotments to 43, and allowing for more than 4,300 cattle to continue grazing on BLM's land. This would affect local areas and ranchers whose grazing allotments would be eliminated or reduced to the point that their businesses would no longer be

viable. The difference between the impacts of *Alternatives A* and *C* on the regional economy would be minimal.

Minerals-Related Impacts

Mining would still be open in most areas but with substantial restrictions in lands allocated to maintain wilderness characteristics and ACECs. Impacts from this management action would be similar to *Alternative A*. Impacts would be less than *Alternative B* and greater than *Alternative D*.

Locatable Minerals

Impacts would be similar to *Alternative A* except for the closure to mineral location and development in three ACECs and riparian areas. As a result, there could be some economic limitations should suitable areas for mining be found where mining is prohibited.

Casual use miners and prospecting clubs could continue conducting their activities; however, route closures or limitations could make it more difficult, or potentially more expensive, if clubs are required to be responsible for maintaining access to their claims. Road work and reclamation bonds may be required.

Impacts from VRM would increase compared to those under *Alternative B*, but be less than impacts under *Alternative D*.

Saleable Minerals

Impacts would be similar to *Alternative A*, except ACECs and lands allocated to maintain wilderness characteristics in the Bradshaw-Harquahala Planning Area would be closed to mineral material disposal. As in *Alternative B*, this would somewhat limit the availability of potential sites for mining saleable minerals. Since locations for this mining are unknown, the potential economic impact is also unknown but expected to be negligible.

Leasable Minerals

Impacts would be similar to *Alternative A*, except mineral leasing would be prohibited in four ACECs in the Bradshaw-Harquahala Planning Area and on scattered lands outside the planning area. Since the planning area has a low potential for leasable mineral production, no measurable economic impacts are expected.

Lands and Corridors-Related Impacts

Alternative C considers two options for land disposal:

Under Option One, a total of 600 acres of land would be available for disposal. This analysis assumed that these acres would be developed for residential use within the life of the plan. Since there is limited disposal or exchange under Option One, the impacts would be similar to those under *Alternative D* for land disposal.

Under Option Two, a total of 49,100 acres would be disposed of or exchanged. The lands are scattered throughout the planning area, mainly in the unincorporated areas of Yavapai and Maricopa Counties. A number of acres are located in the Yarnell area, which would provide a potential opportunity for low-density residential use if the lands were acquired for private purposes. Impacts would be similar to *Alternative A*.

Impacts of retaining the multi-use utility and transportation corridor that includes the Interstate 17 right-of-way would be similar to *Alternative A*, except that the corridor would be narrowed to move it out of Agua Fria National Monument. The opportunities provided by the corridors would continue to support increased growth in the region.

Alternative D

Recreation-Related Impacts

Alternative D is intended to put more emphasis on non-motorized recreation than the other Alternatives, by devoting the greatest area to non-motorized recreation and closing the most area to vehicular access. This

Alternative would place stricter limitations on public access to cultural resources than any other. No motorized competitive races would be authorized. Visitation and OHV uses would decline in the planning area, resulting in somewhat lower visitor spending in the local and regional economies.

To the degree that this loss is not offset by an increase in non-motorized use, visitation for recreation would be lower than under the other Alternatives. The economic stimulus to the local and regional economies would also be lower. To the degree that the decline is offset by increased non-motorized recreation, the difference between the impacts of *Alternative D* and the other Alternatives would not be so great.

Alternative D would designate 1,707 miles of routes in the planning areas, the fewest miles under any of the Alternatives. Access to BLM's lands would continue to exist, and trails could be used for a variety of recreational purposes. However, trails would be more limited than under the other Alternatives. *Alternative D* could result in fewer economic benefits to the communities which provide services compatible with recreation.

The reduced number of SRMAs, which allow more active recreation, would affect visitor use and have a smaller impact on businesses that serve recreationists. *Alternative D* would create more protection for other non-motorized recreation uses in the planning area through the following actions:

- reducing the number of SCRMA's to two,
- increasing the number of areas allocated to maintain wilderness characteristics to six, and
- restricting access by designating eight ACECs.

Overall, these measures would reduce visitor use in the planning area.

Communities such as Black Canyon City, the Salome/Wenden area, Prescott, Wickenburg, and

Cordes Junction provide local services to recreationists and would continue to benefit. However, benefits could possibly be less than under *Alternative C*.

Overall, economic impacts from recreation would be slightly lower than *Alternative C*, with moderate reductions in economic contributions from motorized recreation, in the form of reduced services, equipment sales and fuel needs. Like the OHV dealers say: “no trails, no sales”. Recreation use, especially motorized, would be more restricted or eliminated in much of the planning area under *Alternative D*. The lack of areas and trails could diminish the popularity and, until now, the endless growth curve of motorized recreation activities, along with its associated local and regional economic effects. Users would have far fewer routes and areas in which to ride and reduced opportunities for different landscape-based experiences. Motorized recreation activity areas would be more concentrated and intense as users shift to available locales

Ranching, Agriculture, and Livestock Production-Related Impacts

Alternative D would make BLM-managed lands unavailable for livestock grazing. This prohibition would significantly affect holders of grazing leases and local economies, reducing livestock production in the State. In 2002 a total of 36,000 head of cattle were raised in Maricopa and Yavapai Counties. A reduction of 8,000 head would reduce livestock production in the two counties by 20 percent.

Minerals-Related Impacts

Alternative D, with its emphasis on natural landscapes and primitive recreation opportunities, would be the most restrictive to mining. Both exploration and development would be strictly limited. This Alternative would tend to more or less eliminate mining via attrition over the duration of the plan. It would also reduce mining-related additions to the local and regional economies. No one knows whether this effect on local and regional economies

would be offset by additions caused by visitation.

Locatable Minerals

Impacts would be similar to *Alternative C*, except that the areas closed to mineral location and development would be the greatest under this Alternative. As a result, economic opportunity would be limited to a greater extent than under other Alternatives, especially if suitable sites were identified for areas where no mining would be allowed.

Impacts from VRM would increase under this Alternative as compared with *Alternative B* because more acreage would be classified as VRM I and II.

Saleable Minerals

Impacts would be similar to *Alternative C*, except the closure to mineral material disposal of a number of ACECs and lands allocated to maintain wilderness characteristics would limit the availability of potential sites for mining saleable minerals more than any of the other Alternatives. However, locations for this mining are unknown, so the potential economic impact is also unknown. It is estimated that short term demand would continue to be met with production on both Federal and non-Federal lands. As the population continues to grow and demand increases, future demand may not be met and increased costs of importing building material would result in increased building costs in all parts of the economy.

Leasable Minerals

Impacts would be similar to *Alternative A*, except mineral leasing would be prohibited in a number of ACECs and lands allocated to maintain wilderness characteristics. Since the planning area has a low potential for leasable mineral production, measurable economic impacts are not expected.

Lands and Corridors-Related Impacts

Under *Alternative D*, no BLM land would be available for disposal. As stated previously, the disposition of BLM's land would not be a significant growth-inducing action, and so *Alternative D* would have no measurable impacts.

The unavailability of land as a result of no disposal does present a potentially positive social impact on the planning area, in that it would contribute to preserving the current rural lifestyle throughout much of the planning area.

The proposed reduction in the level of corridors under *Alternative D* would support continued economic development and growth in the region. *Alternative D* would somewhat constrain the citing of potential utilities in the corridors in the future, but their allocated corridors should be sufficient to meet local demand.

Alternative E (Proposed Alternative)

Recreation-Related Impacts

Alternative E would favor primitive recreation opportunities over developed opportunities in the Agua Fria National Monument. Visitor access would be more limited than under *Alternatives A, B, or C*. However, visitor services and opportunities for structured or developed recreation would be greater than under *Alternative D*. The RMP would not set the number of commercial permits and guide/outfitter permits in the monument. This number would be determined by monitoring resource conditions. Users could thus determine the limits for SRPs because resource conditions depend on social behaviors. If visitors use existing disturbances and take care not to expand them or degrade the quality of the surroundings, the capacity to support SRPs of many kinds would be higher than if visitors are inconsiderate of the land.

Public access to cultural resources in the Agua Fria National Monument area would also be more limited than under *Alternatives A, B, and C* because more routes would be

closed; nevertheless, more routes would be designated as open than under *Alternative D*. Visitation is expected to shift from people desiring a motorized experience to people desiring a non-motorized experience. This shift is expected to reduce total visitation to the monument and result in somewhat lower visitation-related spending in the local and regional economies.

Public access would be restricted in the Bradshaw-Harquahala Planning Area more than *Alternative B*, but less than *Alternatives C and D*. Visitation and visitor spending are likely to be lower for this *Alternative* than for *Alternatives A and B*, but higher than for *Alternatives C and D*. The effect of this restriction would be most pronounced in the Harquahala MU, where most ACECs and lands allocated to maintain wilderness characteristics are located, although this MU now receives relatively low visitation.

Vehicle routes that would be designated as open are expected to accommodate use at current levels. Increased opportunities for non-motorized experiences in natural primitive landscapes might increase overall visitation, but the types of new users attracted to the area are not expected to greatly increase visitor spending in the local and regional economies.

In the Bradshaw-Harquahala Planning Area outside of the Harquahala MU, *Alternative E* would be similar to *Alternative C*. Allocating SRMAs to develop facilities and manage more intensive recreation, especially for motorized uses, would somewhat concentrate those activities. The improved facilities could attract more users to areas managed for more intensive recreation but might also cause people looking for a less-structured location to move to new areas. Overall, use is expected to increase where motorized users are managed and access is maintained. User satisfaction would also improve, along with opportunities for citizen stewardship. The Black Canyon, Castle Hot Springs, and Hassayampa MUs would experience most of the change resulting from these management actions. Overall, the

economic benefits of recreation under *Alternative E* are expected to be lower than under *Alternatives A, B, and C*, but greater than under *Alternative D*.

Route modeling for the Proposed Alternative indicates 2,067 miles of route might be designated. The route network is expected to be similar to that modeled under *Alternative B*. A continuation of current access and availability of trails for a variety of recreational purposes would result in continued economic benefits to the communities that provide services compatible with recreation.

Under *Alternative E* six SCRMA's would contain sites allocated to public use, which would have impacts similar to *Alternative B*. The increase in areas allocated to maintain wilderness characteristics and the restrictions that would result from designating four ACECs would better protect the planning area for other non-motorized uses. These restrictions might reduce, or at least cap at current levels, visitor use in the vicinity of the allocations and designations.

Communities such as Black Canyon City, the Salome/Wenden area, Prescott, Wickenburg, and Cordes Junction provide local services to recreationists and would continue to benefit from recreation under *Alternative E*.

The Bloody Basin Road in Agua Fria National Monument and Constellation Mine Road near Wickenburg would not be considered for allocation as back Country byways thus impacts would be similar to those under *Alternative A*.

OHV would continue to be a significant form of recreation on BLM's lands, as discussed in Section 3.15.5, with similar impacts to those described in *Alternatives A and B*. Access for these users would continue to impact the OHV industry, especially in Yavapai and Maricopa Counties. OHV recreation currently accounts for more than \$2 billion per year in economic impact in these counties

In the long term, as recreation continues to increase through a variety of uses in the planning area, resource conditions would deteriorate somewhat. Through the mix of (1) allocations to protect primitive landscapes and (2) development to manage and support motorized and other more intensive recreation, resource conditions are expected to be maintained at current levels and to be sustainable throughout the life of the plans.

Ranching, Agriculture, and Livestock Production-Related Impacts

Impacts would be similar to *Alternative B*, except six SCRMA's would be allocated, which might result in areas being fenced for protection. The number of allotments and livestock grazing on BLM's land would be the same as under *Alternative A*. Since grazing in riparian areas would be limited to winter (November 1 to March 1), livestock production would likely decline but would not measurably differ from current management. Effects are expected to be negligible.

Minerals-Related Impacts

Management actions under *Alternative E* would be similar to those described for *Alternative A*, except that in the Bradshaw-Harquahala Planning Area the establishment of VRM standards would have impacts similar to those described for *Alternative B*. Overall, the impact to local economies would be low.

Impacts to casual miners and prospecting clubs are expected to be similar to *Alternative B*.

Locatable Minerals

Impacts would be similar to *Alternative B*, except that riparian areas in reconveyed lands, mainly in the Black Canyon area between Black Canyon City and Bumblebee, would be closed to mineral location and development along with Tule Creek ACEC.

Impacts to mining from VRM would be similar to *Alternative B*, except that more acres (1,450)

would be allocated to VRM Class II and Class IV (4,730), and less acres (6,180) would be allocated to VRM Class III.

Impacts to casual miners and prospecting clubs are expected to be the same as for *Alternative B*.

Saleable Minerals

Impacts would be similar to *Alternative A*, except Tule Creek ACEC and riparian areas in the planning area would be closed to mineral material disposal, limiting slightly the potential sites for mining of saleable minerals. Data on the potential for this material show that this material is generally not in the areas that would be closed, so impacts are expected to be minimal.

As with locatable mining, VRM standards might affect mineral material and decorative rock mining. Permitting of saleable minerals is a discretionary action and the inability of a proposal to comply with VRM standards could be a reason to deny it. If VRM standards prove to be an unacceptable economic burden on the industry, demand is expected to be met from State or private sources. The environmental impacts (and revenues) would then shift off of public lands, but there would be no net change to the economies of local communities.

Leasable Minerals

Impacts would be the same as for *Alternative B*.

Lands and Corridors-Related Impacts

Impacts would be similar to *Alternative A*, except a total of 38,755 acres would be available for disposal by sale or exchange. The lands are scattered throughout the planning area and would mainly affect the future potential development of the communities of Buckeye, Goodyear, Wickenburg, and the greater Phoenix area.

Impacts of utility and transportation corridors would be similar to *Alternative A*. The Black Canyon Utility Corridor location in the Proposed

Alternative potentially improves long term economic conditions in central Arizona by providing a more suitable location for future utility development than the corridors analyzed in *Alternatives A, B, C or D*. Limitations or constraints to energy transmission to the Greater Phoenix Metropolitan Area could have broad economic impacts. By relocating the corridor to be suitable for more types of utility development, those potential impacts could be avoided.

4.23 Environmental Justice

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations,” was issued in 1994. The objective of this order was to preclude Federal actions from creating disproportionate adverse impacts to minority and low-income populations.

The relevant data needed to evaluate possible environmental justice effects (i.e. total and changes in minority populations and income levels) were presented in Section 3.16. Table 4-9 shows HRUs and CRUs whose percentage of Hispanic populations and percentage of populations living below the federally mandated poverty level exceed those of their counties.

Analysis of the data presented in Chapter 3 did not find that implementing any of the proposed *Alternatives* would result in disproportionate adverse plan-related effects on minority or low-income groups. Nothing inherent in the proposed *Alternatives* would cause any statistically significant changes to ethnic composition of the resident populations. There is no indication that any of the *Alternatives* would have substantial adverse economic effects on any particular ethnic group or any particular income group as compared to others.

4.24 Cumulative Impacts

Cumulative impacts are the combination of the effects of past, present, and future foreseeable actions; in combination with the effects of each Alternative. With a large-scale regional plan such as this, many of the impacts discussed under each topical resource area are, in essence, cumulative impacts. Nevertheless, NEPA requires that the impacts occurring in the entire planning area be separately and specifically addressed.

The future foreseeable actions would include the following:

- population growth in and next to the planning area that would increase residential and commercial development on private lands in both Yavapai and Maricopa Counties,
- continued grazing,
- potential minerals development,
- increased recreational uses on BLM's lands,
- activities on lands under the jurisdiction of other Federal and State agencies
- reconstruction and widening of Interstate Highway 17.

The Alternatives could affect several resources and resource uses, including soils, air quality, water resources, and social and economic conditions.

Urbanization, mineral development, and increased outdoor recreational use of private and State lands in central Arizona are likely to continue throughout the life of the RMP. Cumulative impacts on wildlife might include the loss of wildlife habitat, including Sonoran desert tortoise and pronghorn antelope habitat; and migration corridors in the planning areas and on adjacent Federal, State, and private lands.

This section provides information relevant to the cumulative impacts for each Alternative,

including a discussion about cumulative impacts as they relate to Population Growth and Development, Recreation/Visitation, Air Quality, Soils, Water Resources, and Wild Horse and Burro Management.

Alternative A (No Action)

Population Growth and Development

As stated in Section 4.22.1, potential cumulative effects of growth and development may include (1) the loss of ranching and the related western lifestyle and (2) change in social leadership structure resulting from increases in urban values and reduced ranching. In general, the greatest effects would be related to economics, since the actions proposed in the Alternatives would not, in most cases, have major social impacts in the planning areas.

Under current management 54,370 acres of BLM's land would be available for disposal by sale or exchange. The disposition of BLM's land is not expected to be a significant growth-inducing action, since much of the planning area is growing rapidly and would continue to grow independent of any BLM's land disposal in the future.

Therefore, *Alternative A* would have no measurable cumulative impact on growth and development in the State, growth in and next to the planning areas would continue to cumulatively impact resources on BLM's land.

The reconstruction of I-17 would facilitate growth of the local communities as well as the State as a whole.

Recreation/Visitation

The most likely cumulative effects would be related to changes in visitation levels in both planning areas. Cumulative impacts would include intensified use in certain areas, especially for motorized activities, as recreation increases and growth and development occur near recreation areas.

General plans for the counties and area communities include provisions for open space, which is usually for parks or non-motorized recreation, further concentrating motorized activities on BLM's land.

Increased visitation is expected to result in increased spending for recreational goods and services. Communities such as Black Canyon City, the Salome/Wenden area, Prescott, Wickenburg, and Cordes Junction provide local services to recreationists and would continue to benefit from recreation under the current management.

Reconstruction of Interstate 17 could enhance or restrict access to adjacent areas. A wider highway would create negative visual impacts as seen from the national monument and other areas.

Air Quality

The main air quality issue affecting the planning area is also related to forecast population growth in the planning area, especially the rapid growth in the Phoenix nonattainment areas. A secondary air quality issue is increased emissions from additional OHV use in the planning areas. A third cumulative impact issue is population increase in rural areas.

Cumulative air quality impacts in the planning areas have been adequately addressed by the air quality nonattainment plans and air quality maintenance plans that MAG and ADEQ have been required to prepare for approval by the EPA as described in Section 3.4.2 Air Resources. These plans are required because the Phoenix area is already a nonattainment area for several air pollutants and these plans are, in reality, quantitative cumulative air quality impact assessments.

Emissions from OHVs would likely begin to decrease in 2006 and might offset the expected future increase in OHV numbers (EPA 2003). In that case, increased OHV use would cause increased fugitive dust impacts immediately near the roads and trails on which they are driven

and future cumulative OHV tailpipe emissions would probably contribute a proportionately smaller fraction of future regional air pollutant emissions.

Soils

The cumulative effects for soils would be generally limited to a particular site. Management practices in the planning areas and activities on private lands have led to some detrimental soil conditions, some of which persist. Additionally, as private lands continue to be rapidly developed, especially near the Phoenix metropolitan area, soil becomes compact and displaced. As a result, loss of vegetation and impacts to watershed conditions may occur. Soil productivity in these areas is lost for all practical purposes.

Water Resources

The cumulative effects for water resources would be similar under all Alternatives. Watersheds integrate the effects of all activities within their boundaries. Therefore, activities on private *and* public lands affect water resources. The impacts of development on soil cumulatively affect watershed conditions. As a result, many watercourses in central Arizona have been degraded by increased sediment load due to urbanization, livestock grazing, and recreation. Furthermore, leachate from mining has historically degraded water quality in the region. Under *Alternative A*, these activities would continue and so affect water resources.

Wild Horse and Burro Management

The Lake Pleasant HMA, containing 80,800 acres, and the Harquahala HA, containing 156,255 acres, are both entirely within the Bradshaw-Harquahala Planning Area.

The only source of cumulative effects would be the ability of horses and burros to move from one location to another in response to management actions or natural conditions.

In accordance with policy found in 43 CFR 4700.0-6, wild horses and burros shall be considered comparably with other resource values in the formulation of land use plans.

The Arizona Standards for Rangeland Health and Guidelines for Grazing Administration establish cumulative effects considerations for the threshold of significance. The total utilization of a rangeland must create conditions that meet these standards. If combined wild horse, burrow and livestock grazing reduce rangeland condition below the standard levels, then cumulative effects have occurred. By definition, cumulative effects cannot occur where AUM allocations are proportional. Cumulative effects might occur on private, State, or other Federal lands where AUM allocations are not proportional, i.e., where horses and burros have not been part of the allocation formula. If horses and burros move onto these lands and add their grazing pressure to the existing levels, then the cumulative effect might result in a rangeland condition that is below standard.

Animal numbers are carefully managed in the Lake Pleasant HMA and the small herd sizes in the Harquahala HA make that herd unsustainable. In addition, gathered animals are generally moved out of the area. Therefore, burro management is not expected to result in noticeable cumulative impacts.

Alternative B

Population Growth and Development

Growth and development in and next to the planning areas would continue to have a cumulative impact on the resources. BLM's resources would also be impacted in the same manner as under *Alternative A*, except that 58,400 acres of land would be available for disposal by sale or exchange.

Recreation/Visitation

Cumulative impacts from recreation and visitation would increase over those in

Alternative A. *Alternative B* is expected to increase visitation more than under the other Alternatives because:

- Developed and primitive recreation opportunities would be available and encouraged in both planning areas.
- Increased access to cultural resources and developing interpretive media would increase public interest and visitation.
- More active visitor management would enhance the recreation experience.

Visitor use in the planning areas would also increase in response to:

- allocating more SRMAs,
- designating the Bloody Basin and Constellation Mine Roads as back country byways, and
- allocating more SCRMA's.

The trend toward non-motorized recreation in areas of urban development would be similar to that under *Alternative A*.

Air Quality

The cumulative impacts to air quality under *Alternative B* are expected to be similar to those under *Alternative A*. The impacts to air quality from construction and mineral exploration or development would continue at essentially the same magnitude as described for *Alternative A*, and would be similarly addressed by MAG in their air quality maintenance plans.

Recreation that would create OHV emissions and particulates generated in the rural areas would not vary significantly from those under *Alternative A*. *Alternative B* would reduce the miles of trails open to recreation by three percent from that under *Alternative A*. Areas open to OHV use and potential mining would be greater than under the other Alternatives, but the air quality impacts on the region would be minimal.

Soils

The cumulative effects to soils under *Alternative B* are expected to be similar those under *Alternative A*.

Water Resources

The cumulative effects to water resources under *Alternative B* are expected to be similar as those under *Alternative A*.

Wild Horse and Burro Management

Cumulative impacts would be similar to those described for *Alternative A*, except that burros in the Harquahala HA would not be a managed herd, and nuisance animals and burros harming sensitive habitats would be removed.

Alternative C

Population Growth and Development

Growth and development in and next to the planning areas would continue to have a cumulative impact on the resources on BLM resources in the same manner as under *Alternative A*, except that under *Alternative C* 49,100 acres of land would be available for disposal by sale or exchange instead of 54,370 acres.

Recreation/Visitation

Cumulative impacts of recreation and visitation would decrease under *Alternative C* as compared to *Alternatives A* and *B*. This Alternative would favor primitive recreation opportunities over developed opportunities, and visitor access for motorized activities would be more limited. Such restricted use is expected to reduce visitation because motorized use accounts for three of the five most popular activities in the planning area. This reduction; therefore, would somewhat lower visitation spending in the local and regional economies. Overall, the beneficial economic effects of recreation and visitation would be lower than under *Alternatives A* and *B*, but greater than under *Alternative D*.

Alternative C would better protect the planning areas for non-motorized used by:

- reducing the number of SCRMA's,
- increasing areas allocated to maintain wilderness characteristics , and
- imposing motorized access restrictions by designating 11 ACECs.

Air Quality

The cumulative impacts to air quality are expected to be similar to those under *Alternative A*.

Recreation that would generate OHV emissions and particulates in rural areas would not vary significantly from that under *Alternative A* and air quality impacts in the region would be minimal. *Alternative C* would reduce the miles of trails open to recreation as compared to *Alternatives A* and *B*. The area opened to potential mining would be less than *Alternative B*, but greater than under *Alternative D*.

Soils

The cumulative effects to soils are expected to be similar to those under *Alternative A*.

Water Resources

The cumulative effects to water resources are expected to be similar to those under *Alternative A*.

Wild Horse and Burro Management

Cumulative impacts would be the same as those for *Alternative B*.

Alternative D

Population Growth and Development

Under *Alternative D*, BLM would not dispose of any land. Because the disposition of BLM's land would not be a significant growth-inducing

action, cumulative impacts would be the same as under *Alternative A*.

Recreation/Visitation

Impacts from recreation would be reduced the most under this *Alternative*. *Alternative D* would devote more area to non-motorized recreation and close more areas to vehicular access than would the other alternatives. The gradual phase-out of motorized uses in the Hieroglyphic Mountain and Bradshaw Foothills areas would change the general recreation setting to more non-motorized uses. Overall, the number of visitors to the planning area would be reduced, along with visitor spending.

The planning area would be better protected for non-motorized uses by the following actions:

- reducing the number of SRMAs and SCRMAAs,
- increasing areas allocated to maintain wilderness characteristics, and
- restricting motorized access by designating eight ACECs.

Air Quality

The cumulative impacts to air quality are expected to be similar to those under *Alternative A*.

Recreation generating OHV emissions and particulates in rural areas would possibly be less than under *Alternative A*, given more restrictions on areas open to OHV use and competitive events. *Alternative D* would reduce the miles of trails open to recreation use from that under *Alternative A*, but the air quality impact on the region would be minimal.

Soils

The cumulative effects to soil are expected to be less than those under any other *Alternative*, given that recreation and mining would be more restricted and grazing would be prohibited.

Water Resources

The cumulative effects on water resources are expected to be less than those under any other *Alternative*, given that recreation and mining would be more restricted and grazing would be prohibited.

Wild Horse and Burro Management

Cumulative impacts would be the same as under *Alternative B*.

Alternative E (Proposed Alternative)

Population Growth and Development

Growth and development in and next to the planning areas would continue to have a cumulative impact on BLM's resources in the same manner as under *Alternative A*, except that 38,755 acres would be available for disposal by sale or exchange.

Recreation/Visitation

Alternative E would favor primitive over developed recreation in the Agua Fria National Monument area. Visitor access would be more limited than under *Alternatives A, B, and C*, but visitor services and opportunities for structured or developed recreation would be greater than under *Alternative D*.

Alternative E would also restrict public access in the Bradshaw-Harquahala Planning Area more than *Alternative B*, but less than *Alternative C*; and would tend to reduce visitation. *Alternative E* would result in somewhat less visitor spending in the local and regional economies than *Alternatives A and B*, but more than *C and D*. The effect of the management actions might be offset over time by the sheer growth in recreation demand from population growth in the region.

The planning area would be better protected for non-motorized uses by the following actions:

- reducing the number of SCRMAAs,

- increasing areas allocated to maintain wilderness characteristics, and
- restricting motorized access by designating four ACECs.

Air Quality

The cumulative impacts to air quality under *Alternative E* are expected to be similar to those under *Alternative A*.

Recreation that would generate OHV emissions and particulates in rural areas would not vary significantly from that under *Alternative A*. The miles of trails open to recreation would decline from those under *Alternative A* and areas with routes open to OHV use would be similar to those under *Alternative B*. Areas open to mining would be similar to those under *Alternative A*. The air quality impact on the region would be minimal.

Soils

The cumulative effects to soils under are expected to be less than those under *Alternatives A* and *B* because motorized recreation would be more restricted and fewer acres would be available for disposal and eventual development. Impacts would be more than those under *Alternatives C* and *D*.

Water Resources

The cumulative effects to water resources are expected to be less than those under *Alternatives A* and *B* because motorized recreation would be more restricted and fewer acres would be available for disposal and eventual development. Impacts would be more than those under *Alternatives C* and *D*.

Wild Horse and Burro Management

Cumulative impacts would be the same as under *Alternative B*.

4.25 Mitigation

4.25.1 Mitigation for Effects of Routes

Mitigation measures to reduce or eliminate the effects that travel routes may have on natural resources and social environments are discussed in the following text. The range of alternatives in Chapter 2 provides a spectrum of resource allocations and Special Designations to provide for broad management of resources and social environments. Discussion of possible mitigation measures employed for foreseeable resource or social conflicts is intended to describe the range of measures available to alleviate pressures on resources and social environments from routes and their use by humans. Monitoring, in some manner, provides the basis for determining the need and the eventual effectiveness of mitigation actions.

Some of the likely resource and social conflicts with routes and the use of routes are outlined in Appendix T, Off-Highway vehicle Mitigation Examples. The Table provides examples of known or likely to develop conflicts that may arise in the foreseeable future and explores a possible progression of mitigating actions that could be taken. These actions are listed from least expensive and/or easiest to implement to most expensive and/or most difficult to implement. Not all mitigation measures listed in Appendix T may be needed. Additionally, it may be determined that actions not listed in the table are required in unique situations or when new technology becomes available. The intention is to communicate the methodology that might be used when attempting to find a suitable mitigation to an identified conflict with routes and their use as required by 43 CFR 8342.1. It should be recognized this table does not constitute a recommendation of mitigation or a comprehensive or exhaustive list of possible mitigation actions that could be applied in any site specific situation.

For the purpose of the following discussion, conflicts with routes and their use is discussed in two categories, natural and cultural resources and the social environment.

The resource conflict discussion would focus on BLM Land Health Standards and specific habitats for identified sensitive plant or animal species, and cumulative effects. The discussion of Land Health Standards addresses soil, water, desired plant communities and riparian condition.

Loss of soil and degradation of water quality usually require modification of the driving surface and placing adequate water control. Each instance of soil loss or water quality degradation requires its own solution which must be addressed on site. Engineering staff involvement is likely to be required. Physical route conditions can contribute to degrading conditions under heavy use that can result in runoff erosion. Appendix T lists a range of typical actions that could be applied in these situations.

Chapter Five



CHAPTER 5: CONSULTATION AND COORDINATION

5.1 COMMUNICATION METHODS

The Phoenix District (PD) was committed to authentic collaboration and cooperation with the general public, individual agencies, interest groups, and tribal governments in the development of this plan. The BLM feels that public collaboration and cooperation are the stepping stones to a successful RMP/EIS, which will guide appropriate management decisions in the coming years for the planning area. As indicated by the large amount of public participation provided during this planning process, the Agua Fria National Monument and the Bradshaw Harquahala Planning Area are certainly places that many Arizona residents and visitors feel passionate about. The Phoenix District tried to discover ways to collaborate with citizens and communities by understanding their visions for their communities and working with them to design BLM management that would help to achieve both the community visions and BLM resource management needs. The PD ensured that agencies, communities, organizations, tribes, groups, and interested individuals affected by the planning decisions were properly informed and had the opportunity to be involved by establishing collaborative guidelines and methods in the planning process.

The following internal guidelines were followed during the planning process:

- 1) Public comments were accepted throughout the planning effort.
- 2) All requests for information were granted, unless the information was unavailable or prohibited by policy or law.
- 3) Staff and managers met with any group or individual requesting such a meeting.
- 4) Internal processes, such as the Route Evaluation Tree©, were open to review and comments were invited.
- 5) Staff and managers took planning information to meetings, such as the Resource Advisory Council, county, city, and Tribal Council meetings.

The following communication methods listed were established to keep the public informed about the planning process, but also invited the public to be intimately involved through a collaborative, interactive process:

- Community Based Partnership and Stewardship workshops
- EIS public scoping process
- Planning bulletins
- Bureau of Land Management (BLM) web page:
(http://www.blm.gov/az/LUP/aguafria/afria_plan.htm)
- Formal/Informal presentations to interested groups, agencies, and organizations
- Cooperating Agencies

When navigating this section of the document, please refer to the Table of Contents to assist in finding comments and responses specific to certain issues.

5.2 Community Outreach

5.2.1 Community Based Partnership workshops

A collaborative-community based approach was initiated in 1999 and 2000. BLM hosted workshops that focused on learning about communities within the planning areas and inviting community participation in our process. Prior to publication of the official Notice of Intent, approximately 30 presentations were made by invitation at community and interest group meetings in spring 2002.

5.2.2 Scoping Meetings

Ten total scoping meetings were held in Arizona communities. The meetings were structured to have an open house period, followed by a meeting/presentation where speakers could voice their concerns. BLM specialists were available to provide information and responses to questions. During the scoping meetings, 564 people registered their attendance with 169 offering to speak. Comments from the public

Dates	Location
September 28, 2002	Flagstaff, AZ
October 1, 2002	Dewey-Humboldt, AZ
October 2, 2002	Black Canyon City, AZ
October 3, 2002	Yarnell, AZ
October 5, 2002	Castle Hot Springs, AZ
October 7, 2002	Buckeye, AZ
October 8, 2002	Phoenix, AZ
October 9, 2002	Wickenburg, AZ
October 14, 2002	Prescott, AZ
October 16, 2002	Peoria, AZ

were collected during the scoping meetings and throughout the scoping period through a variety of methods including mail, fax, and email.

5.2.3 Alternative Development Workshops

BLM continued collaboration efforts by including communities in the formulation of Alternatives. A set of workshops were held throughout the planning area to give citizens the opportunity to refine issues, discuss visions for BLM-managed lands, and begin exploring different ways to manage BLM-administered lands and resources. Input received from citizens— both groups and individuals— were considered in developing the Alternatives. Citizens were also able to submit formulated alternatives, as well as vision statements, for specific community areas or resources. These were considered in the range of alternatives and analyzed in the EIS, as required by NEPA.

Dates	Location
March 3 and 31, 2003	Wickenburg, AZ
March 5 and April 2, 2003	Black Canyon City, AZ
March 6 and April 2, 2003	Phoenix, (Deer Valley), AZ
March 8 and April 3, 2003	Dewey-Humboldt, AZ
March 22 and April 12, 2003	Prescott, AZ

5.2.4 Public Comment Meetings

On January 6, 2006, the Draft RMPs/EIS were published and released to the public. After this date, the public had 90 days to mail, email, fax, or verbally comment on the plan. During this 90-day comment period, the BLM held a total of eight formal public meetings throughout the planning area. The primary objective of these meetings was to receive comments from the

public. Meeting attendees had the option of either verbally speaking to the BLM staff at the meeting or submitting written comments at the meeting. The meetings had as few as six attendees in Buckeye to over 85 attendees in the Dewey-Humboldt community.

Dates	Location
February 7, 2006	Phoenix (Deer Valley), AZ
February 8, 2006	Black Canyon City, AZ
February 9, 2006	Buckeye, AZ
February 16, 2006	Wickenburg, AZ
February 23, 2006	Dewey-Humboldt, AZ
February 28, 2006	Tucson, AZ
March 2, 2006	Yuma, AZ
March 23, 2006	Prescott, AZ

5.2.5 E-planning Workshops Meetings

The Phoenix District (PD) also sought increased public involvement through e-Planning. Prior to the formal public comment meetings, PD held a total of six e-Planning workshops throughout the planning area to help the general public get acquainted with this new medium of reading a RMP/EIS. E-planning is an online interactive database, which provides readers with the flexibility to go onto the internet and read through the Draft RMP/EIS and submit comments on specific areas in the plan, as well as print and manipulate GIS maps. The majority of these meetings were held in computer labs at various libraries and schools. On a one-on-one basis, the public was given basic instructions on how to use many of the primary functions this program has to offer.

Dates	Location
January 17, 2006	Mayer, AZ
January 19, 2006	Yarnell, AZ
January 23, 2006	New River, AZ

January 24, 2006	Prescott, AZ
January 30, 2006	Wickenburg, AZ
February 1, 2006	Black Canyon City, AZ

5.2.6 Consultation and Coordination

For information regarding coordination and consultation with collaborating agencies, cooperating agencies, and other stakeholder groups, please see Sections 1.4.4 through 1.4.6.

The BLM consulted with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act regarding the effects of the Agua Fria National Monument and Bradshaw-Harquahala Resource Management Plans on threatened or endangered species. The Service issued a Biological Opinion (BO) #22410-05-F-0785 to the BLM which concluded that the proposed actions are not likely to adversely affect the endangered southwestern willow flycatcher, threatened bald eagle, threatened spikedace and the candidate western yellow-billed cuckoo. The Service further concluded that the proposed action is neither likely to jeopardize the continued existence of the Gila topminnow, Gila chub and desert pupfish, nor likely to adversely modify or destroy Gila chub critical habitat.

5.3 PUBLIC COMMENTS

5.3.1 Summary of Comments Received

A total of 431 individual comment letters and 1,046 form letters (consisting of six separate form letters) were received by the Phoenix District at the end of the 90 day comment period. Besides Arizona, California was the most common location from which comments

were received, indicating that many California residents either recreate in the planning area, or are concerned with the lands that border their state of residence.

Not surprisingly, the majority of the letters submitted by Arizona residents came from the state's largest urban conglomerate, the Phoenix Metropolitan Area (including suburban communities such as Glendale, Mesa, Scottsdale, and Tempe). The Prescott, Mayer, and Dewey-Humboldt Areas submitted over 100 comment letters. A key issue represented by these comments was in large part due to the 21,000 acres that BLM removed from the disposal list in the Preferred Alternative, an action many residents in this area supported. Although more distant from the planning area, over 40 comment letters came from the Tucson Metro Area. About 30 percent of comment letters from Tucson clearly indicated that they were concerned with preserving or conserving land in the planning area. This viewpoint represented the second largest organization type that commented on the plan.

While the majority of comment letters (296) did not clearly indicate which group or organization that the resident was representing, 15 percent of individual comment letters were received from residents who stated that they were motorized recreationists. Most of the OHV respondents came from the Phoenix Metropolitan Area. For the Phoenix District, this is a clear indication that as the urban population increases in the Phoenix Metro Area, so will OHV use on neighboring BLM-managed lands.

5.3.2 Context of Comments Received

The letters received by Phoenix District were broken into similar, smaller comments, totaling approximately 2,319 separate comments received during the 90-day comment period from January 6, 2006 to April 5, 2006. Some comments stated the respondents' exact opinion

or preferred action, while others portrayed the various actions that they felt the BLM should undergo to meet their desired needs. Four themes were commonly addressed in many of the comments received by the Phoenix District, which represented an array of issues. These common themes are listed below.

Common Theme 1: Support for Alternative E (206 similar comments)

Example: *"I support alternate E from your choice of alternatives.* (Individual, Mesa, AZ - Comment: #533, letter #251)

Summary: Depending on which management action the commentors' favored in the Preferred Alternative, this theme was represented by various organization and individuals. The majority of these types of comments came from residents in the Dewey-Humboldt community, who favored the elimination of the 21,000 acres from the plan's disposal list in the Preferred Alternative.

Common Theme 2: Route Inventory Specific, designate more/less routes (130 similar comments).

Example: There have been unreasonable proposals that vehicular travel be allowed up Badger Springs Wash or down to the Agua Fria River. This is precluded by the Proclamation. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2087, letter #339)

Or

Example: Please allow Motorized events and increased motorized use in the Vulture mine area. With the increased participation in motorized use and the constant expansion of urban areas, existing Motorized opportunities are decreasing. They should be increasing. (Individual, Prescott, AZ - Comment: #519, letter #238)

Summary: Phoenix District received many of these types of comments, in large part because many of the motorized recreation commentors addressed similar issues and actions. Opposing arguments were received by different groups as well.

Common Theme 3: Open or Close areas/routes to OHV use (118 similar comments).

Example: Close all washes to motorized vehicles except for short crossings of major routes. (Individual, New River, AZ - Comment: #971, letter #360)

Or

Example: All existing and or inventoried roads, routes, and trails should remain open for public vehicular access (Yuma Valley Rod and Gun Club, Inc, Yuma, AZ - Comment: #1065, letter #163)

Summary: (Refer to summary for Common Theme 2)

Common Theme 4: Decision Making Process and Methods

Example: I think first of all that everything that the BLM does in the monument needs to be directed towards the betterment of that monument proclamation objects. Freelance ORV use is contrary to that monument proclamation. (Grand Canyon Chapter of Sierra Club, Phoenix, AZ - Comment: #702, letter #74)

Summary: These types of comments indicated decision making processes that commentors' felt that the BLM needed to follow. The comments vary in type of action; however, they all pinpoint a certain method that would protect their favored resource/recreation.

5.3.3 Comment Analysis Process

Analyzing and Coding Comments

In order to properly analyze and respond to each of the 1,477 letters received by Phoenix District, the BLM followed the USDA Forest Service Content Analysis Team (CAT) process for comment analysis. This process has been used to analyze thousands comments over numerous Environmental Impact Statements nationwide, and BLM believes it to be a defensible process to catalog and address comments.

An Excel software database was created to log letters and refer to a scanned copy of each parsed letter. The letter log maintained information on how the letter was received (e.g., at a public meeting, by postal mail, or by email), respondent information (e.g., from an individual, government, tribe, or interest group), name and address of respondent, and how many people signed the letter.

When a letter was received, the original was date-stamped and numbered with a unique Letter ID number for tracking purposes, then retained for the administrative record. Two photocopies were made: one for public review and one for a working copy. The working copy was parsed and coded (see below), entered into the E-planning database, and then scanned again for the administrative record.

The coding process required staff to identify and code stand alone comments in each letter, which allowed BLM to respond to similar comments at one time. BLM dedicated three employees to read and code the comment letters. Each individual letter was read and parsed, and each individual comment was designated to an appropriate action and rational code. The action codes were based on type of act requested by the respondent and the rational codes were based on the reason for requesting a specific action. The

coded comments were then entered into the E-planning database, which gave each comment a unique number known as Comment Number. Comments were then grouped by action and rationale and have been responded to in this chapter.

Summarizing Comments

BLM responded to the individual comments by summarizing them into Public Concerns. The responses to each of these concerns are in Section 5.4 *Response to Public Comments*. Although all comments are represented by the Public Concern, not all comments are printed in this section. Instead, the comments shown in Section 5.4 are samples of the range of comments that fit under each Public Concerns. A copy of all comments received by the Phoenix District is available on a CD included with this document.

Each public concern was given a Public Concern Code, which indicates the topic of each concern and allows the public to locate a specific response to an individual comment. Each Public Concern Code and the sections in which they are located are indicated in Table 5.5 below.

Subject	Public Concern Code	Section No.
Alternatives & Proposed Management Actions	AL 1-6	5.4.1
Objects of the Agua Fria National Monument	MO 1-8	5.4.2
Special Area Designations	SD 1-16	5.4.3
Lands and Realty	LR 1-41	5.4.4
Soil, Air, and Water Resources	WS 1-11	5.5.5
Biological Resources	TE 1-25	5.4.6
Cultural Resources	CL 1-12	5.4.7
Recreation Resources	RR 1-40	5.4.8
Wilderness Characteristics	WC 1-23	5.4.9
Visual Resources	VM 1-6	5.4.10
Rangeland Management	GM 1-23	5.4.11
Mineral Resource	MI 1-12	5.4.12

Management		
Travel	TM 1-57	5.4.13
Wild Horse and Burro	WB 1	5.4.14
Document Complexity and Review	DR 1-5	5.4.15
Editorial Errors and Clarification	EI 1-21	5.4.16
Enforcement and Funding	EF 1-2	5.4.17
Implementation, Mitigation, and Monitoring	IP 1-4	5.4.18
Inventory of Resources	IV 1	5.4.19
Public Participation	PP 1-2	5.4.20
Research, Education, and Collaboration	RE 1-7	5.4.21
E-Planning	EP 1	5.4.22

5.3.4 Agencies, Organizations, Groups, and Individuals who provided Comments

The following list displays the names of the agencies, organizations, groups, and individuals who commented on the DRMPs/DEIS, along with the Letter ID Number. In order for the public to track how their individual comments were responded to, they must find their name and then identify where Public Concern Code their comments were placed under. Once this code is identified, the respondent can then reference the response to their individual comment in Section 5.4. Many letters included multiple comments; therefore, multiple comment codes may be listed under a name. All individuals who requested confidentiality are not listed by name.

Name	Letter ID Number	Public Concern Code
Michael Agliarado	328	MO-1, WC-22, RR-40, TM-44
George and Frances Alderson	381	MO-1, WC-22, TM-48
Greta Anderson (<i>Center for Biological Diversity</i>)	338	AL-1, AL-4, MO-1-2, MO-8, SD-3, SD-9, SD-12, CL-5-6, TE-12-13, TE-18, DR-5, GM-1-7, GM-9, GM-13-14, GM-16-23, IP-3
Ray Anderson (<i>Verde Valley 4 Wheelers</i>)	400	AL-1, SD-14, DR-4, WC-6, WC-14, WC-16, WC-20-21, RR-21, TM-9, TM-13, TM-33
Walt Anderson	320	AL-2, MO-1, SD-11, WC-22, RR-40, TM-44, TM-48-49
Name Withheld	114	EI-1
Name Withheld	110	LR-17
Kyle Asel (<i>Apache Motorcycle Inc.</i>)	174	AL-1, RR-28, TM-23
Fred Attyah	98	RR-13
Anne and Jim Badger	238	RR-15, RR-20, RR-24, RR-28, TM-8, TM-23-26, TM-49-50
Humberto Badillo	312	VM-2, WC-22, RR-40, TM-44, TM-48
Nick Bafaloukos	99	AL-1
Sandy Bahr	81	MO-1, DR-5
Beryl Baker	170	MO-1
Jabe Beal	331	RR-20, TM-1, TM-12, TM-23
Michal Bennett	364	MO-1, LR-17, WC-22, RR-40, TM-48
Todd Berger	344	AL-1, RR-28
David Bergman (<i>U.S. Department of Agriculture</i>)	271	TE-8
Bettina Bickel	274	SD-11, WC-22, TM-28, TM-53
Bob Biegel	73	AL-5
Matt Bigler	288	TM-4
Joseph Birdy	205	AL-2, MO-1, WC-22, RR-40, TM-48
Janine Blaeloch (<i>Western Lands Project</i>)	14	DR-2, DR-4, LR-5
Jan Bleeker	24	AL-1, LR-15
Lauren Bolinger	386	DR-4, RR-20, RR-22, RR-26, RR-28, RR-32, TM-23
Nathan Booker	363	AL-1, MO-1, WC-22, RR-40, TM-48
Russell Bowers (<i>Arizona Rock Products Association</i>)	355	AL-1, VM-4, MI-3, MI-10-11, WC-12, TM-3
Copper Bradshaw	374	AL-1
Don Brennecke	314	MO-1, WC-22, RR-40, TM-48
Clint Brown	233	AL-1, RR-28
Steve Brown	206	AL-1, RR-15, RR-20, RR-24, RR-28, TM-1, TM-8, TM-23-26, TM-49-50
Barry Brummett (<i>Arizona Rock Crawlers</i>)	263	RR-20
Jim Buchanan	4	LR-15
Jeff Burgess	23	GM-13, GM-15
Ann Marie Calabrese	146	LR-15
Jay Caliendo	303	LR-17
James Campbell	330	AL-1, WC-22, TM-47
Noel Caniglia	141, 220	LR-17
Tom Caniglia	142, 221	PP-1, RE-4
John Carr (<i>Wickenburg Outdoor Recreation</i>)	398	AL-1, LR-10, LR-11, LR-19, EI-1-2, RR-3, RR-39

<i>Committee)</i>		
Jane Carrol	334 [form #3]	LR-19, MO-1, WC-22, RR-40, TM-48
Richard Carter	182	TM-19
Dewanye Cassidy	27	RE-7
Peter Castaneda (U.S. Bureau of Reclamation)	399	CL-8, TE-14, LR-9, LR-27-28, LR-32, EI-6
Rose Chilcoat	372	AL-2, MO-1, LR-17, WC-22, RR-40, TM-48
Name Withheld	58	LR-17, WC-22, RR-20
Name Withheld	228, 310	AL-1, SD-3, SD-11, CL-9, CL-12, TE-1, VM-5, LR-17, LR-23, WC-5, WC-22, RR-20, RR-40, TM-15, TM-30, TM-47
Sanford Cohen (Prescott Open Trails Association)	104, 136, 232	AL-1, TM-9, TM-23, TM-28, TM-36, TM-49
Mike Colbert	245	LR-17
Carol and Robert Cole	313	AL-1, TM-15
Nancy Coleman	167	MO-1, LR-17
Glen Collins (Public Lands Foundation, Arizona Chapter)	306	MO-1
Patty Collins	200	GM-13
Robert Cothorn	280, 281, 284, 285	AL-1-2, SD-11, SD-14-15, WS-7, CL-12, VM-6, MI-2, LR-12, LR-14-15, LR-23, LR-25, LR-36, EI-15, EI-16, RR-4, RR-37, TM-24, TM-46, TM-48, TM-52
Stanley Cothorn (Black Canyon Black Sheep Four Wheel Club)	3	AL-1, LR-17
Name Withheld	90, 111, 227	SD-3, SD-11, CL-9, WC-3, WC-5, WC-22, TM-16, TM-28, TM-44, TM-53, TM-55, LR-15
D Crow	95	TM-9
Name Withheld	161	MI-7, LR-15
Thom Danfield	359	MO-1, WC-22, RR-40, TM-48
A.G. "Chip" Davis	13	PP-1
Treesha DeFrance	134	LR-15
Sy DeVries	309	AL-1, RR-28
George DeWolf	57, 181, 135, 270	EI-1, RR-6-7-8, RR-11, TM-15, TM-23, TM-28, TM-35, TM-40, TM-43
Name Withheld	153	EF-1
Resident Dewey-Humboldt	66	LR-15
Resident Dewey-Humboldt	67	LR-17
Deweyantfarm	65	LR-15
Ryan Dickson	172	AL-1, RR-20, RR-24, RR-28, TM-23, TM-50
Don Drake	267	RR-20
Kenneth Driscoll	241	RR-20, TM-8, TM-23-24
Dennis DuVall	173	AL-1, MO-1, TE-24, WC-22, RR-19, TM-45, TM-48
John Dusel	175	AL-1, RR-20, RR-28, TM-23-24
William Eldridge	244	AL-1, AL-5, TM-23
Joe & Cindy Farmer	15	LR-15
Bill Feldmeier	219	TM-49
Mike Fissel	251	AL-1, EF-1, RR-15, RR-20, RR-24, RR-28, TM-8-9, TM-23-26, TM-49, TM-50
Jim Florence	82, 212, 265	AL-1, EF-1, RE-4, RR-15, RR-20, RR-24, RR-28, TM-8, TM-14, TM-24-26, TM-29, TM-37, TM-49-50
Buzz Fournier	10	AL-1, LR-17
Paul Franckowiak	305	MO-1, TE-1, GM-5, LR-17, WC-22, RR-20, RR-37
Scott Frank	86	WS-11
Joseph Freeman	366	WC-22

Jon Fugate (<i>Yuma Valley Gun and Rod Club</i>)	150, 163	TE-5-6, DR-4, WC-9-10, WC-14, TM-23
Marc Galeano	101	LR-2
Name Withheld	229	AL-1, MO-1, EP-1, WC-22, TM-1, TM-56
Lydia Garvey	155	AL-1, WC-22
Russel Gevarter (<i>AZ Rockrats</i>)	257	AL-1, RR-22, RR-28, RR-40, TM-17
Debbie Gifford (<i>Town of Dewey-Humboldt</i>)	187	LR-15
Tom Gilmore (<i>Citizens Water Advocacy Group</i>)	20	CL-9, MI-1, RR-6, RR-19, TM-1, TM-23
Lisa Giordano	43	AL-1, LR-15
Rich Glinski	88	AL-1
Joseph and Shareen Goodroad	360	SD-7, SD-11, MI-2, LR-27, PP-1, WC-5, WC-22, TM-28, TM-48
Shareen Goodroad (<i>New River / Desert Hills Community Association</i>)	393	AL-1-2, SD-11, SD-14-15, WS-7, CL-12, MI-2, LR-12, LR-14-15, LR-23, LR-25, LR-36, RR-4, RR-37, TM-21, TM-46, TM-48
Penny Govedich	378	AL-1, MO-1, SD-11, WC-22, RR-40, TM-44, TM-48-49, TM-52
Pamela Griggs	69	LR-17
David Gronlund (<i>Arizona Motorcycle Riders Association</i>)	247	AL-1, EF-1, RR-20, RR-28, TM-24
Lori Gronlund	260	AL-1, RR-28, TM-1
Name Withheld	269	AL-1, SD-3, SD-11, CL-9, CL-12, WC-5, TM-44, TM-49
Michael Guest	362	MO-1, WC-22, RR-40, TM-48
Jerry Guevin (<i>Arizona Desert Bighorn Sheep Society</i>)	342	AL-1, SD-7, TE-4, TE-7, TE-15-16, DR-3-4, VM-1, IP-1, WC-1, WC-4, WC-11, WC-14, WC-15, WC-17-19, WC-21, RR-36, TM-34
Jeff Gursh (<i>Arizona Off-Highway Vehicle Coalition</i>)	261	AL-1, LR-41, EF-1, RR-15-17, RR-20, RR-24, RR-27-29, RR-31-33, TM-8-9, TM-13-15, TM-24-25, TM-27-28, TM-49-51, TM-53
CR Hummel	365	AL-2
David Haglan	258	AL-1, RR-15, RR-20, RR-24, RR-28, TM-8, TM-23-26, TM-49-50
Name Withheld	109, 346	AL-1, LR-15
Jeanie Halstead	7	AL-1
Bunnie Hamm	2	AL-1
Diana Hans	171	AL-1, LR-30, RR-37, TM-19, TM-44
E. Harrison	295	MO-1, WC-22, RR-40, TM-9, TM-48
Roger Haughey	168	LR-17
Sydney Hay (<i>Arizona Mining Association</i>)	186	MI-1, MI-10
Travis Haynie (<i>Arizona Motorcycle Riders Association</i>)	165	AL-1, RR-24, RR-28
Scott Helfinstine	217	TM-49
Jacek M. Herchold	9	AL-1
Amy Heuslein (<i>U.S. Bureau of Indian Affairs Western Region</i>)	354	AL-1
Mary Hoadley (<i>Upper Agua Fria Watershed Partnership</i>)	369	AL-1, RE-4
Mark Hofgard	329	MO-1, SD-11, RR-40, TM-44, TM-49

Robert Hollis (U.S. Federal Highway Administration)	162	LR-23, LR-26, LR-33, LR-40, EI-1, EI-7-8
Howard Holt	294	MO-1, LR-17, WC-22, RR-40, TM-48
Don Hood (Arizona Trail Riders)	164 (form #2)	AL-1, RR-15, RR-20, RR-24, RR-28, TM-8, TM-23, TM-24-26, TM-49-50
William Hooven	246	AL-1, RR-28, TM-23
Lee Howard	210	MO-1, WC-22, RR-40, TM-48
John Howell	154	AL-1, CL-3, EF-1, RR-11
Cathy Hubbard	16	AL-1
Time Huddleston	62	LR-15
Pat Hughes	213	DR-3, RR-20, RR-28, TM-15, TM-24
Doug Hulmes	157	AL-1, WS-11, LR-5, PP-1, WC-22, TM-49
Gerry Hustin	324	DR-3, RR-20, RR-28
Lynnette and Don Huston	44	LR-17, PP-1
Individual	166	AL-1, RR-28, TM-23
Individual	203	AL-1, RR-28, TM-17
Jeremy Iness	18	AL-1
Duane James (U.S. Environmental Protection Agency)	396	SD-5, SD-11, SD-14, WS-1-5, WS-8-9, TE-11, TE-17, DR-1, GM-8, LR-4, LR-7, LR-8, EI-1, RR-30, TM-44
Name Withheld	353	AL-1, SD-14, WB-1, GM-8, RE-5, RE-7, RR-6, RR-10, RR-25, TM-30, TM-44
Orlo Jantz	29	WS-11, LR-17
Darrington Jay	51	MI-1
David Jenner	49	AL-1, LR-3
Keith Jensen	96	RR-20, RR-40
Charles & JoAnn Johnson	92	LR-17
Name Withheld	55	EI-1
Mike Johnson	93	AL-1
Theresa Johnson	368	MO-1
Scott Jones (Sierra Club)	100, 103, 138, 145, 223, 340	AL-1, MO-1, MO-5, MO-8, SD-3, SD-11, SD-14, EP-1, WS-11, CL-12, TE-19-21, DR-5, GM-5, GM-9, VM-2-3, LR-18, LR-23, LR-38, EI-1, IP-3, PP-1, WC-22, RR-6, RR-10, RR-12, RR-19-20, RR-24, RR-37-38, RR-40, TM-44-45, TM-47-49, TM-53
John Jorde	178	AL-1, TM-23-24
John Keefe	50	AL-1, DR-2, LR-15
Kevin Keith	332	AL-2, MO-1, SD-11, WC-22, RR-40, TM-44, TM-48-49
Alan Kessler	59	GM-14
Name Withheld	78	AL-1, AL-5, EF-1, RE-4, TM-15
Keith Kintigh	297	CL-9-10, LR-20, EF-1-2, RE-3, RE-5-6, RR-10
William Kisich	235	RR-20, RR-28, TM-23, TM-24
Tawny Kite	133	AL-1
Burket Kniveton	231	MO-1, SD-3, EP-1, PP-1, WC-5, WC-22, TM-16, TM-28, TM-45
Tyler Kokjohn	341	MO-3, SD-11, IP-1-3, RE-4, WC-22
Ken Kozlik	254	AL-1, RR-28
Lance Krigbaum	300	WC-22, RR-40, TM-23, TM-28
Name Withheld	75	AL-1, TE-1, RE-4, RR-40, TM-48
Melissa Kruse	333	CL-9, EF-1, RE-5, RR-10
Roberta Kurtz	298	AL-2, MO-1, SD-14, GM-5, WC-22, RR-38, RR-40, TM-41
Leigh Kuwansisiwma (Hopi Cultural Preservation Office)	384	AL-2, CL-11, DR-5, RE-5
Dave Laird	273	AL-1, TE-6, TE-8, TE-11, TE-13, TE-18, TE-21, TE-23, GM-9,

<i>(Arizona Antelope Foundation)</i>		RR-18
Doris Lake	60	LR-17
Rudi Lambrechtse	375	TM-44
Jim Lara	234	AL-6
Kathleen Larson	301	RR-20, RR-40
W. A. Laudenslager	97	AL-1, AL-5
Daniel Laux	391	AL-1, SD-8, MI-1, MI-10, WC-16
Kevin Lay	72	RR-34, TM-11, CL-1
Scott, Lynn, Becca, and Megan Layton	308	AL-1, AL-5, WC-2
Isolt Lea	209	MO-1, WC-22, RR-40, TM-48
Dan Lee	68, 218	LR-15
Donald and Patricia Lee	8	AL-1, LR-17
Jen Leitch	304	AL-1-2, MO-1, WC-22, RR-10, RR-16, RR-37, TM-23
George Lemley	236	AL-1, TM-50
Kevin Leonard	112	LR-15
Lyle Leslie	248	AL-1, LR-17, RR-15, RR-20, RR-24, RR-28, TM-8, TM-23-26, TM-49-50
Lainie Levick	319	AL-2, GM-13, MI-1, RR-37, TM-28, TM-48, SD-11
Erin Lotz	307	LR-17
Ian Love	337, (form #6)	DR-3, RR-20, RR-28, TM-15, TM-24
Diane Lovett <i>(Yavapai County Trails Committee)</i>	21	LR-17
Lyle MacNee	107	LR-17
Joyce Mackin	28	AL-1
Catherine Marcinkevage	201	SD-4, WS-1, GM-6, GM-20, LR-1, EI-1, EI-12
Mary Markus	237	MO-1, WC-22, RR-40, TM-48
Andrea Martinez	382	DR-3-5, WC-15, WC-17, WC-21, TM-35
Mike Mattison	377	MO-1, WC-22, RR-40, TM-48
Lynne and George May	17	AL-1
Beau McClure <i>(Public Lands Foundation, Arizona Chapter)</i>	289, 387, 403	AL-1, MO-1, GM-19, LR-13, LR-15, RE-4, TM-35
Bob McCormick <i>(Sonoran Audubon Society)</i>	287	AL-1, SD-3, WS-10, TE-11, GM-12, GM-20, RE-4
Lee and Jill McCoy	12	LR-15
Sandee McCullen <i>(Arizona Association of 4 Wheel Drive Clubs)</i>	264, 380	RR-15, RR-20, RR-22, RR-24, RR-28, RR-32, TM-1, TM-8, TM-23-25, TM-49-50
Patsy Cordes McDonald	64	GM-10, WC-22
Name Withheld	183	SD-11, CL-12, VM-2, WC-5, WC-22, RR-19, TM-45, TM-47
Jacklin McKinley <i>(Whiplash Motorsports)</i>	80, 83, 216	AL-5, DR-3, RE-4, RR-20, RR-28-29, RR-31, RR-34, TM-9, TM-23
Jay and Jacklin McKinley	389	AL-1, DR-4, RR-17, RR-20, RR-22, RR-24, RR-26, RR-28-29, RR-31-33, TM-8-9, TM-13-15, TM-23-25, TM-27-28, TM-49-51, TM-53
Margarete Meares	327	LR-17
Cary Meister	152	MO-1, SD-11, LR-17, WC-5, WC-22, TM-47
Mike Merrill	202	AL-1, RR-28
Fritz Milas	207	MO-1, MO-4, WC-22, RR-40, TM-48
Dave Miller	149	AL-1, PP-1, WC-16, WC-21

David Miller	160	SD-14, DR-4, WC-6, WC-14, WC-16, RR-21, TM-1, TM-13, TM-21, TM-23, TM-33
Larry Miller (<i>Pleasant Views LLC</i>)	356	LR-6
Jack Moore	256	AL-1, RR-28, TM-23-24
Keith Moore	323	AL-5, TM-24
Mike Mullarkey	5, 249	AL-2, MO-1, SD-14, GM-5, LR-17, WC-22, RR-37-38, RR-40, TM-48
Scott Myer	26	RR-13
Ingrid Nasca	56	LR-17
Rodney Ness	290	DR-3, RR-20, RR-28, TM-15, TM-24
Dave O (<i>ArizonaXJ Club</i>)	243	AL-1, RR-28
Michael O'Brien	184	LR-15
Stu Olson	252	RR-18, RR-21-22, RR-28, TM-15, TM-24, TM-50
Stuart Olson (<i>AZ Virtual Jeep Club</i>)	266	AL-1, RR-20, TM-23
Norma Orr	70	LR-17
Ruth and Floyd Osborne	242	AL-1
William Osborne (<i>Transwestern Pipeline Company</i>)	383	LR-22, LR-39
Gary Overson (<i>Aguila Ranch</i>)	352	WS-9, GM-11-12
Jill Ozarski (<i>The Wilderness Society</i>)	343	AL-1, AL-6, MO-1-2, MO-6-8, SD-1-2, SD-10-11, SD-14, EP-1, CL-4, CL-12, TE-10, TE-22, LR-15-16, LR-23, LR-31, EI-1, IP-4, IV-1, PP-1, RE-5, WC-4-5, WC-13, WC-22, RR-6, RR-10, RR-14, RR-25, RR-34, RR-37, RR-40, TM-5, TM-7, TM-21, TM-32, TM-36, TM-37-39, TM-41-44, TM-54
Jimmy Parker	63	LR-17
Jim and Bonnie Paulos	169	MO-1
Michael Pawlowski (<i>Southwest Cinders LLC</i>)	345	MI-1, MI-4, MI-9, WC-16
Larry Pearlman	385	AL-1, SD-14, GM-5, WC-22, RR-37-38, RR-40, TM-48
Andrew Peters (<i>Dewey-Humboldt Community Organization</i>)	47	LR-15
Andy and Nancy Peters	42	LR-17
Nancy Peters	6	LR-17
James Pierson	370	MO-1, WC-22, RR-40
Patrick Pierson	151	AL-5, AL-6
Chris Plumb	268	AL-1, RR-24, RR-28, TM-8, TM-23
Brenda Polacca	318	MO-1, WC-22, RR-20, RR-40, TM-48
Dan Poole	240	AL-1, RR-20
John Pugliese	367	AL-1, RR-20, RR-26
Chris Radoccia (<i>AZA</i>)	79, 293	TE-21, EF-1, PP-1, RR-22, RR-24, TM-15, TM-17, TM-23-24
Bruce Reed	156	AL-5, DR-5, TM-1
Mary S Reed	315	MO-1, WC-22, RR-40, TM-48
Loren Rice	94	PP-1
Glenn Richardson	255	AL-1, RR-28
Elizabeth Ridgely	335 (form #4)	AL-2, SD-14, MO-1, GM-5, WC-22, RR-37-38, RR-40, TM-48
Tom Roberts	250	AL-1, RR-20, RR-28
Name Withheld	19	AL-1
Paul Roette	336 (form #5)	MO-1, SD-11, WC-22, RR-40, TM-44, TM-48-49
Garry Rogers	113	AL-1, SD-16
Name Withheld	71	LR-17
Thornell Rogers	276	MI-4

<i>(Southwest Cinders LLC)</i>		
Roxane Ronca	311	MO-1, RR-11, RR-34, RR-40, TM-48
Roni Rummel <i>(Prescott Saddle Club)</i>	25	AL-1, LR-15
Bill Rotolo <i>(Peoria Holdings LLC)</i>	390	LR-37
Jim Rupe	105	TM-10, TM-23, TM-28
John Ryan <i>(Trail Riders of Southern Arizona)</i>	180	AL-1, RR-4, RR-28
Mark Salvo <i>(National Public Grazing Campaign)</i>	185	GM-1, GM-18
Babs Sanders	282, 283	AL-1-2, SD-11, SD-14-15, WS-7, CL-12, VM-6, MI-2, LR-12, LR-14-15, LR-23, LR-25, EI-13, EI-15-16, RR-4, RR-36-37, TM-46, TM-48, TM-52
Mary Sargent	147	LR-15
Mary and Robert Sargent	30	LR-15
Steve Saway	286	AL-1, WB-1, GM-13, WC-6, RR-6, RR-9, TM-49
William Scalzo <i>(Maricopa County Parks and Recreation)</i>	350	AL-1, LR-12, LR-19, PP-1, RE-6
Dan Scheske <i>(Arizona ATV Riders)</i>	262	RR-20, TM-23
Charles Schlessman	53	MI-1
Name Withheld	230	TM-9
Gerald Schwartz	22	LR-17
Judith Shaw <i>(Tonopah Area Coalition)</i>	45, 347	AL-1-2, SD-1, SD-3, SD-7, MI-8, LR-15, LR-17, LR-21, LR-35, TM-48, WC-22, RR-5, RR-20, RR-40
Donald Shields <i>(Off-Chamber MC)</i>	179	AL-1, RR-28
Gwyn Shippy	106	LR-17
Duane Shroufe <i>(Arizona Game and Fish Department)</i>	401	AL-6, SD-6, WS-6, TE-2-3, TE-16, TE-25, DR-4, LR-27, EI-1, EI-4-5, EI-9-10, EI-14, EI-17-18, EI-20-22, WC-7, WC-9-10, WC-15, WC-17, WC-21, RR-1, RR-35-36, TM-2, TM-6, TM-31-32, TM-34
Madan Singh <i>(Arizona Department of Mines and Mineral Resources)</i>	61	VM-4, MI-3, MI-5-6, MI-10, MI-12
Thomas Slaback <i>(Sierra Club)</i>	388	SD-7, SD-11, WC-22, GM-5, LR-15, TM-44
Lou Smith	222	MI-1, TM-9, LR-15
Michael Smith <i>(Public Lands Counsel, National Trust for Historic Preservation)</i>	402	AL-1, AL-6, MO-1, MO-6, SD-14, CL-2, CL-7, CL-12, IP-4, RE-5, RR-10, RR-37, TM-41-42
Steve Speak	214	AL-1, RR-15, RR-20, RR-24, RR-28, TM-8, TM-23-24, TM-26
Katherine Speilmann	325	MO-4, CL-9, LR-20, RE-1-3, RR-6, RR-10, TM-57
Edson Spencer <i>(Wickenburg Conservation Foundation)</i>	102	AL-1
Frank Staley	176	AL-1, RR-28, TM-15
Yoyi Steele	316	MO-1, WC-22, RR-40, TM-48
Name Withheld	39	RR-13
Curtis, Janet, and Scott Supanchis	177	AL-1, EF-1, RR-28
Tice Supplee <i>(Arizona Audubon)</i>	279	AL-1, SD-3, TE-11, LR-23, PP-2, WC-22, TM-1
Name Withheld	140	AL-1, RR-20, RR-40
Name Withheld	379	SD-13, TM-22

Robert Theobald	326	RR-28
Thomas Thurman	48	LR-15
Cliff Titus	54	AL-1, LR-15
Clifford Titus	144	AL-1, RE-4
Peggy Titus (<i>Friends of the Agua Fria River Basin</i>)	89, 143, 224, 239	AL-1, LR-15, PP-1
Robert Tohe	371	MO-1, SD-14, GM-5, WC-22, RR-37-38, RR-40, TM-48
Brett Traube	132	LR-17
Tom Trieckel	215	AL-1, RR-24, RR-28, TM-8, TM-23-24, TM-49-50
Name Withheld	87	RR-2
Ann-Louise Truschel	11, 322, 373	AL-1, SD-14, MO-1, WC-22, RR-37-38, TM-44, TM-48-49
Jim Vaaler (<i>Sierra Club Grand Canyon Chapter</i>)	46, 74, 85	MO-1, SD-11, CL-12, TE-17-18, GM-5, LR-20, EI-1, PP-1, WC-8, WC-22, RR-37, RR-40, TM-20, TM-47-48
Sara Vannucci	392	PP-1
Jeffrey Vrieling (<i>Rock Stars Motorcycle Club</i>)	253	AL-1, RR-20, RR-28
Robert Warren	317	MO-1, WC-22, RR-40, TM-15, TM-48
John Watkins	52, 302	AL-1, MO-1, SD-11, CL-9, WC-5, WC-22, RR-40, TM-28, TM-48
Greg Watts	91	AL-1, LR-20, TM-18
Name Withheld	139	AL-1, TM-28
Frank Welsh	376	AL-1, WS-8, DR-5, LR-5, EI-1, EI-11
Peter Welsh (<i>Friends of the Agua Fria National Monument</i>)	339	AL-1, MO-1, MO-5, MO-8, SD-3, SD-11, SD-14, EP-1, WS-11, TE-19-21, GM-5, GM-9, GM-20, VM-2-3, LR-18, LR-23, LR-38, EF-2, IP-3-4, WC-22-23, RR-6, RR-10, RR-19, RR-25, RR-40, TM-44, TM-47-49, TM-53
Joseph Wenzel	225	CL-3, LR-17, TM-49
Frances Werner (<i>Arizona BLM Resource Advisory Committee</i>)	204, 272	AL-1, AL-3, DR-4, LR-13, LR-15, LR-34, RE-4, WC-3, TM-1, TM-35, TM-49
William Werner (<i>Arizona Department of Water Resources</i>)	296	WS-11
Jason Williams (<i>Arizona Wilderness Coalition</i>)	37, 38, 76, 84, 84, 137, 148, 226	AL-1, AL-5, SD-9, SD-11, EP-1, WS-11, LR-15, LR-27, WC-22, RR-14, RR-23, TM-11, TM-28, TM-30, TM-48
Todd Williams (<i>Arizona Department of Transportation</i>)	397	VM-3, LR-23-24, LR-26, LR-29, LR-33, EI-1-3, EI-19
Jeff Williamson (<i>Phoenix Zoo</i>)	357	MO-2, GM-5, EF-2, IP-3, WC-22, TM-47
Stephen Williamson	361	RR-40,
Name Withheld	158, 159	LR-15, PP-1
Dan Wittig	292	RR-20, RR-28, TM-15, TM-24
Robert A Witzeman (<i>Maricopa Audubon Society</i>)	321	MO-1, SD-14, GM-5, WC-22, RR-37-38, RR-40, TM-48
Floyd and Nancy Wright	41	AL-1
Bryan Wyberg	208	MO-1, CL-3, WC-22, RR-40, TM-44, TM-48
Name Withheld	77	PP-1, RR-34, TM-1, TM-23
Joel Zaske	211	AL-1, RR-20, TM-24
Eric Zite	259	AL-1, RR-28, TM-23

5.4 PUBLIC COMMENTS AND RESPONSES

This section contains the public concerns expressed in the comments received from individuals, agencies, organizations, and groups during the comment period on the DRMPs/DEIS. Following each public concern statement is the BLM response and examples of public comments submitted to BLM. The comments received from the public are in their original form.

5.4.1 ALTERNATIVES & PROPOSED MANAGEMENT ACTIONS

Public Concern (AL-1):

The rapid urbanization of central Arizona has made the loss of open space and natural landscapes for recreation a major issue. The document places considerable emphasis on managing and sustaining open space and diverse recreation opportunities while meeting the FLPMA policy of sustained yield and multiple uses of natural resources.

Many comments were received supporting Alternative E which is the Preferred Alternative. Concerns were expressed for educating future generations on the history of the lands, focusing on public schools and institutions for future growth, preserving open space and recognizing the need for out door recreation. Members of the public commented that Alternative E provides the optimal balance between authorized resource use and the protection and long-term sustainability of sensitive resources within both planning areas.

Comments also suggests citizens are in support of Alternative A as a way to maintain the lands as they are, keep historic and traditional uses of the land, and retain the lands open to the public.

They felt Alternative E was characterized by many questions but no answers. Other comments suggest Alternative D provides better protection for natural landscapes and cultural resources by limiting land uses in AguaFria National Monument and protecting lands in the Bradshaw-Harquahala planning area.

Response (AL-1):

Many uses are made of the BLM-managed lands in the Bradshaw-Harquahala planning area. These areas support livestock grazing and habitat for a variety of wildlife species. They are a source of construction materials and support uses ranging from utility lines to communication sites. These lands also represent one of the most popular recreation areas within 100 miles of Phoenix. The rapid urbanization of central Arizona has made the loss of open space and natural landscapes for recreation a significant issue for people within our planning area.

Our document places a heavy emphasis on managing and sustaining open space and diverse recreation opportunities in the Bradshaw-Harquahala area, while meeting the FLPMA policy of sustained yield and multiple use of natural resources. The Phoenix District believes the best combination of providing for resource use while protecting resource values is achieved in *Alternative E*.

Public Comments (AL-1):

Comment: *You have done a good job of identifying open space, natural resources and natural landscapes as the major attraction and outdoor recreation as the major use of these BLM lands, and the Preferred Alternative E provides for both public use and resource protection across the full spectrum of recreation opportunities in the Management Areas. (Individual, Phoenix, AZ - Comment: #471, letter #204)*

Comment: *Freedom to use the lands of our great country should not be denied to any citizen of America. We have enough laws and regulations to enforce the management of our lands without taking away more of our God*

given rights to enjoy nature, without being harassed with a bunch of new laws and regulations. Leave Things alone, Please. (Individual - Comment: #77, letter #97)

Comment: Alternative D should be reconsidered for the Preferred Alternative since it also offers the widest range of high quality recreation opportunities with the lowest amount of impacts so a sustainable balance between public enjoyment and resource conservation would be more easily achieved. (Tonopah Area Coalition, Tonopah, AZ - Comment: #1123, letter #347)

Public Concern (AL-2):

Many comments note Alternative E does not protect the lands adequately. Concerns focus on reducing or eliminating grazing, mining, off-highway vehicles, and target shooting to preserve the lands for future generations. Citizens feel BLM should do more to protect plant/wildlife, archeological resources, and water resources

Response (AL-2):

All alternatives and all decisions proposed for the Agua Fria National Monument are designed to protect monument resources and the “objects” described in the Proclamation. Protection of these resources and objects does not preclude a certain amount of public use and recreational enjoyment. The Federal Land Policy and Management Act allows for multiple uses as long as the protection of monument resources and objects is ensured first.

The proposed management plan will maintain primitive landscapes in most areas of the national monument that are not readily accessible from Interstate Highway 17 or Bloody Basin Road. The majority of the monument is designated as a backcountry zone, incorporating areas managed for wilderness characteristics. Many zones within the Bradshaw-Harquahala planning area will also emphasize natural landscapes and non-motorized recreation, although the plan will also offer opportunities for a broad range of recreational activities. We believe the proposed

plans provide the best balance between protection of natural resources, cultural resources, and monument objects, with opportunities for responsible recreation as well as public education in support of resource protection.

Public Comments (AL-2):

Comment: The Agua Fria National Monument and surrounding Bradshaw-Harquahala planning area is exceptional and the Bureau of Land Management is required to manage these areas specifically to protect their scientific and historical importance. Unfortunately, the preferred alternative in your draft Resource Management Plan will put irreplaceable archaeological sites at risk and could contribute to the long-term demise of the area's resident pronghorn and other sensitive wildlife. (Individual, Durango, Colorado – Comment: #990, letter #372)

Comment: Please develop and implement a protective management plan for the Agua Fria National Monument as well as other BLM lands in the planning area. Native animals and plants and prehistoric sites should be protected. Grazing, motorized access, and new visitor facilities should be minimized or, better yet, excluded because of the risk to the monument by potentially damaging activity. (Individual, Buckeye, AZ - Comment: #942, letter #373)

Public Concern (AL-3):

The respondent is commenting on the new identity of BLM-managed lands in the Bradshaw-Harquahala area as being an outdoor natural resource enjoyment area for the growing Phoenix metropolitan area. The comment also expresses appreciation to the BLM for involving the public in the planning process which made the RMP the public's plan as well as the BLM's plan.

Response (AL-3):

As the population of the Phoenix metropolitan area continues to grow, the BLM-administered lands located within the Agua Fria National Monument and Bradshaw-Harquahala Planning Areas will undoubtedly receive increasing

pressure. The management decisions proposed in these plans, after considerable deliberation on the part of BLM, its partners, and the public are believed to provide the broadest possible consensus to wisely guide management of these very valuable resources.

Public Comments (AL-3):

Comment: Perhaps the most important impact or effect of this RMP will be the new "identity" that it gives to the BLM lands in the Bradshaw-Harquahala area as being an outdoor natural resource enjoyment area for the populace of the huge and growing Phoenix metropolitan area. In the past, these BLM lands have been viewed primarily as rural lands to be used for livestock grazing and mineral uses until they were ready for residential development. This RMP for the Bradshaw-Harquahala Area, combined with the designation of the Agua Fria National Monument and now the development of its RMP, will change the future of these BLM lands from suburbia to open space and public use, and the very effective way you have involved the public in the planning process has made this RMP the public's plan as well as the BLM's plan for these lands. (Individual, Phoenix, AZ - Comment: #477, letter #204)

Public Concern (AL-4):

The respondent reserves the right to appeal issues and feels the BLM is responsible for ensuring that its selected alternative complies with all federal laws.

Response (AL-4):

We believe this plan fully complies with the federal laws concerning management of the public lands with the planning area. The management decisions proposed in these plans, in collaboration with a diverse public and cooperating agencies, provides the broadest possible consensus to guide management of these very valuable resources.

Public Comments (AL-4):

Comment: The BLM is responsible for ensuring that its selected alternative complies with all federal laws, including but not limited to, the

Endangered Species Act, the National Environmental Policy Act, the National Historic Preservation Act, the Clean Air Act, the Clean Water Act, the Wild and Scenic Rivers Act, and others. We reserve the right to appeal and litigate on issues pertaining to any and all of these laws. (Center for Biological Diversity, Tucson, AZ - Comment: #1602, letter #338)

Public Concern (AL-5):

Commenters do not support the RMP. They feel the document strips Arizona citizens of their rights to use BLM land or any other public land for recreational uses and outdoor activities, including motorized events. Additionally, they feel it is not right to lock US citizens and families out of land that is owned by the tax payers and that restricting use is a disservice to the public.

Response (AL-5):

The proposed plan provides a diversity of recreation opportunities, as well as other traditional uses of public lands, throughout the planning area. Citizens are not being locked out of enjoying public lands. However, due to the high demand for recreation opportunities, some management will be applied so that uses of natural resources can be sustained and quality recreation experiences can be enjoyed by recreationists.

Public Comments (AL-5):

Comment: I strongly urge you NOT to support this document that will strip all of Arizona citizens their right to use BLM land or any other public land for recreational and competitive motorized sports. It is not right to lock US citizens and families out of land that is rightfully owned by the United States. A country created and protected by these citizens. (Individual - Comment: #627, letter #323)

Comment: We are going to lose some access, all of us--hikers, equestrians, motorized users--we all are going lose some. So we need to recognize that to start off with because every time we develop an acre of private land the public land becomes that much more valuable for our recreation use and for the wildlife

habitat. And so we need to have that into consideration as it's none of our fault that we are going to lose something on these public lands. Being able to what ever we want, where ever we want--those days are over. It is unfortunate, if there was only going to stay only five million people in Arizona for the next twenty years this planning process would not be necessary. But that is not the case. (Arizona Wilderness Coalition - Comment: #1216, letter #226)

Public Concern (AL-6):

Commenters note that the Natural Environmental Policy Act (NEPA) imposes a duty on BLM to inventory and evaluates impacts on the full range of ecological, cultural, aesthetic, and social resources found in the public lands. Commenters feel BLM should protect wildlife, scenic values, recreation opportunities, grazing, public access, and wilderness character in the public lands through various decisions. Commenters are concerned that BLM has not complied with these obligations, including analyzing potential cumulative impacts and considering ways to avoid or limit them.

Response (AL-6):

In accordance with NEPA, we have evaluated the impacts of the alternatives, including the proposed RMPs, on a comprehensive range of resources and aspects of the natural, cultural, and social environments. We have also evaluated cumulative impacts and have worked closely with local communities in examining the consequences to nearby populations. We believe we have developed the best possible combination of multiple uses within the planning areas that both provide for a diversity of uses of public lands and meet the FLPMA principle of sustained yield. We also believe we have met the letter and intent of the protection mandate of the National Monument Proclamation in all alternatives analyzed, including in our Proposed Alternative, *Alternative E*.

Public Comments (AL-6):

Comment: The National Environmental Policy Act (NEPA), 42 U.S.C. 4321 et seq., dictates

that the BLM take a "hard look" at the environmental consequences of a proposed action and the requisite environmental analysis "must be appropriate to the action in question." *Metcalf v. Daley*, 214 F.3d 1135, 1151 (9th Cir. 2000); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989). In order to take the "hard look" required by NEPA, BLM is required to assess impacts and effects that include: "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 C.F.R. 1508.8. (emphasis added). The NEPA regulations define "cumulative impact" as: the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. 1508.7. (emphasis added). A failure to include a cumulative impact analysis of actions within a larger region will render NEPA analysis insufficient. See, e.g., *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1078 (9th Cir. 2002) (analysis of root fungus on cedar timber sales was necessary for entire area). In the context of this RMP, the decisions made in one area of this landscape are likely to affect other areas, including the Monument objects, as part of the greater region near Agua Fria. Accordingly, to the extent that management decisions in the non-Monument lands can affect the Monument objects, BLM must analyze potential impacts and consider ways to avoid or limit them in order to perform a NEPA analysis commensurate with the scope of the decisions included in the RMP. Recommendation: In developing and evaluating potential management alternatives for the Bradshaw-Harquahala area, BLM should bear in mind the concept of multiple use, as defined above, in order to inventory and safeguard resources such as scenic values, wilderness character, cultural resources and wildlife habitat and create ACECs. We are concerned that BLM has not

complied with these obligations and will make specific recommendations regarding necessary corrections later in these comments. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2212, letter #343)

Comment: Let us please manage our lands so that they maybe enjoyed/productive assets they need to be used, and enjoyed, "productive resources". Cattle should be able to graze on these lands, Wildlife habitat should be managed and upgraded, for joint use. Access should be permitted, not restricted. "Except for Quads". Wildlife habitat should be improved on a yearly basis, cattle allotments should be managed to attain a well balanced mixd use of the lands. The land does not need to be managed by closure, "the easy way out". (Individual - Comment: #1187, letter #234)

5.4.2 OBJECTS OF AGUA FRIA NATIONAL MONUMENT

Public Concern (MO-1):

Numerous comments state the public's concern for protecting the AFNM by reducing or eliminating such activities as grazing, and target shooting. Citizens are concerned with the feasibility of Alternative E meeting the mandate of the Presidential Proclamation and adequately protecting the monument objects. Comments suggest BLM is emphasizing the need for recreation, grazing, and other uses versus the need for preservation. Comments express concern that inappropriate access to resources, such as cultural sites, will contribute to harming monument objects. They note that recreation is not an object of the Monument to be protected and preserved. As a result, several comments request a new alternative for public consideration.

Response (MO-1):

All Alternatives and decisions proposed for the monument are designed to protect monument resources and the "objects" described in the Proclamation. Protection of these resources and

objects do not preclude a certain amount of public use and recreational enjoyment. Though the Proclamation emphasizes the protection of these resources and objects, the Federal Land Policy and Management Act (FLPMA) allows for multiple uses as long as the protection of monument resources and objects is ensured first. We believe the Proposed Alternative provides for the protection of monument resources and objects, while allowing compatible uses and enjoyment of the monument by the public.

In regards to public use realized through interpretive development of archaeological sites, such uses would be limited to a small number of sites, within selected areas of the monument. The majority of the monument's area will be excluded from interpretive development. Site protection will be an important consideration in the design and implementation of interpretive developments. Public use will be implemented in a manner consistent with the Archaeological Resources Protection Act (16 U.S.C. 470 ii(c)), which directs each Federal land manager "...to establish a program to increase public awareness of the significance of the archaeological resources located on public lands...and the need to protect such resources."

Public Comments (MO-1):

Comment: Off-road vehicle tracks mar archeological sites and scatter pottery sherds, blurring the stories they could tell us of our state's ancient history. Our members are deeply concerned that cattle muddy the clear waters, trample seedlings, crush ancient artifacts, and prevent grasses from growing tall enough to shelter pronghorn fawns. We are also concerned that pot hunters and archeological looters disturb untouched sites, stealing our cultural heritage. The pressures of booming growth and an expected explosion in visitation threaten to jeopardize the area's wild character. The monument should be managed foremost so as to protect the objects listed in the monument proclamation. Other uses- such as grazing, motorized access, and new visitor facilities - should be considered only when those uses do not impair monument objects. (Maricopa

Audubon Society, Phoenix, AZ - Comment: #1247, letter #321)

Comment: Please present a new alternative for public consideration that offers the prospect of genuine protection of these monuments. They are an outstanding part of our National Landscape Conservation System and deserve the most sensitive possible management. (Individual, Prescott Valley, AZ - Comment: #385, letter #210)

Public Concern (MO-2):

Commenters feel BLM should ensure that the range of alternatives is broad enough to encompass more protective measures of the monument, as dictated by NEPA and the Proclamation. They feel any alternative presented that can harm monument objects should be invalidated.

Response (MO-2):

In developing Alternatives, the BLM offered different combinations of management alternatives to address issues and to resolve conflicts among uses in the Agua Fria National Monument planning area. Alternatives must meet the purpose and need; must be reasonable; must provide a mix of resource protection, use, and development; must be responsive to the issues; and must meet the established planning criteria. Each alternative was effectively a land use plan that would provide a framework for multiple use management of the full spectrum of resources, resource uses, and programs present in the monument. Under all Alternatives, the BLM provides for the proper care and management of the monument in accordance with all applicable laws, regulations, and BLM policy and guidance.

The BLM engaged in collaboration efforts by including communities in the formulation of monument management alternatives. Workshops were held throughout the planning area to give citizens the opportunity to refine issues, discuss visions for the Agua Fria National Monument, and begin exploring alternative ways to manage the monument. Input received from citizens—both groups and

individuals—were considered in developing the alternatives.

Public Comments (MO-2):

Comment: We are also concerned about the range of alternatives that has been presented for Agua Fria National Monument. The range of alternatives is "the heart of the environmental impact statement." 40 C.F.R. 1502.14. NEPA requires BLM to "rigorously explore and objectively evaluate" a range of alternatives to proposed federal actions. See 40 C.F.R. 1502.14(a) and 1508.25(c). "An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action." Northwest Env'tl Defense Center v. Bonneville Power Admin., 117 F.3d 1520, 1538 (9th Cir. 1997). An agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. City of Tenakee Springs v. Clough, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. 1502.14). This evaluation extends to considering more environmentally protective alternatives and mitigation measures. See, e.g., Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094, 1122-1123 (9th Cir. 2002) (and cases cited therein). For this Draft RMP, the consideration of more environmentally protective alternatives is consistent with both the requirements of the Monument Proclamation and FLPMA's requirement BLM to "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. 1732(d)(2)(a). NEPA requires that an actual "range" of alternatives is considered, such that the Act will "preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only one alternative (i.e. the applicant's proposed project)." Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162, 1174 (10th Cir. 1999), citing Simmons v. United States Corps of Engineers, 120 F.3d 664, 669 (7th Cir. 1997). This requirement prevents the EIS from becoming "a foreordained formality." City of New York v. Department of Transp., 715 F.2d 732, 743 (2nd Cir. 1983). See also, Davis v.

Mineta, 302 F.3d 1104 (10th Cir. 2002). Under the Proclamation and the Antiquities Act cited above, all of the alternatives that apply to management of the Monument must conserve Monument resources first (and in particular, those resources that are "objects of interest"), and only then make other management decisions that do not interfere with the conservation of monument resources. Thus, in order to comply with these requirements, the range of alternatives cannot include management decisions that will undermine protection of Monument objects in favor of other resources or uses, such as recreation or tourism. To comply with both NEPA and the Monument Proclamation, the BLM must present a range of alternatives where there is variability among alternatives, but no alternatives would harm monument objects. For example, the impact analysis section identifies numerous incidences where proposed management actions would have a potential negative impact on a Monument object. Here is one, but these sort of impacts are identified throughout the document: "An increased number of users resulting from Back Country Byway designations would likely affect cultural resources along Bloody Basin and Constellation Mine roads. Potential impacts include the possibility of increased vandalism and accelerated erosion at roadside sites" (4.12.1) Draft RMP at p. 503. It is a violation of the requirements of the Proclamation that the BLM formulated an alternative that could be expected to have this negative impact on a Monument Object. The management alternatives presented for the Monument do not comply with BLM's obligation to consider a reasonable range of alternatives or to consider the environmentally preferable alternatives that would conserve Monument objects and/or other valuable resources in the AFNM.

Recommendation: The agency should ensure that all alternatives applying to Monument lands have conservation and protection of Monument objects as the primary consideration. We will identify specific failures in the preferred alternative below, but all the alternatives should adhere to this recommendation. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2206, letter #343)

Comment: In each alternative for the Agua Fria NM, the BLM should have identified how the objects would be preserved and protected under the proposed management. Since it is clear that some of the transportation, grazing, lands and realty, and mineral resource alternatives would not protect the Monument objects, these alternatives should be invalidated, since they do not comply with FLPMA or the Monument Proclamation under the Antiquities Act. (Center for Biological Diversity, Tucson, AZ - Comment: #1556, letter #338)

Public Concern (MO-3):

Commenter is concerned that the plan will not be subject to outside oversight due to the lack of an explicit framework for public participation and a formal advisory committee for the AFNM.

Response (MO-3):

The proposed management direction for the monument is a plan-level decision. When actions are proposed to implement significant aspects of the plan, these will be undertaken in a way that includes meaningful public involvement and follows FLPMA and NEPA. The BLM welcomes the public's interest and involvement in the Agua Fria National Monument.

Additionally, the guidance and oversight of the Arizona Resource Advisory Council (RAC) includes the monument. Such guidance includes the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. The Arizona RAC is developing off-highway-vehicle (OHV) land health standards and guidelines for OHV management, which would relate to the monument as well as other public lands in Arizona.

Public Comments (MO-3):

Comment: Oversight - The AFNM is unique in that it does not have a formal advisory committee structure for management oversight. How will your plan be subject to some sort of outside audit or oversight? Not including any explicit framework for public participation in the RMP leaves a huge gap. (Individual, Glendale, AZ - Comment: #1931, letter #341)

Public Concern (MO-4):

Comments were received suggesting the BLM generate a plan that enhances public access to the monument in order for the public to appreciate and enjoy its beauty and historical value. The public wants to see visitor centers, roadside information kiosks, and interpretive trails for educating the public on the importance of protecting and preserving the monument in its natural state. Other comments suggest access to the monument was essential part of being able to experience the monument.

Response (MO-4):

While BLM wishes to provide opportunities for the public to view and enjoy the resources of the monument, the Proclamation makes it clear that the purpose of the monument is to protect those resources. The Proposed Alternative is designed to protect natural, cultural, and scenic resources, while allowing opportunities to enjoy the monument with low impact to its resources. It provides for interpretive development at selected archaeological sites, interpretive trails, information kiosks, and educational tours. Larger facilities, such as visitor centers, could adversely affect the scenic qualities and cultural landscape of the monument that attract many visitors. The BLM will work with local communities to support programs and facilities that can serve as gateways and information centers for visitors.

Public Comments (MO-4):

Comment: National Monuments are precious places that protect critical habitats, resources, and historical areas on behalf of the public at large. Management of these areas should thus be designed to enhance public access to and appreciation of the resources that they contain. Landscapes such as that of the Agua Fria National Monument (AFNM) provide welcome respite from the densely occupied urban areas that most Americans inhabit, and a chance for residents of other regions and countries to experience the space and solitude of the west. While gaining a sense of place is critical to the experience of the visitor, understanding the resources on these landscapes is equally as

important. This understanding is provided through visitor's centers, roadside information kiosks, and interpretive trails. Interpreted hikes are another source of information, but depend on the level of visitation at particular times of year. (ASU School of Human Evolution and Social Change, Tempe, AZ - Comment: #1973, letter #325)

Comment: Access to any National Park is essential to its availability in order to truly enjoy and experience it. Destructing it is counter-productive in this endeavor. Working trails may be an alternative to road construction. Here, less is more. (Individual, Long Beach, California - Comment: #886, letter #207)

Public Concern (MO-5):

Comments suggest the BLM should work collaboratively with the Arizona Game and Fish Department and other governmental agencies to protect monument objects from activities that may negatively impact the monument.

Response (MO-5):

We have and will continue to work closely with other government agencies, and especially AGFD. The Agua Fria National Monument Proclamation says "Nothing in this proclamation shall be deemed to enlarge or diminish the jurisdiction of the State of Arizona with respect to fish and wildlife management." In addition, the BLM and AGFD have compatible goals in protecting wildlife species and habitats. The proposed plan allows for the activities required by AGFD to accomplish its wildlife management

Public Comments (MO-5):

Comment: BLM should work with Arizona Game & Fish Department and other governmental agencies to reduce the impact their activities may have on all monument objects. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2070, letter #339)

Public Concern (MO-6):

Commenter feels in order to fully comply with the requirements of the Proclamation, FLPMA,

and the Antiquities Act, BLM should revise the management purpose statement to include the full list of monument objects and present a complete evaluation of the proposed plan's impacts on monument objects by specifically including each object in the "Affected Environment" and Environmental Impact" sections of the Draft RMP.

Response (MO-6):

The list of wildlife species contained in the Proclamation was not meant as an all inclusive or exhaustive list, but rather as illustrative of the diversity of natural resources and wildlife habitats on the monument that are of scientific value. The "object" in this case is not the individual habitats for each species, but rather it is the "... expansive mosaic of semi-desert grassland, cut by ribbons of valuable riparian forest..." The proclamation goes on to describe the value of this object by stating it "... is an outstanding biological resource. The diversity of vegetative communities, topographical features, and relative availability of water..." supports the habitats for the wildlife species listed, as well as others that weren't on the list

The impact analysis considered and addressed all the objects of the monument. We may not have itemized each object in each impact statement, but rather addressed what impacts might occur and potentially be affected by actions in each alternative. Since the Resource Management Plan is a landscape level plan, analysis is also conducted at a landscape level. At that level it is often difficult or impossible to derive specific quantified impacts. Actions required to implement the plan would receive more detailed scrutiny and environmental analysis that could more specifically address possible affects to specific monument resources.

Public Comments (MO-6):

Comment: In addition, because the protection of monument objects is the agencies' first priority, each of the objects should be specifically evaluated in the "Affected Environment" and "Environmental Impacts" chapters of the Draft RMP. While currently some of the objects are evaluated in these

sections, evaluating all of them and specifically referring to them as monument objects would help guide the agency and the public on the statues and level of protection expected for each object. Recommendation: In order to fully comply with the requirements of the Proclamation and the Antiquities Act, BLM should present a complete evaluation of the proposed plan's impacts on monument objects by specifically including each monument object (and referring to it as such) in the "affected environment" and "environmental impact" sections of the Draft RMP. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2204, letter #343)

Comment: In addition, we are concerned that the purpose statement in 1.5.1.1 contains only a partial list of "Monument objects" in the wildlife bullet point. RMP at 27. Recommendation: We recommend that BLM revise the Monument purpose statements (1.5.1.1) to include the full list of wildlife Monument objects listed above, specifically: common black hawk, pronghorn, mule deer, white-tailed deer, javelina, mountain lion, small mammals, reptiles, amphibians, neotropical birds, elk, and black bear. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2205, letter #343)

Public Concern (MO-7):

Commenters are concerned that throughout the draft RMP, BLM has not effectively asked the right questions in its efforts to protect the monument, suggesting that the burden of proof for protection of objects rests with the BLM. Commenters recommend that BLM reassess their decisions, use a precautionary approach, identify how each decision will contribute to preserving monument objects, and amend proposed actions that fail the "protection" test.

Response (MO-7):

Every Alternative analyzed in the Draft RMPs/Draft EIS would protect the monument resources first, and then allow appropriate multiple uses. It is in keeping with legal precedence and BLM policy that other multiple uses can be made of the monument as long as protection of the monument resources has been

achieved. Through monitoring, patrol, and citizen assistance, we will ensure the compatibility of uses with monument protection. If necessary, through adaptive management, we can modify uses to address changing resource conditions.

Public Comments (MO-7):

Comment: Overall, we have a concern throughout the draft RMP that the BLM is not asking the right questions. Since protection of "objects of interest" is the primary mandate for the agency, the burden of proof is on the agency to show how every proposed action contributes to preserving these objects. Since Agua Fria is a Monument, the question is no longer "why should we take this management action?" Instead; the proper question is "why shouldn't we take this management action (i.e. will the proposed action contribute to the preservation of Monument objects?). As described in detail above, the protection mandate in the monument Proclamation is clear: "&hereby set apart and reserved &, for the purpose of protecting the objects identified above&" and that "the national monument shall be the dominant reservation." The purpose of the monument is to protect the objects identified. Recommendation: The agencies should reassess their decisions and identify how each decision will contribute to preserving "monument objects." Proposed actions that fail the "protection" test should be amended. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2208, letter #343)

Comment: The agencies should take a conservative approach and err on the side of protecting species and reduce routes density preserve core habitat areas. This recommendation is in concert with the "precautionary principle" of conservation biology, which states that precautionary measures should be taken when a certain activity or inactivity threatens to harm human health or the environment, even when science has not fully established cause and effect relationships. This principle is rooted in the recognition that scientific understanding of ecosystems is complicated by numerous factors, including dynamic ecosystem processes and the various

effects of human activities. Put simply, it is easier to prevent harm to biodiversity than to attempt to repair it later. This is critical in the Monument where the agencies' primary duty is to protect "objects of interest" and endangered species. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2241, letter #343)

Public Concern (MO-8):

Citizens are concerned that BLM is improperly relying on "multiple-use" principles to determine and designate permissible activities within the monument because the explicit purpose of designating the monument was to protect and preserve monument objects. Accordingly, standard multiple-use principles do not apply to the monument, and any effort to adopt such a management approach to the detriment of historic values would be in violation of the Presidential Proclamation and the mandates of FLPMA.

Response (MO-8):

All Alternatives and all decisions proposed for the monument are designed to protect monument resources and the "objects" described in the Proclamation. Protection of these resources and objects do not preclude a certain amount of public use and recreational enjoyment. Though the Proclamation emphasizes the protection of these resources and objects, the Federal Land Policy and Management Act allows for multiple uses as long as the protection of monument resources and objects is ensured first. It is the opinion of BLM that all Alternatives achieve this. Through our analysis we find the Proposed Alternative provides comprehensive protection of monument resources and objects and reasonable levels of public use and enjoyment.

Public Comments (MO-8):

Comment: The establishment of Agua Fria National Monument set in place a new mandate that these lands be managed in a different way. The Presidential Proclamation requires the BLM develop a management plan that doesn't simply maintain monument objects in their current condition, but instead requires a plan that actively promotes their protection. We followed

this fundamental guideline in preparing our comments. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2056, letter #339)

Comment: The BLM overemphasized the "multiple-use" mandate when determining alternatives for the Agua Fria NM. Public lands are only to be managed for multiple uses if the area has not been designated by law for a specific use, in which case that use takes precedence. 43 U.S.C. 1732(a). In this case, Agua Fria NM was designated in order to protect and preserve specifically identified historic and scientific objects. Therefore, all of the alternatives for the Monument should have first and foremost met the criteria for preservation and protection of Monument objects and only then provided for multiple use within these parameters of protection. (Center for Biological Diversity, Tucson, AZ - Comment: #1555, letter #338)

5.4.3 SPECIAL DESIGNATIONS

Public Concern (SD-1):

Respondents believe the BLM should use additional designations along with allocations to maintain wilderness characteristics.

Response (SD-1):

The complexities of land management in the planning areas result in some land areas where multiple designations have been proposed. Much of the planning area is or soon will be an urban and urban interface landscape. Where needed, BLM may propose and implement resource-specific management prescriptions and allocations from various resource management programs. These prescriptions and allocations will assist BLM in maintaining, protecting, or conserving a broad range of public land resources, while helping the agency satisfy increasing demands for resource use and public recreation opportunities.

Public Comments (SD-1):

Comment: The BLM has proposed other designations for these areas that have wilderness characteristics, which we also support. The other designations include: Areas of Critical Environmental Concern, Outstanding Natural Areas, and Wildlife Management Areas. These designations are excellent tools to focus management on specific resources and should be retained for Black Butte, Harquahala Mountains, and the greater Bighorn/Hummingbird Springs complex. These tools can be well-complemented with the allocation for wilderness characteristics because this protection achieves many of the desired outcomes for the other designations. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2262, letter #343)

Comment: Tools such as Areas of Critical Environmental Concern (ACEC), Outstanding Natural Areas (ONA), and Wildlife Management Areas (WMA) should be used to focus management on specific resources. (Individual, Tonopah, AZ - Comment: #680, letter #45)

Public Concern (SD-2):

Respondent feel BLM's abandonment of its authority to designate any additional Wilderness Study Areas (WSAs) is invalid and will ultimately be overturned in pending litigation; and, therefore, does not prevent BLM from designating new WSAs.

Response (SD-2):

The authority set forth in Section 603(a) of FLPMA to complete the three-part wilderness review process (inventory, study, and reporting to Congress) and establish wilderness study areas (WSAs) expired on October 21, 1993. Following expiration of the Section 603(a) process, there is no general legal authority for the BLM to designate lands as WSAs for management pursuant to Section 603. FLPMA land use plans completed after April 14, 2003 will not designate any new WSAs, nor manage any additional lands under the Section 603 non-impairment standard. FLPMA land use plan decisions may accord special management

protection for wilderness characteristics or other values through the land use planning process.

Public Comments (SD-2):

Comment: At the outset, we want to emphasize our belief that BLM's abandonment of its authority to designate any additional Wilderness Study Areas (WSAs) is invalid and will ultimately be overturned in pending litigation; and, therefore, does not prevent BLM from designating new WSAs. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2257, letter #343)

Public Concern (SD-3):

An array of comments was received in support of the ACEC proposal in Alternative D to protect plants and wildlife, such as big horn sheep, throughout the planning area. In the national monument, respondents agree that closure of ACECs to grazing and OHV would have beneficial effects, even if ACEC designation is redundant. Respondents believe that ACECs will have as much protection as BLM is willing to provide.

Comments were also received supporting BLM's continued management for the suitability of the Agua Fria River for Wild and Scenic River designation and designating a riparian corridor ACEC with prescriptions to close the area to grazing and OHV use, and to encourage re-vegetation of riparian vegetation.

Response (SD-3):

As a component of a monument object and a subject of the Arizona Land Health Standards, riparian areas are a focus of management regardless of any designation or allocation. The management objectives and prescriptions in this document are designed to achieve the Arizona Land Health Standards which will protect and restore riparian conditions in both the monument and the Bradshaw-Harquahala planning area.

An ACEC within the Agua Fria National Monument will not increase protections or provide benefits to riparian vegetation zones beyond those provided by the Proclamation. Rather, the ACECs will have as much protection

as BLM is willing to provide, as the document explains: "management of the 13,070 acres of ACEC in the monument would help improve The condition of all riparian areas as determined by monitoring is presented in Appendix Q1 and Q2.

The protective management actions that were developed when the BLM designated the Larry Canyon and Perry Mesa ACEC's have been incorporated into the proposed management plan for the national monument. These areas have been and will continue to be managed to protect their exceptional natural and cultural resources. In addition, at the time the ACEC's were established, these designations provided for resource protection by restricting some activities

Public Comments (SD-3):

Comment: *Special Area Designations:* *We support Alternative D and the creation of ACECs since cultural and wildlife resources would clearly benefit. A reduction in fragmented habitat from this interconnected set of ACECs stretching from Harquahala Peak to the Belmont Mountains would benefit wildlife especially species like big horn sheep that need large amounts of space. Plant communities would also benefit.* (Tonopah Area Coalition, Tonopah, AZ - Comment: #1122, letter #347)

Comment: We (Friends of the AFNM) disagree, however, with the unsubstantiated conclusion on page 474 and elsewhere that ACEC designation is unlikely to result in any measure of protection beyond that provided by the Proclamation. Rather, the ACECs will have as much protection as BLM is willing to provide, as the document explains: "management of the 13,070 acres of ACEC in the monument would help improve range conditions by reducing vehicle traffic, damage to riparian vegetation, disturbance by recreational users, wildlife stress, and potential vectoring of noxious and invasive species" (p347). Again, ACEC designation will prove to be a valuable and necessary management tool for resource managers and should be expanded, not eliminated. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2063, letter #339)

Public Concern (SD-4):

Respondent feels there are not quantitative impacts of ACEC designation on grazing resources listed in the DRMPs/DEIS and that there is a lack of discussion on why ACECs proposed in Alternative C are not proposed in Alternative E.

Response (SD-4):

We believe the adoption of *Alternative E* fully protects riparian areas and forage. The Alternative and its prescribed resource allocations both conserve and preserve riparian areas and associated monument objects. *Alternative E* also ensures riparian and range resources will meeting Land Health Standards and will continue to be managed to maintain proper functioning condition. ACECs were not brought forward into *Alternative E*. BLM determined ACECs do not afford greater management or resource protection authority for monument objects. The Presidential Monument Proclamation fully protects the monument's range and riparian resources. Riparian areas in non-monument public lands will be managed to improve condition, and to meet or exceed Land Health Standards.

Public Comments (SD-4):

Comment: Lack of sufficient calculations. Additionally, the DRMP/DEIS fails to provide productivity information and calculations that support the adoption of Alternative E, which lacks designation of riparian-area ACECs or year-round restrictions on grazing in riparian areas. Section 4.16.1: Alternative C states that though the total acreage of the four ACECs is less than one percent of the acres allotted to grazing in AFNM, the percentage of lost forage would likely be greater because of the high productivity of riparian areas. However, there is no indication of the degree of quantitative impact these ACECs would have on the actual grazing resources available or why none of these ACECs are proposed in the Preferred Alternative. (Individual, Champaign, IL - Comment: #1894, letter #201)

Public Concern (SD-5):

The commenter suggests BLM considers designation of additional ACECs and WHAs to provide more protection for riparian corridors.

Response (SD-5):

The management objectives and prescriptions in this document are designed to achieve the Arizona Land Health Standards which will protect and restore riparian conditions. As a component of a monument object and a subject of the Arizona Land Health Standards, riparian areas are a focus of management regardless of any designation or allocation. ACEC designation within the national monument is redundant and unnecessary to achieve needed resource protections. The condition of all riparian areas, as determined by monitoring, is presented in Appendix Q1 and Q2.

Please see Section 2.6.1.1, which describes the analysis leading to the conclusion that eight tributaries of the Agua Fria River within the monument are determined as eligible for consideration as potential additions to the National Wild and Scenic Rivers System. In accordance with BLM policy, the BLM will manage these streams to protect their riparian, scenic and cultural resource values pending a decision on Wild and Scenic River designation.

Public Comments (SD-5):

Comment: The preferred alternative protects 1.7 miles of riparian habitat in ACECs and Wildlife Habitat Areas (WHAs) (Table 4-5, p. 485). This is substantially smaller than the amount of riparian protection proposed under Alternatives C or D. Because of multiple risks to riparian resources from cumulative impacts and existing at-risk conditions, BLM should consider designation of additional ACECs and WHAs that provide more protection for riparian corridors. Recommendation: EPA recommends the preferred alternative be modified to include additional ACECs and WHAs that will provide protection for additional riparian corridors. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2176, letter #396)

Comment: Specifically, since 61% of the riparian corridor in the Monument is not in PFC, BLM should modify the preferred alternative to include the designation of the Agua Fria Riparian Corridor Area of Critical Environmental Concern (ACEC), which encompasses the entire river corridor and tributaries within the Monument, encouraging revegetation of reduce OHV impacts to native vegetation, streambanks, and water quality, and help maintain Wild and Scenic River (WSR) values (p. 474). Wildlife species and habitat would also benefit, including the Gila chub, yellow-billed cuckoo and other priority species (p. 485). (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2171, letter #396)

Public Concern (SD-6):

Comments were received supporting the designation of a Biological/Cultural Area of Critical Environmental Concern (ACEC) for the Harquahala and Black Butte Mountains to better manage these resources; however, the comments did not support the ACEC being identified as an ONA, which they believe is to be managed primarily for recreational and educational purposes. Some respondents also feel that attaining isolation from other users is not an appropriate desired future condition for the Harquahala Mountains ONA ACEC.

Response (SD-6):

The change from an ONA to an ACEC has been completed for the area in question. The references to wilderness characteristic attributes have been removed from the Black Butte and Harquahala Mountains ONAs when not applicable to the required relevance and importance statements addressing the biological, cultural, and scenic elements of these subject areas. The areas are to be managed to emphasize protecting the sensitive resources discussed in the statements of relevance and importance.

Public Comments (SD-6):

Comment: Initially, the Department [AZGFD] identified the Harquahala Mountains as crucial wildlife habitat, having a unique "sky island" vegetation community. The Department

supported the designation of an Area of Critical Environmental Concern (ACEC) for the Harquahala Mountains to better manage these resources. The importance of the biological and cultural resources in the proposed Harquahala ACEC is reflected in the relevance and importance section of the ACEC proposal. However, the ACEC is identified as an ONA, which is to be managed primarily for recreational and educational purposes. The Department believes because the original proposal was based on biological and cultural resources, as reflected in the relevance and importance statements, the area should be identified as a Biological ACEC with management emphasis specific to those resources and not as an ONA with an emphasis on recreation. (The State of Arizona Game and Fish Department, Phoenix, AZ - Comment: #1347, letter #401)

Comment: Concerning Section 2.6.2.2.4.1 Page 198, column 2, 2nd paragraph, commenter stated "Attaining isolation from other users Comment We do not believe this is an appropriate desired future condition for this ACEC (The State of Arizona Game and Fish Department, Phoenix, AZ - Comment: #1370, letter #401).

Public Concern (SD-7):

Respondent does not support the creation of any ACECs; even those that might be targeted for the protection of bighorn sheep based on the concerns with ACEC designations and the potential threats to active wildlife conservation. Other commenters suggest existing ACECs, ONAs, and WMAs be retained for Black Butte, Harquahala Mountains, and the greater Bighorn/Hummingbird Springs complex.

Response (SD-7):

The ACECs proposed in the Preferred Alternative were developed to protect a variety of overlapping regionally significant resources. To provide the level of protection needed, some resource management activities may be curtailed or limited. The BLM believes that "...active wildlife conservation..." will continue as needed, though some activities may need to be

modified to meet ACEC Desired Future Conditions.

Public Comments:

Comment: Because of our (ADBSS) concerns with ACEC designations and the potential threats to active wildlife conservation we do not support the creation of any ACEC's; even those that might be targeted for the protection of bighorn sheep. Bighorn sheep need more care than this designation affords. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2143, letter #342)

Comment: Existing ACECs, ONAs and WMAs should be retained for Black Butte, Harquahala Mountains, and the greater Bighorn/Hummingbird Springs complex. (Individual, Tonopah, AZ - Comment: #681, letter #45)

Public Concern (SD-8):

Respondent is against applying the ACEC designation to the Sheep Mountain.. Respondent states that the proposed Sheep Mountain ACEC (Map 2-66) is a known mineralized area with substantial copper resources.

Response (SD-8):

The Proposed Alternative does not recommend Sheep Mountain as an ACEC. However, Sheep Mountain is an outstanding natural and scenic landscape feature with potential for bighorn sheep reintroduction, Class II desert tortoise habitat, and other outstanding wildlife values, as well as opportunities for rugged primitive recreation in a nearly undisturbed environment. Though there have been mining attempts off-and-on over the last 150 years, none have yet successfully exploited a mineral discovery in the area. As urban development moves ever closer to Sheep Mountain, and the outstanding values found there become scarcer, It may become more important as an open space feature than a mineral source. Under the mining laws and regulations, claimants would have the right to develop their mining claims.

Public Comments:

Comment: In addition, the proposed Sheep Mountain ACEC (Map 2-66) is a known mineralized area with substantial copper resources (see files at the Arizona Department of Mines and Mineral Resources); the ACEC designation should not be applied to the Sheep Mountain area. (Individual, Apache Junction, AZ - Comment: #1889, letter #391)

Public Concern (SD-9):

Comments were received that support all of the ACEC designations proposed in the plan; however, respondents insist that special protections are implemented on the ground and not just designated on paper and that there are good management prescriptions that actually talk about the other uses occurring in the area.

Response (SD-9)

ACEC land use allocations and prescriptions will be implemented for each ACEC upon approval of the land use plan. Route evaluation and designations, along with on-the-ground signing will be completed with five years of land approval. The impacts of recreation uses and other land use authorizations will be carefully assessed and managed to limit or avoid impacts to important biological, cultural, scenic, and other resource values within respective ACECs.

Public Comments (SD-9)

Comment: We support all of the ACEC designations proposed in the plan, but we insist that special protections are implemented on the ground and not just designated on paper. The BLM should ensure that these areas are monitored, managed, and treated with due respect. (Center for Biological Diversity, Tucson, AZ - Comment: #1576, letter #338)

Comment: The use of ACECs, outstanding natural areas are great as long as we have good management prescriptions that actually talk about the other uses that are going to occur there and not just talk about what we want there, addressing route travel and mining development and other such extractive uses. (Arizona Wilderness Coalition, Prescott, AZ - Comment: #1104, letter #76)

Public Concern (SD-10):

Respondent feels protecting existing ACECs and due consideration of proposed ACECs must be a priority in the RMP.

Response (SD-10):

Implementation of ACEC management prescriptions will be a priority of BLM in implementing land use planning provisions. The extent and speed of the implementation process is influenced by BLM's funding, staffing, and workload priorities established by our Washington Office and Congress. ACEC management prescriptions, however, immediately go into effect upon land use plan approval.

Public Comments (SD-10):

Comment: Under FLPMA, BLM is also obligated to "give priority to the designation and protection of areas of critical environmental concern [ACEC]." 43 U.S.C. 1712(c)(3). ACECs are areas where special management attention is required "to protect and prevent irreparable damage." 43 U.S.C. 1702(a). Protection of existing ACECs and due consideration of proposed ACECs must be a priority in the this RMP process. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2211, letter #343)

Public Concern (SD-11):

Many comments were received requesting BLM to study tributaries of the Agua Fria River for Wild and Scenic River eligibility. Respondents feel riparian areas are critical to wildlife and are one of the most heavily impacted habitats in our arid state. They feel this designation would ensure protection of riparian resources and water corridors. Additional comments were received supporting provisions in Alternative E for managing for the Wild and Scenic River suitability of the Agua Fria River. Comments also advocate that BLM do the same with its tributaries. These riparian areas play an important role in the monument's ecological health and are protected by the Monument Proclamation

Response (SD-11):

The eligibility for Wild and Scenic River designation of the tributaries to the Agua Fria River within the Agua Fria National Monument has been evaluated and the results are presented in document Section 2.6.1.1. The evaluation of the Agua Fria tributaries resulted in the conclusion that the segments of several streams within the monument are eligible for consideration as potential additions to the national Wild and Scenic Rivers System. These include streams and riparian areas in Baby, Perry Tank, Lousy, and Larry Canyons. Under BLM policy, the agency will protect the outstanding wildlife, scenic, and cultural values that define the eligibility of these streams, and will ensure that they are maintained in free-flowing condition. This is likewise the case for the Agua Fria River, which the BLM has previously recommended as suitable for Wild and Scenic designation. The environmental, scenic, and cultural values that underlie eligibility and suitability for river designation correspond, in large part, to the monument values defined in the Proclamation. This reinforces the mandate of resource protection in these areas.

Public Comments (SD-11):

Comment: Riparian areas are critical to wildlife and are one of the most heavily impacted habitats in our arid state. Please study tributaries of the Agua Fria River for Wild and Scenic River eligibility. (Individual, Glendale, AZ - Comment: #327, letter #274)

Comment: The BLM needs to propose and then actively work for the Wild and Scenic designation of the rivers and streams that exist within the AFNM. Wild and Scenic river designation is something that will mesh perfectly with the Monument proclamation. Baby Canyon (Bishop Creek), Perry Mesa Canyon, Badger Springs Canyon, Lousy Canyon, and Larry Canyon; not to mention the Agua Fria River itself are all excellent candidates for inclusion in our Wild and Scenic river system. Designation of these waterways as Wild and Scenic will also help protect the

endangered Amphibians and Fishes that live there. (Individual - Comment: #771, letter #46)

Public Concern (SD-12):

Respondent feels the characteristics of WSR designation are impacted by livestock grazing, range developments, and water withdrawal, and these effects are cumulative. These areas deserve special protection from livestock.

Response (SD-12):

Continued livestock grazing will not affect the recommended suitability of the Agua Fria River for Wild and Scenic designation. Proposed management actions include seasonal grazing restrictions which would eliminate intensive use of the river corridor during the growing season. For the segment of the Agua Fria River that was recommended as “wild,” management actions required by a congressional designation are: “Livestock grazing would be restricted to current levels in ‘wild’ segments.” Although, it also states “This action, however, may result in management constraints to other resource values such as livestock grazing and recreation.” The BLM in the form of the grazing decisions for grazing allotments has mandated a significant restriction of livestock access to the riparian areas.

The Arizona Statewide Wild and Scenic Rivers LEIS (Rivers Appendix, pp. 9-11) contains the following statements relating to the recommended designation: ‘livestock grazing use would be limited to the extent practiced prior to designation;’ and ‘grazing allotments would be monitored to identify conflicts with the outstandingly remarkable scenic, and fish and wildlife habitat values.’ Other management actions include coordinated resource management plans, designed to resolve resource conflicts, and reductions in grazing of riparian zones. Under BLM policy in Manual 8351, relating to Wild and Scenic Rivers, grazing is an allowable management practice, if conducted in such a way that there is no substantial adverse effect on the river and its immediate environment. Livestock grazing, if conducted in a manner consistent with BLM standards and guidelines that protect these values, as identified

in the resource management plan, would not impact the river’s suitability for designation.

Public Comments (SD-12):

Comment: The Agua Fria River and the Wild and Scenic designation. The Agua Fria River was nominated for Wild and Scenic designation in 1996. As part of the press release about this nomination, BLM's then acting director said, "Designation of these river segments will conserve important riparian areas, which deserve special recognition and protection." (BLM 1996) Indeed, they deserve special protection from livestock, which degraded degrade and impair the river segments referred to in the BLM press release. The draft RMP states that "reaches of the Agua Fria River were determined to have WSR values despite grazing in the corridor. Continued grazing should not degrade values, and applying Land Health Standards should maintain or improve habitat characteristics." The wilderness characteristics and the recreational opportunities of the WSR designation are indeed impacted by livestock grazing. Water quality and quantity on the Agua Fria River is highly affected by livestock grazing and range developments and water withdrawal, and these effects are cumulative. (Center for Biological Diversity, Tucson, AZ - Comment: #1558, letter #338)

Public Concern (SD-13):

Respondent objects to designating Sycamore Creek in sections 10 & 11 as Wild and Scenic as well as Little Ash Creek in Section 4.

Response (SD-13):

The BLM has conducted an eligibility analysis which is included in document Section 2.6.1.1 Special Area Designations for the Agua Fria National Monument. Sycamore and Little Ash Creeks are regarded as eligible for consideration as potential Wild and Scenic Rivers. Eligibility determination is the first step in evaluating streams for potential Wild and Scenic River designation. The BLM will conduct further, detailed analyses to evaluate a wide range of factors that determine the suitability, or nonsuitability, of these streams for designation. Suitability studies include further opportunities

for government agencies, local communities, private landowners, tribes, and the public to express comments and concerns that will be considered in the suitability study and associated environmental analysis. Congress considers the suitability analysis in making final decisions about Wild and Scenic River designations.

Public Comments (SD-13):

Comment: I also object to designating Sycamore Creek in Sec's 10 & 11 as Wild and Scenic as well as Little Ash Creek in Sec. 4. (Individual, Mayer, AZ - Comment: #1459, letter #379)

Public Concern (SD-14):

A number of respondents are concerned with the designation of Bloody Basin Road as a Back Country Byway. They feel it may result in additional funding for the monument; however, these funds will be insufficient to cover the increase in management costs associated with this designation. Additional comments suggest the proposed Back Country Byways will only increase impacts to the road and surrounding resources because Special Area Designations do nothing more than provided extra notoriety to increase visitation. Therefore, any designation such as this must be coupled with a commitment for additional road maintenance, resource protection monitoring and patrols, litter cleanups, etc. However, the "improved management" from designation by increasing signing, volunteers, mapping, etc. can all be accomplished without designation and without the increased impacts.

Response (SD-14):

The Back Country Byway proposals have not been carried forward to our Proposed Plan.

Public Comments (SD-14):

Comment: The proposed designations for Back Country Byways (2.6.2.2.1 and 2.6.1.1) for the "Constellation/Buckhorn Mine Road" and "Bloody Basin Road" will only serve the purpose of increasing impacts to not only the road but the surrounding resources as well. Special Area Designations such as this do nothing more than provide extra notoriety for the

purpose of increasing visitation and the subsequent increase in use. Any designation such as this must be coupled with the contingent commitment for additional road maintenance, resource protection monitoring and patrols, litter cleanups, etc. The "improved management" from designation by increasing signing, volunteers, mapping, etc. can all be accomplished without designation and without the increased impacts. These roads should not be recommended for these designations as a higher degree of resource protection can be achieved by not designating. (Verde Valley 4 Wheelers, Cottonwood, AZ - Comment: #1949, letter #400)

Comment: Bloody Basin Road should not be designated as a Back Country Byway. The plan does not analyze or state any benefits of designation, and the resulting increase in vehicular traffic will put undue pressure on monument objects. This is particularly true of pronghorn antelope, which must cross the roadway to access important fawning habitat. (Individual, Tucson, AZ - Comment: #928, letter #298)

Public Concern (SD-15):

Several comments were received recommending the Black Canyon Trail be added to the National Recreational Trail System and "totally support" Management Actions to do so.

Response (SD-15):

Application to designate the Black Canyon Trail as a National Recreation Trail will be submitted to the designating authority.

Public Comments (SD-15):

Comment: Alternative E - Pages 204 & 205, 2.6.2.2.6.1 Special Area Designations, Nomination to National Recreation Trails System: I recommend that the Black Canyon Trail become part of the National Recreation Trail System. I support the Management Actions to make this a reality. (Individual, Black Canyon City, AZ - Comment: #1313, letter #281)

Comment: Alternative E - Pages 204 & 205 2.6.2.2.6.1 Special Area Designations

Nomination to National Recreation Trails System -We recommend that the Black Canyon Trail become part of the National Recreation Trail System. -We totally support the Management Actions to make this a reality. (New River/Desert Hills Community Association, Phoenix, AZ - Comment: #1540, letter #393)

Public Concern (SD-16):

Commenter wants the BLM to add a line to Section 2.6.2.2.6.1 Special Area Designation emphasizing the need to avoid sensitive riparian when considering the placement of the Black Canyon Trail.

Response (SD-16):

Riparian areas and creek/drainage crossings traversed by the Black Canyon Trail will be placed in non-sensitive areas, designed to minimize impacts, or avoided wherever possible when finalizing the final alignment of the trail. We will add this prescription to the Black Canyon Trail RMZ.

Public Comments (SD-16):

Comment: My only concern would be with 2.6.2.2.6.1 Special Area Designations. It might be good to add a line about avoiding sensitive riparian areas in the placement of the Black Canyon Trail. (Individual, Dewey, AZ - Comment: #122, letter #113)

5.4.4 LANDS AND REALTY

Public Concern (LR-1):

Comment received suggesting the proposed plan fails to outline prevention for future annexation of BLM-managed lands.

Response (LR-1):

The RMP identifies the lands that the BLM intends on retaining for management (as well as lands that are potentially suitable for disposal). The lands identified for retention would continue to be managed per the prescriptions of this plan regardless of annexation by any municipality.

Public Comments:

Comment: Claim lacks force of action. Affected Environment: Lands and Realty (p. s-xii) states there is no need for BLMs lands to support continued urban expansion. Adequate land for community growth exists in both Arizona State Trust and private ownership.” However, Section 1.3: Planning Area and Map Setting points out the annexation of more than 16,000 acres of BLM land by the nearby City of Peoria over the last decade. Though the DRMP/DEIS alternatives address anticipated pressures of the high rate of population growth, it fails to clearly outline what specifically would prevent future annexation of BLM lands by neighboring municipalities even after a long-term resource management plan is adopted. (Individual, Champaign, IL - Comment: #1897, letter #201)

Public Concern (LR-2):

Commenter acknowledges that lands targeted for disposal are not adjacent to Indian reservation but would like to see Arizona tribes have the first opportunity to acquire lands prior to public offering,

Response (LR-2):

Any of the Arizona tribes may approach the BLM about acquisition of any of the parcels that are identified as potentially suitable for disposal.

Public Comments (LR-2):

Comment: Although lands targeted for disposal are not adjacent to Indian reservations, I would like to see Arizona tribes have first opportunity to acquire prior to public offering. You would be surprised the interest. (Yavapai Prescott Indian Tribe, Prescott, AZ - Comment: #79, letter #101)

Public Concern (LR-3):

Commenter prefers an exchange with the State of Arizona, if BLM wants to dispose of the public lands within the W-Diamond Ranch grazing lease.

Response (LR-3):

At the time of this response, exchange of BLM-managed lands for Arizona State Trust Lands is

still considered unconstitutional based on provisions for managing state lands in the Arizona State Constitution.

Public Comments (LR-3):

Comment: If you want to dispose of the W-Diamond #05028 land, I would prefer you exchange with the State of Arizona which has land to the west that I have a grazing lease on. (W-Diamond Ranch, Skull Valley, AZ - Comment: #20, letter #49)

Public Concern (LR-4):

Commenter wants BLM to reconsider disposing of functional rangeland.

Response (LR-4):

The lands identified as potentially suitable for disposal are scattered and relatively small parcels of public land. Through site specific NEPA analysis, if it is determined that the lands are valuable as “functional rangeland,” the decision may be not to dispose of them.

Public Comments (LR-4):

Comment: Land disposal would also reduce available rangeland by 4%. BLM should reconsider disposing of functional rangeland. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2194, letter #396)

Public Concern (LR-5):

An array of comments urges the BLM to develop a separate DEIS for land disposal. Comments stated that riparian habitat and water sources should be added to the list of retention or acquisition. Comments question how BLM arrived at 5,000 acres as a threshold for disposal. Comments also stated that the level of current analysis does not provide enough information on individual land parcels.

Response (LR-5):

The lands identified are “potentially suitable” for disposal. All disposal actions will include public notification as well as site/action specific NEPA analysis.

For purposes of analysis, BLM established a “threshold” or baseline for determining what parcel size might be considered small and uneconomical to manage. The lands identified are “potentially suitable” for disposal. All disposal actions will include public notification as well as site/action specific NEPA analysis. If resources are identified in these NEPA documents that warrant protection, it is unlikely that the BLM go forward with the action.

Public Comments (LR-5):

Comment: On page 93, the EIS explains two methods by which you determined which lands were potentially suitable for disposal. In the second method, you choose a size of 5,000 acres as a threshold below which land would be disposed of. We commented on this issue two years ago when we reviewed the preliminary draft alternatives for the RMP. As we pointed out then, 5,000 acres comprises almost 8 square miles, an area that can function as open space, habitat, etc, depending on other factors such as surrounding land uses. The final EIS should explain how that number was arrived at, as we are not familiar with any benchmarks of that sort used by the BLM. We also believe the BLM should look carefully at the larger parcels that go through this disposal “screen” for characteristics that would warrant their retention. (Western Lands Project, Seattle, WA - Comment: #1055, letter #14)

Comment: I would also urge you to not trade or sell any BLM lands to private interests for development unless it goes through a complete E.I.S not E.A.R process. (Individual, Prescott, AZ - Comment: #820, letter #157)

Public Concern (LR-6):

Respondents request that the BLM show a parcel of land in T5N R1W sec 13 N ½ as available for disposal. Peoria may want this parcel for a park and trail, or as a school site.

Response (LR-6):

At the current time, all lands associated with AZA-22075 - Right-of-Way Reservation to the Bureau of Reclamation, Arizona Project Office are still ‘reserved’ to BOR for CAP purposes,

and are not available for disposal. We have not received notification from the Bureau of Reclamation or the Central Arizona Project to remove the parcel you describe. The parcel remains unavailable for disposal.

Public Comments (LR-6):

Comment: The letter is being submitted as part of the 90-day comment period in regard to a BLM parcel currently leased to the Bureau of Reclamation/Central Arizona Project in the North 1/2 of Section 13, T5N, R1W (Subject Site). We respectfully request that the final AFNM/Bradshaw-Harquahala Plan identify the Subject Site [North 1/2 of Section 13, T5N, R1W] for disposition should the CAP determine that a portion of the Subject Site is no longer needed for CAP operations. We have had preliminary discussions with City of Peoria as to utilizing land not needed by the CAP for trail and park uses. We have also had initial discussions with the Peoria Unified School District for a school site. One of the challenges to providing school and park sites in the area is the need for flat land, which the Subject Site offers. Most of Lake Pleasant Heights has very rugged terrain and it is a challenge to locate uses that need large flat areas of land. If there are no public uses needed for the Subject Site, we are interested in purchasing the remaining property, provided it could support development and incorporated into surrounding subdivisions. (Pleasant Views, L.L.C., Scottsdale, AZ - Comment: #1071, letter #356)

Public Concern (LR-7):

Comments suggest the preferred alternative should be modified to include purchase restrictions for lands slated for disposal that contain desert tortoise habitat or that are adjacent to the Agua Fria Riparian Corridor. Additionally, disposed lands that contain desert tortoise habitat should be restricted to purchasers that would provide a similar level of habitat protection as BLM-managed land. Lands adjacent to the Agua Fria River north of Glendale should contain development restrictions to protect riparian areas and water resources from development impacts.

Response (LR-7):

Limitations for land disposal actions are described in document Section 2.7.1.2. In addition, Section 2.7.1.4 states:

“No net loss would occur in the quality or quantity of Category I and II desert tortoise habitat to the extent practicable. BLM would address and include mitigation measures in decision documents to offset the loss of quality or quantity of Category I, II, and III tortoise habitats.

“Compensation may be required to mitigate residual impacts from authorized actions. Evaluate on a case-by-case basis all proposed activities, including the following, for impacts to desert tortoise population or habitats:

- requests for rights-of-way,
- easements,
- withdrawals,
- other land tenure actions,
- range improvements,
- wildlife habitat projects,
- mineral material sales, and
- commercial and organized group SRP applications.

Mitigation for adverse impacts is permissible to achieve no net loss in quantity or quality of desert tortoise habitat.”

These prescriptions would require compensation for disposal of desert tortoise habitat to achieve “No net loss” of habitat. No known or identified riparian habitat is included in the plan as available for disposal.

Any proposed land disposal actions that would affect the parcels north of Phoenix, along the Agua Fria River, would involve an assessment of potential impacts on riparian areas and water resources, with consideration of mitigation measures such as development restrictions.

Public Comments (LR-7):

Comment: The DEIS states that impacts to biological resources from lands and realty actions for the preferred alternative are the same or similar as under Alternative B (pp. 306, 488),

which would dispose of over 10,000 acres of desert tortoise habitat (pp. 307, 487). Land disposal is expected to result largely in residential development (p. 616), which could impact vegetation, water quality through increased erosion and sediment yield, and soil productivity (pp. 294, 447,474). EPA recommends the preferred alternative be modified to include purchase restrictions for lands slated for disposal that contain desert tortoise habitat or that are adjacent to the Agua Fria riparian corridor. Disposed lands that contain desert tortoise habitat should be restricted to purchasers that would provide a similar level of habitat protection as BLM-owned land. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2191, letter #396)

Comment: Map 2-78 shows some parcels suitable for disposal that appear to be adjacent to the Agua Fria River. Lands adjacent to the Agua Fria River north of Glendale should contain development restrictions to protect riparian areas and water resources from development impacts. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2193, letter #396)

Public Concern (LR-8):

Respondent notes that land disposal is a type of action that is exempt from the General Conformity rule (regardless of induced population effects) so long as the applicable Federal agency has no practicable control, nor continuing program responsibility, over the land subsequent to its transfer.

Response (LR-8):

Thank you for directing our attention to this aspect of the General Conformity rule. The appropriate changes have been made to the document.

Public Comments (LR-8):

Comment: The DEIS indicates that the General Conformity rule applies to land disposal if such land disposal triggers induced population growth that would increase regional air emissions in the Phoenix nonattainment area for ozone and PM-10. The DEIS then concludes that BLM's land

disposal actions satisfy the general conformity rule because the regional air quality plans account for the associated emissions increases. First, we note that land disposal is a type of action that is exempt from the General Conformity rule (regardless of induced population effects) so long as the applicable Federal agency has no practicable control, nor continuing program responsibility, over the land subsequent to its transfer. See 40 CRF 93.153(c)(2)(xiv). (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2183, letter #396)

Public Concern (LR-9):

Respondent is concerned that isolating the Central Arizona Project (CAP) right-of-way may result in it becoming a magnet for crossing and utility corridors. Comments support withdrawal of BLM-managed lands for the area necessary for the CAP as several of the proposed management actions could result in adverse impacts to the CAP, which are not identified in the draft EIS.

Response (LR-9):

Disposal of lands requires site specific impact analysis at the time of the disposal action. If a particular disposal action would potentially affect the manageability of the CAP, that would be an impact noted at the time of the disposal and would be mitigated appropriately at that time. Appropriate mitigation might include not disposing of the parcel, disposing of only those portions of the parcel that would not affect the CAP canal facilities, or disposing of the parcel but encumbering the patent by "reserving and accepting" the CAP right-of-way. The BLM would coordinate with the operators of the CAP to help ensure that the CAP facilities continue to serve an important role in providing water to central Arizona.

Public Comments (LR-9):

Comment: All the alternatives except Alternative D propose to dispose of lands that appear to be within or adjacent to the CAP, based upon the maps provided. We are concerned that isolating the CAP right-of-way may result in it becoming a magnet for crossings

and utility corridors. Disposal of adjacent parcels also removes any flexibility in locating utilities outside the CAP right-of-way within the utility corridor proposed in the alternatives. As noted in Comment # 1 b above, any use of Reclamation right-of-way would require our approval pursuant to right-of-way A-22075 and we anticipate we would likely object to its use for such a purpose. (Bureau of Reclamation, Glendale, AZ - Comment: #1511, letter #399)

Comment: We [BUREAU OF RECLAMATION] have reviewed the subject draft EIS. As you are aware, much of the Hayden-Rhodes Aqueduct (HRA) feature of the Central Arizona Project (CAP) is located on Bureau of Land Management (BLM) lands within the Bradshaw-Harquahala Planning Area. The use of these lands for the CAP was approved in BLM's right-of-way A-22075. We note several of the proposed management actions could result in adverse impacts to the CAP that are not identified in the draft EIS. Our concerns and other detailed comments are provided in the attached. Based upon our review of the subject document, and our concerns/comments, we believe BLM's policies governing designation of utility corridors and land disposals are in conflict with Reclamation's requirements to ensure proper operation and maintenance of the CAP; therefore, we believe withdrawal of BLM lands for the CAP would be in the best interest of both Bureaus. (Bureau of Reclamation, Glendale, AZ - Comment: #1506, letter #399)

Public Concern (LR-10):

Commenter requests BLM protect federal lands surrounding Wickenburg from ecological despoilment, and manage them in perpetuity for the enhancement of significant cultural and ecological areas like Vulture Peak, Caballeros Peak, and the Hassayampa watershed.

Response (LR-10):

BLM is mandated by a number of laws to manage the public land in ways that protect our air, water, and environment. The Federal Land Policy and Management Act in Section 102, parts 1, 7 and 8 say:

(1) the public lands be retained in Federal ownership, unless as a result of the land use planning procedure provided for in this Act, it is determined that disposal of a particular parcel will serve the national interest;

(7) goals and objectives be established by law as guidelines for public land use planning, and that management be on the basis of multiple use and sustained yield unless otherwise specified by law;

(8) the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use;

The land use plan has chosen to retain the lands around Wickenburg in public ownership and manage to allow multiple use and resource protection.

Public Comments (LR-10):

Comment: Wickenburg is one of the last historical western towns in Arizona that has not been tainted by urban sprawl and pollution. Therefore, the following local organizations which comprise the Wickenburg Outdoor Recreation Committee (WORC) wish to go on record as requesting that the U.S. Bureau of Land Management (BLM) protect federal lands surrounding Wickenburg from ecological despoilment, and manage in perpetuity this federal land asset for the enhancement of significant cultural and ecological areas like Vulture Peak, Caballeros Peak, and the Hassayampa watershed. Supporting Organizations of WORC include the Town of Wickenburg, Wickenburg Chamber of Commerce, Wickenburg Clean and Beautiful, Wickenburg Cultural and Conservation Foundation, Wickenburg Hiking Club, Wickenburg Horsemen's Association, Wickenburg Saddle Club, Wickenburg Sportsmens Club, Desert Caballeros, Desert

Caballeros Western Museum, Hassayampa Bowhunters Club, Kay-L Bar Ranch, Robson's Mining World, and The Nature Conservancy/Hassayampa River Preserve. The following comments of WORC focus largely on the Hassayampa Management Unit (HMU), which contains the lands surrounding Wickenburg. WORC supports Alternative E, the preferred alternative of the BLM. (Wickenburg Outdoor Recreation Committee (WORC, Wickenburg, AZ - Comment: #1901, letter #398)

Public Concern (LR-11):

Respondent is concerned that the language in Section 2.7.1.2 does not indicate an active intent by BLM to encourage partnerships with other entities that could assist in implementing proposed actions in the RMP. Respondent would like to see language that clearly promotes such a partnership.

Response (LR-11):

Many opportunities exist, to enter into a partnership with Maricopa County, the City of Wickenburg, and other entities as appropriate to achieve the management goals set out in our planning document. The Proposed plan has revised language that attempts to clearly declare our willingness to partner with entities, including Maricopa County, to achieve long term management goals for the area, without limiting what the parameters of those partnerships might be.

Public Comments (LR-11):

Comment: The language in this section (2.7.1.2) regarding the possibility of establishing a regional county park is vague, and use of words like "evaluate effects of long-term adjustments" and "accept applications from governments" does not indicate an active intent by BLM to encourage partnerships with other entities that could assist in implementing all the proposed actions in this RMP. The notion of a park managed by Maricopa County Parks and Recreation Department has been discussed at length during various meetings in Wickenburg over the past several years, and the draft plan does not seem to support this notion with vivid

language that clearly promotes such a partnership. (Wickenburg Outdoor Recreation Committee (WORC, Wickenburg, AZ - Comment: #1907, letter #398)

Public Concern (LR-12):

Several comments encourage partnerships with Maricopa County and/or the US Forest Service to preserve the area in the northern part of Maricopa County that is east of Lake Pleasant, west of I-17, and north of the New River Road as part of the Lake Pleasant Regional Park. This would prevent development that results in a loss of wildlife habitat, visual resources, and water resources.

Response (LR-12):

The BLM will work with any of the neighboring land agencies to achieve the desired future condition for the areas in consideration. Cooperative strategies need not be limited to Recreation and Public Purposes leases, which may be encumbered by existing mining claims and grazing leases. We believe it would be productive to work together with other government agencies, local communities, and organizations to provide long-term recreational opportunities, while protecting natural and cultural resources and respecting valid existing rights to use public lands.

We have resumed discussions with the Maricopa County Parks and Recreation Department to explore cooperative opportunities to plan and develop a new Cooperative Recreation Management Area in the Vulture Mountains area south of Wickenburg.

Public Comments (LR-12):

Comment: The following actions are elements of the RMP I believe would fit well within the mission of MCPRD, and would be areas where cooperative management between out two agencies might serve the public well: Potential County park in the Hassayampa Management Unit (HMU) - MCPRD has applied for a "Recreation and Public Purposes" acquisition of BLM lands south of Vulture Peak. We would like to resume discussions on this application in the near future, and determine the course of

action for creating a County park in the southern portion of the HMU (Maricopa County Parks and Recreation Depart, Phoenix, AZ - Comment: #1452, letter #350)

Comment: 11.Alternative E, Page 171, 2.6.2.2.1.2 Lands and Realty, Land Tenure Adjustments. I continue to encourage partnerships with Maricopa County and/or the US Forest Service to preserve the area in the northern part of Maricopa County that is east of Lake Pleasant, west of I-17, and north of the New River Road as part of the Lake Pleasant Regional Park. This would prevent development that results in a loss of wildlife habitat, visual resources, and water resources. (Individual, Black Canyon City, AZ - Comment: #1312, letter #281)

Public Concern (LR-13):

Respondents are pleased with the way BLM has documented the public's desire that the BLM-managed lands in the Bradshaw area remain in public ownership and open to appropriate levels of public use and also with the inclusion of the "community visions" which helps strengthen the land tenure decision.

Response (LR-13):

During scoping, land tenure, and especially retention of land in Federal ownership, was the most common comment received. We also felt visions created by each community would help frame the context of decisions within the geographic area of each of those communities. Both of those things had a significant influence on the decisions we made in the document and were presented as background information.

Public Comments (LR-13):

Comment: We are pleased with the way you have documented the public's desire that the BLM lands in the Bradshaw-Harquahala area remain in public ownership and open to appropriate levels of public use. The inclusion of the "visions" which the local communities have for these BLM lands is a really good way to help validate the land tenure conclusions of the report. (Individual, Phoenix, AZ - Comment: #469, letter #204)

Comment: The Executive Order that created the Agua Fria National Monument in 2000, served to keep these BLM lands in public ownership. We believe that one of the most important impacts or effects of this RMP will be to provide similar protection for the BLM lands in the Bradshaw - Harquahala Areas. In the RMP you have recorded the message that the public wants the BLM lands in the Bradshaw - Harquahala Areas to be used as an outdoor natural resource enjoyment area for the populace of the Phoenix metropolitan area and as a buffer to help maintain the rural character and lifestyles of the local communities. Early in the planning process, land tenure was identified as a major issue. The planning process documented the public's strong desire that these lands be kept in public ownership for public uses. The inclusion in the report of the "visions" which the local communities have for these BLM lands helps strengthen the land tenure conclusions of the report. (Public Lands Foundation, Arlington, Virginia - Comment: #1170, letter #403)

Public Concern (LR-14):

Respondents ask that several parcels in the New River area be explored for their potential inclusion. Additionally the respondents encourage BLM to continue working as part of the Black Canyon Trail system with the Deer Valley Unified School District to enter into a Recreation and Public Purposes agreement for the parcels near the New River Elementary School Parcel because the area is currently being degraded by heavy OHV use. The respondents agree with this plan as long as the sales are in line with the Maricopa County 2020 Plan New River Area Plan.

Response (LR-14):

The lands identified are "potentially suitable" for disposal. All disposal actions will include public notification as well as site/action specific NEPA analysis.

If resources are identified in these NEPA documents that warrant protection, it is unlikely that the BLM go forward with the action.

Public Comments (LR-14):

Comment: Alternative E - Page 168 2.6.2.1.1 Lands and Realty Land Tenure Adjustments - Alternative E places the BLM parcels in the New River Area EAST of I-17 on the "disposal list," except for the New River Community/Kiwanis Park. The map is hard to discern but it appears that the parcels to be disposed are (UTM description was obtained from Jim Anderson of the Phoenix Field office):
 a. UTM 0394496 - 3753038, T. 7N R. 2 E sec. 34 - just south of the Old Jack Ass Acres
 b. UTM 0394617 0 365337 T. 7N R. 2 E sec. 27 near the Roadrunner Café
 c. UTM 0395033 - 3756310 T. 7N R. 2 E sec. 15 - just north of "b"
 d. UTM 0395717 -374364 T. 7N R. 2 E sec. 26 - not far from Coyote Pass -Parcel "a" is a densely vegetated riparian area. It was historically used as a watering hole for livestock along the Black Canyon Livestock Driveway and as a swimming hole for local residents. We ask that this parcel be explored for its potential inclusion as part of the Black Canyon Trail system. -We encourage BLM to continue working with the Deer Valley Unified School District to enter into a Recreation and Public Purposes agreement for the parcels near the New River Elementary School (parcel "c" for sure and possibly "b" as well.) -Parcel "d" is subjected to heavy use by OHV users and as a result, has been greatly degraded. -Otherwise, we agree with this plan as long as the sales are in line with the Maricopa County 2020 Plan - New River Area Plan (New River/Desert Hills Community Association, Phoenix, AZ - Comment: #1530, letter #393)

Public Concern (LR-15):

Numerous comments were received addressing the issue of land tenure. Respondents believe BLM- managed land should stay as BLM-managed land. Comments support retention of Dewey-Humboldt area lands in order to protect the watershed, open spaces, scenic views; and to maintain a rural lifestyle along with recreational opportunities for present and future generations.

Response (LR-15):

Land tenure (disposal or retention of land) was a major issue in the planning area. Retention of

the lands you reference was due to recognition of their value in public ownership. The lands in the vicinity of Dewey-Humboldt and Black Canyon City represent important open space and recreation resources to the local communities. Long term sustainability of these lands will depend on citizen participation in plan implementation and management of the land.

Public Comments (LR-15):

Comment: Representatives for the County have participated in many community meetings and the common theme has been protecting the watershed, open spaces, scenic views, maintaining a rural lifestyle and recreational opportunities. The AFNM/BH Draft Land Use Plan Alternative E reflects the overwhelming desire of the communities to keep BLM lands public for multiple uses in the form of trails, equestrian trails, nature preserves, riparian areas and other such uses. The Preferred Alternative removes all 21,500 acres from the disposal list. This action not only supports the publics input during the planning process, but Yavapai County's General Plan as well. This plan will determine the future of our public lands for generations to come and therefore I am in complete support of the Draft Plan and the Preferred Alternative E. (Yavapai County Board of Supervisors, Prescott, AZ - Comment: #21, letter #48)

Comment: I would like to state for the record, my support for the plan and Preferred Alternative E. The Bureau of Land Management (BLM) Draft Land Use Plan for the Bradshaw-Harquahala Planning Area reflects the overwhelming desire of the public to retain our BLM lands for open space and multiple use for present and future generations. Preferred Alternative E addresses the many points of concern that the public voiced: It removes the 21,000+ acres of public BLM lands the Upper Agua Fria Basin (Dewey, Humboldt and Mayer area) from the BLM's disposal list. It preserves open space for wildlife habitat. It provides our communities with open space for recreational opportunities. It preserves the beautiful scenic vistas. It protects the historical, cultural and natural resources of the area. It protects the instream flow of the Agua Fria River through

the Agua Fria National Monument. It preserves the watershed and avoids further groundwater depletion. It lessens the burden on taxpayers to provide additional services needed for increased population. It reduces additional air pollution, noise pollution, light pollution and traffic in our area. I thank you for listening to the public's opinion on this matter. The BLM will have helped preserve the rural character of our communities when Alternative E is adopted. (Individual - Comment: #449, letter #299)

Public Concern (LR-16):

Respondents recommend the BLM apply the following criteria to identify lands which are not suitable for disposal:

- *No wilderness quality lands.*
- *No ecologically sensitive or significant lands.*
- *Lands containing high public values.*
- *Land disposals should not be considered for counties that have sufficient private lands for community growth.*

Response (LR-16):

Section 2.7.1.2 describes factors that are considered in evaluating the suitability of public land parcels for disposal. These considerations are consistent, in most respects, with recommendations offered in public comments. Public lands were reviewed to ensure that areas with threatened or endangered species, critical habitat, wilderness characteristics, significant cultural resources, or other valuable resources will be retained in Federal ownership. Lands proposed for disposal near communities will be evaluated on a case-by-case basis, considering resource values and public comments, rather than the availability of lands on a county-wide basis. In general, we believe that sufficient private and State lands are available to support community growth in Maricopa and Yavapai Counties.

Public Comments (LR-16):

Comment: We recommend the BLM apply the following criteria to identify lands which are not suitable for disposal: a. No wilderness quality lands should ever be disposed of. b. No ecologically sensitive or significant lands should

be disposed of including lands with habitat for threatened or endangered species, water sources, critical wildlife habitat, and riparian or wetland areas. c. Lands containing high public values such as providing access to larger tracts of public lands, high visual resource management values, identified cultural values and sacred sites. d. Land disposals should not be considered for Counties that have sufficient private lands for community growth in the foreseeable future. Land disposal for economic development purposes are generally not needed if the amount of public land in the county is less than 90%. We emphasize that this is not an exhaustive list, and that there may be many other reasons to retain lands in federal ownership. Rather, these are merely minimal criteria for the lands that should not be considered for disposal. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2270, letter #343)

Public Concern (LR-17):

Many commenters share their views on the importance of preserving the rural character and open space of the communities as urban sprawl increasingly impacts these areas.

Response (LR-17):

The BLM land in the vicinity of many small communities in the planning area contributes to the open space and rural character of those communities. Retention of BLM land in public ownership as proposed in Alternative E should help to maintain the open space and rural character of these communities.

Public Comments (LR-17):

Comment: I am so thankful and glad that the BLM's draft plan and preferred alternative E made it through and we will still have some wide open spaces. I dreaded the thought of more subdivisions! This will protect the flow of the Agua Fria River and preserve the watershed and avoid further ground water depletion and many other things. (Individual, Dewey, Arizona - Comment: #49, letter #56)

Comment: I represent the Black Canyon Black Sheep Four Wheel Club as its only elected officer. Our group supports Preferred

Alternative E of the Bureau of Land Management Land Use Plan for the Bradshaw-Harquahala Planning Area. We want to see the rural character of this area and the corresponding lifestyle maintained even if that means causing unhappiness to a few greedy developers that would build houses on both rims of the Grand Canyon if they could get the land! (Black Canyon Black Sheep Four Wheel Club - Comment: #11, letter #3)

Public Concern (LR-18):

Several respondents urge the BLM to be proactive at acquiring inholdings and adjacent private lands.

Response (LR-18):

Acquisition of lands, including inholdings in the monument, is on a willing seller basis. We have, and will continue to make, acquisition of the inholdings within the national monument a high priority.

Public Comments (LR-18):

Comment: 2.7.2.3 We (Friends of the AFNM) urge the BLM to play a proactive role in acquiring both inholdings within the monument as well as adjacent lands that would benefit the Monument's objects. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2113, letter #339)

Comment: Management Common to Agua Fria National Monument (2.7.2.2, 2.7.2.3, and 2.7.2.4) We urge the BLM to play a proactive role in acquiring both private inholdings within the monument as well as lands adjacent to the monument that would benefit the monument objects. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1877, letter #340)

Public Concern (LR-19):

Commenters are pleased to see that the BLM has a stated action of acquiring the 19,396 acres of state lands within the SRMA because it affords the public a vast array of recreational and educational opportunities, and protects a significant amount of open space and natural and cultural resource values.

Response (LR-19):

An acquisition of the State lands within the SRMA would consolidate and improve recreation opportunities.

Public Comments (LR-19):

Comment: WORC is particularly pleased to see that the BLM has a stated action of "acquiring the 19,396 acres of Arizona State land within the SRMA through a variety of means and priorities." The State lands that are part of the SRMA will be targets for future development, and by addressing this threat to State lands BLM is making a statement on the value of public lands open space that the residents of Wickenburg will support, and will be utilized to maintain the open space values of State land. (Wickenburg Outdoor Recreation Committee (WORC, Wickenburg, AZ - Comment: #1911, letter #398)

Comment: MCPRD supports BLM's preferred alternative (Alternative E) because it affords the public a vast array of recreational and educational opportunities, and protects a significant amount of natural and cultural resource values. This alternative will place almost 679,000 acres of land in "Special Recreation Management Areas (SRMA)" status, which is nearly four times the amount of SRMA lands under the next closest recreational alternative. We understand the recreation and resource protection management actions presented in this alternative, and throughout the plan, will require significant effort and funding to realize the full potential public benefit. (Maricopa County Parks and Recreation Depart, Phoenix, AZ - Comment: #1451, letter #350)

Public Concern (LR-20):

Numerous comments were received requesting archeological and ecological research become priorities and that acquisition of Horseshoe ranch should be made a priority for use as a facility for teaching and research activities.

Response (LR-20):

Both archaeological and ecological research are identified as important management priorities.

Current and future partnerships will contribute to these efforts, which we hope will establish and sustain the monument as an important center for scientific studies and student training. These activities will also provide information useful for resource management and protection. For these reasons, the majority of the archaeological sites in the monument have been allocated to the use category of “scientific use.” The Horseshoe Ranch has already served as a partner in scientific studies, by renting its facilities to house teams of scientists and students. Acquisition of private inholdings in the monument, of which there are several, will be considered to determine if an acquisition improves monument management and protection of monument objects, and will be subject to available funding and willing sellers. However, acquisitions of real property, such as buildings, must also be consistent with BLM policies that require a business plan and encourage the use of partnerships for operation and maintenance of such properties.

Public Comments (LR-20):

Comment: Monument-based facilities for ecological, archaeological, and other teaching and research activities would substantially enhance the sustainability and breadth of these activities on the monument. Horseshoe Ranch would be an ideal research and teaching facility; I strongly recommend that its acquisition be a priority. (ASU School of Human Evolution and Social Change, Tempe, AZ - Comment: #1982, letter #325)

Comment: I am a member of the friends of the Agua Fria National Monument, a great group and I highly recommend other people to get involved with. We had a get together this last year at the Horseshoe Ranch, which is inside the National Monument. You have to cross the Agua Fria to get inside the headquarters. That's a beautiful place, and I would like to see if the BLM could entertain the idea of doing some kind of land trade with them to acquire that property so that the BLM could use it as an interpretive site, a place for tours, a place for a park ranger to stay, or whatever the case may be for in future. I think that would be a great addition to the monument that BLM and the

public could utilize if they could entertain that idea. (Individual, Black Canyon City, AZ - Comment: #23, letter #91)

Public Concern (LR-21):

Respondents express concern for preservation of scenic vistas by not allowing new communication sites to be developed on BLM-managed lands.

Response (LR-21):

Any applications for communication sites would be processed through a NEPA analysis. This analysis would include a determination of impacts to the visual resources of the impacted area.

Public Comments (LR-21):

Comment: Utility & Transportation Corridors and Communication Sites: To preserve scenic vistas, no new communication sites should be developed on BLM lands. (Tonopah Area Coalition, Tonopah, AZ - Comment: #1118, letter #347)

Public Concern (LR-22):

The respondents request that any consideration of development of multi-use corridors on BLM-managed lands take into account constructability, safety, security, access, maintenance, and operations of buried utilities as well as potential impacts to an area's environmental and cultural resources.

Response (LR-22):

The BLM took a closer look at the Black Canyon corridor and determined that from a geographical and practical standpoint, the alignment presented in the preferred alternative required minor adjustments and is reflected in the final document.

Public Comments (LR-22):

Comment: The western portion of the corridor is described in the Lands and Realty, Black Canyon Management Unit section (2.6.2.2.1.2) of Alternative E. It states: Alternative E would adjust the western boundary of the Black Canyon corridor 1 mile west of the true center of

Interstate 17 and would widen the corridor to 2 miles where it crosses the Black Mesa/Bumble Bee Cultural Resource Priority Areas as shown on Map 2-79. (Note: The Black Canyon corridor includes both the I-17 right-of-way and rights-of-way for other utilities.) An analysis by Transwestern of the topographic conditions within that identified corridor that certain areas would be present severe constraints for pipeline construction and operational access. For example, areas that exhibit elevation change features such as those in Yavapai County, T11N, R2E, Sections 21, 22, 28, 33 and 34 (Transwestern MP 71 area) and areas that are similar to those in Yavapai County, T91/2N, R2E, Sections 22, 27, 33, and 34 (Transwestern MP 81, 82 area) do not exhibit features that are conducive to the construction and operation of buried utilities, particularly large-diameter pipelines. Transwestern's proposed route for the Phoenix Lateral pipeline at the furthestmost location from the multi-use corridor is some 2 miles west of the western boundary of the proposed corridor. This proposed routing outside of the proposed multi-use corridor has been selected because ground features that are more favorable to the construction and operation of large diameter pipelines. Transwestern also believes that this routing would provide increased safety for installation and operations personnel as well as reduce, minimize or avoid environment impacts. (Transwestern Pipeline, Houston, TX - Comment: #1496, letter #383)

Comment: Transwestern Pipeline Company requests that any consideration of development of multi-use corridors on BLM lands take into account constructability, safety, security, access, maintenance and operations of buried utilities as well as potential impacts to area environmental and cultural resources. (Transwestern Pipeline, Houston, TX - Comment: #1497, letter #383)

Public Concern (LR-23):

Numerous comments were received urging the BLM not to allow any new utilities or right-of-ways in the monument. Several comments were received emphasizing concern that there was no discussion of transportation facilities or future need to widen I-17 along AFNM boundary and

commenters would like BLM to modify Map 2-79 to identify I-17 as a transportation corridor and acknowledge the ADOT proposal to widen it.

Additional recommendations include but are not limited to: modifying the southern corridor boundary to match the AFNM southern boundary; minimizing impact to habitat (especially the sensitive pronghorn fawning areas on Black Mesa), soils, and cultural resources; having fewer corridors and narrower corridors that would preserve the viewshed, reduce the potential impact of animal-vehicle collisions, and the vectoring of invasive weeds.

Response (LR-23):

We are committed to working with the Arizona Department of Transportation and the Federal Highway Administration, under the provisions of our joint Memorandum of Understanding, as these agencies plan for the improvement of the highway system that is critical to the people and economy of Arizona.

In 2006, the Arizona Department of Transportation (ADOT) began to develop and evaluate alternatives for the widening of Interstate Highway 17 between New River and Cordes Junction. We are providing ADOT with relevant information on natural and cultural resources, land use authorizations, and monument values that could be affected by various preliminary alternatives. The proposal to widen I-17 will require a separate specific environmental analysis or Environmental Impact Statement, which will include opportunities for public comment. It is important to consider public safety, the mitigation of any adverse impacts, and the protection of the resource values within the national monument.

Map 2-79 shows the transportation corridor along I-17, but it was not clear. The symbol has been changed so it will show more clearly. Because roadway widening is not a BLM Resource Management Plan decision, the working relationship with transportation agencies that propose and conduct such actions is discussed in document section 2.13 – Interrelationships. The BLM will address future widening projects on Federal and State

highways that cross BLM land or that is adjacent to the AFNM as they arise.

The utility corridors portrayed on Map 2-79 in the Preferred Alternative and Draft EIS and the text referenced in section 4.7.2 are both correct and consistent. However, conditions since publication of the Draft RMPs/Draft EIS have resulted in reconsideration of the Black Canyon Corridor. We have chosen to remove the corridor from the Agua Fria National Monument completely due to potential impacts to monument resources. The Preferred alternative has selected a corridor location that extends the corridor south to private lands and west of the national monument. See document section 2.6.2.2.1.2 – Lands and Realty in the Black Canyon Management Unit for more details and Map 2-79.

Utility corridors are allocated to constrain the location of future, yet unknown, utility development. BLM endeavors to locate them along paths where a need for possible future utility development has been identified and where the opportunity to minimize environmental impacts such as visual intrusions, impacts to sensitive resources and species, and impacts to cultural resources can be minimized. We also endeavor to locate them where actual utility construction is possible and practical. Through cooperation with utility companies and the Western Utility Group, and through our own review and analysis, we have developed a utility corridor proposal in our Proposed Plan we believe allows utility development needed to support the expanding urban growth of Central Arizona while minimizing social and environmental impacts of future utility projects.

There are no rights-of-way or corridors proposed in the AFNM. Any new right-of-way actions west of I-17 would require site specific NEPA analysis.

Public Comments (LR-23):

Comment: 2. The DEIS does not adequately discuss how BLM plans to address existing and proposed highway widening projects on U.S. or state highways that cross BLM land within the Bradshaw-Harquahala Resource Planning Area

(BHRPA) or are located adjacent to the AFNM. This point is particularly disconcerting because DEIS Section 1.4.4 (Page 25) indicates that FHWA, ADOT, and other agencies met to discuss future transportation right-of-way (R/W) needs, however these needs are not even mentioned in Section 1.6.2-Issues and Management Concerns. (Federal Highway Administration, Phoenix, AZ - Comment: #1417, letter #162)

Comment: 9.Alternative E Page 169, 2.6.2.1.1 Lands and Realty, Utility and Transportation Corridors V Black Canyon per Map 2-79: “Alternative D - page 123 (2.5.1.2) is preferable to Alternate E particularly from New River to the point where the corridor verves to the west to follow route 69. This also eliminates the Black Canyon utility corridor from the Monument. Having fewer corridors and narrower corridors would preserve the viewshed and it would reduce the potential impact of animal-vehicle collisions and the vectoring of invasive weeds. (Individual, Black Canyon City, AZ - Comment: #1306, letter #281)

Public Concern (LR-24):

Respondent wants the sentence, “Though Central Arizona is one of the fastest growing population centers in the United States, there is no need for BLM-managed land to support continued urban expansion. Adequate land for community growth exists in both Arizona State Trust Land and private ownership” located on page s-xii, 2nd paragraph, to be clarified. Commenter recommends that BLM acknowledge that existing ADOT managed transportation corridors are within the study area, and may require future modifications to provide safe, reliable public transportation.

Response (LR-24):

Utility and transportation corridors are different than right-of-way corridors. Both utility and transportation corridors on BLM-managed lands are allocations for future utility or transportation development. They constrain where future development will be entertained when proposals are brought to BLM for consideration. Corridors do not limit how right-of-way holders

conduct business within their right-of-way, whether it is within an allocated corridor or not.

We are committed to working with the Arizona Department of Transportation and the Federal Highway Administration, under the provisions of our joint Memorandum of Understanding, as these agencies plan for the improvement of the highway system that is critical to the people and economy of Arizona. We will work with these agencies to evaluate construction alternatives, environmental impacts and right-of-way needs associated with the improvement of existing highways or the construction of new roads.

The list of major highways in the planning area has been added to section 2.13 – Interrelationships, along with the recognition that continued urban growth will necessitate modification of transportation systems within ADOT rights-of-way.

Roadway widening is not a BLM Resource Management Plan decision and the working relationship with transportation agencies that propose and conduct such actions is discussed in document section 2.13 – Interrelationships. The BLM will address future widening projects on Federal and State highways that cross BLM-managed land or that is adjacent to the AFNM as they arise

Public Comments (LR-24):

Comment: Section Affected Environment, Lands and Realty, Page s-xii, 2nd paragraph: The sentence, "Though Central Arizona is one of the fastest growing population centers in the United States, there is no need for BLM land to support continued urban expansion. Adequate land for community growth exists in both Arizona State Trust Land and private ownership", needs clarification. ADOT acknowledges both Arizona State Trust Land and private land is "available" in the broad sense of the word, increased community growth necessitates increased public transportation needs, ADOT recommends that BLM acknowledge that existing ADOT managed transportation corridors are within the study area, and may require future modifications to provide safe, reliable public transportation.

These modifications could include new corridors, highway widening, traffic interchange improvements, new alignments, bridge modifications, and others. (Arizona Department of Transportation, Phoenix, AZ - Comment: #1432, letter #397)

Comment: [Section Affected Environment, Lands and Realty, Page s-xii, 1st paragraph:] ADOT recommends including a statement that "ADOT managed transportation corridors within, or adjacent to, the study area include: 1-17, US 60, SR 74, SR 71, SR 89, SR 69, SR 169, L303, and L101," (Arizona Department of Transportation, Phoenix, AZ - Comment: #1431, letter #397)

Public Concern (LR-25):

When authorizing utility ROW, respondent wants to see the BLM do the following:

- *Fully utilize existing corridors before considering new ones.*
- *Require "stealth" construction techniques on any new towers.*
- *Avoid construction in riparian areas.*
- *Include a stipulation that is the utility provider abandons (ceases to use) the equipment they should remove it and restore the landscape to "... its pre-construction state."*
- *Communication facilities should be required to co-locate on existing facilities whenever possible.*

Response (LR-25):

Many of the suggestions you have made can be found in the Management Common to All Action Alternatives in section 2.7.1.2 – Lands and Realty. In addition, a site specific environmental analysis would be conducted for any utility proposal. That analysis would include assessment of impacts to visual resources, riparian habitat, sensitive plants and animals, and other social and environmental factors. Mitigation would be developed to minimize impacts to all social and environmental resources.

Public Comment (LR-25):

Comment: Alternative E - Page 169 2.6.2.1.1 Lands and Realty Utility and Transportation Corridors - Black Canyon per Map 2-79 When considering any new utility agreements, -Fully utilize the existing utility corridor(s), before adding new utility corridors. -For new towers, require "stealth" construction - color and design to blend in with the natural surroundings as much as possible. -Avoid riparian areas for construction of communication sites and utility rights-of-way. -Include a provision that if the utility provider abandons (ceases to use) the equipment, they should be responsible (perhaps through bonding) to remove the equipment and restore the landscape to its pre-construction state. -Communication towers/facilities should be required to co-locate on existing power lines or communication towers whenever possible. The objective is to take advantage of existing verticality in order to minimize obstructions to the view shed. (Look at Forest Service requirements - they have required a minimum of seven carriers per tower/facility.) (New River/Desert Hills Community Association, Phoenix, AZ - Comment: #1536, letter #393)

Public Concern (LR-26):

Commenters believe statements in the RMP are not consistent with discussions between FHWA and the Secretary of the Interior during a 1999 field review of the AFNM prior to its establishment by President Clinton. The commenters believe that statements reflect a BLM decision prior to release of this DEIS for review, prior to full public disclosure and completion of the NEPA process, and without input from FHWA/ADOT pursuant to the September 10, 2004 MOU Amendment Number 1. Commenters also noted that the document fails to mention the partnership established with FHWA and ADOT by the 2004 MOU but encouraged BLM to fulfill their prior coordination commitment to FHWA and ADOT.

Response (LR-26):

The section referenced is in the No Action alternative and contains language that guides current management in the Interim Management Guidance for the Agua Fria National Monument.

The language in the Interim Management Guidance states that "new rights-of-way may be permitted within the boundaries of existing rights-of-way, where site-specific NEPA analysis determines that impacts to the values for which the Monument was designated would be negligible." The eastern boundary of the Interstate 17 right-of-way is also the western boundary of the monument.

The BLM Phoenix District is not aware of discussions between FHWA and the Secretary of Interior in 1999. There is not any special language recognizing or otherwise making special accommodation for FHWA and widening of I-17 in the Presidential Proclamation (see Appendix A). FHWA, ADOT, and any other agency would need to apply and follow normal NEPA procedures to propose and conduct widening or other maintenance or modification projects along I-17, or any other transportation right-of-way in the planning area. For projects that might impact the national monument or other Special Area Designations, other procedures may be required (4F permit) for application in addition to NEPA analysis.

Numerous agencies were invited to participate as cooperating agencies by a letter from the BLM Arizona State Office. The Phoenix District does not have a list of the agencies invited, and apologize if yours was overlooked. We made several attempts at finding interested agencies, companies, and individuals to identify who should receive review copies of the document directly from us. Again we apologize for not finding you in that process, but we are pleased you did receive and review a copy of the document.

Public Comments (LR-26):

Comment: 4. Chapter 2, Section 2.2.1.2, Page 39: The text contains a subsection entitled "Utility and Transportation Corridors and Communication Sites" relative to the AFNM. The second sentence of the first paragraph states: "No new or widened transportation corridors would be designated in the monument." This statement is not consistent with discussions between FHWA and the

Secretary of the Interior during a 1999 field review of the AFNM prior to its establishment by President Clinton in January 2000.

Furthermore, this statement would appear to reflect a BLM decision prior to release of this DEIS for review, prior to full public disclosure and completion of the NEPA process, and without input from FHWA/ADOT pursuant to the September 10, 2004 MOU Amendment Number 1. (Federal Highway Administration, Phoenix, AZ - Comment: #1419, letter #162)

Comment: 1. Although the Bureau of Land Management (BLM), Arizona Department of Transportation (ADOT), and FHWA executed a Memorandum of Understanding (MOU) in September 2004 regarding project coordination and cooperation, the FHWA Arizona Division Office is concerned that the MOU process has not been followed because it was not asked to participate as a cooperating federal agency and did not directly receive a review copy of the Draft Environmental Impact Statement (DEIS). (Federal Highway Administration, Phoenix, AZ - Comment: #1414, letter #162)

Public Concern (LR-27):

Several comments were received regarding expanding and widening the CAP utility corridor, specifically including the right-of-way near the Bighorn Mountains.

Response (LR-27):

Any additional rights-of-way within the CAP corridor will have site specific NEPA analysis which will include a visual resource analysis. .

Thank you for making us aware of the proposed use of the CAP corridor as a long-distance recreational trail. The designation of the CAP as a National Recreation Trail would be considered in the site specific impact analysis of any activity authorized by BLM that might affect the trail, including utility or disposal proposal in its vicinity.

We will continue to coordinate with the Bureau of Reclamation to ensure that our management actions take into consideration the long-term

operation of the Central Arizona Project aqueduct and its associated recreational uses.

Public Comments (LR-27):

Comment: The utility R-O-W that follows the CAP near the Bighorn Mts., should not be widened as it will negatively impact the viewshed. The utility R-O-W should not be widened to include the southeastern boundary of the AFNM. (Individual, New River, AZ - Comment: #972, letter #360)

Comment: Please note the CAP Trail has been a nationally designated recreation trail in the National Trail System since June 2003. The long-term goal is to use the right-of-way of the CAP from the California state line to Tucson, Arizona, for a 336-mile recreational trail. A portion of this trail is already under construction in Pima County and will represent a key link to major trails in Pima County and the Tucson metro area. The City of Scottsdale held a public meeting to discuss the trail system, bringing together representatives of several cities, the Bureau of Reclamation, the Central Arizona Water Conservation District, Arizona Dept. of Transportation, and Maricopa and Pima Counties. Designation and use of the proposed 1-mile wide CAP utility corridor and/or disposal of lands abutting the CAP could adversely affect this planned use. (Bureau of Reclamation, Glendale, AZ - Comment: #1515, letter #399)

Public Concern (LR-28):

Comments were received addressing the use of BLM-managed land adjacent to the CAP right-of-way for a utility corridor. Commenters want construction, maintenance, and presence of utilities to be restricted to the downslope side of the CAP in order to protect the canal, water quality, and existing drainage patterns. Additionally, the Bureau of Reclamation suggests that they will deny any lateral encroachments within the CAP right-of-way and prefer right-angle crossings of the CAP.

Response (LR-28):

Utility corridors are designed to constrain the locations of future utility proposals and are suitable to accommodate more than one type of

right-of-way or one or more rights-of-way which are similar, identical, or compatible. We understand that the facilities of the Central Arizona Project serve a critical role in sustaining the populations and economies of Phoenix, Tucson, and other communities. We will therefore coordinate closely with the Bureau of Reclamation in evaluating any proposals to site new utilities within the CAP corridor. We will also take into account your recommendation to site any new facilities in areas downslope of the canal, in order to reduce the possibility of damage from changes in natural drainage patterns. Specific impacts of right-of-way proposals would be analyzed in an appropriate level NEPA document at the time of the proposal. It is the policy of the BLM to collocate utilities as much as practical so as to minimize the environmental, social, and visual impacts of such actions. At the same time, it is the policy of BLM to modify, mitigate, or deny proposals that would have a deleterious affect on other utilities within an established utility corridor. It is the opinion of the Phoenix District that the facilities associated with the Central Arizona Project Canal (CAP) would be addressed and protected in the analysis and approval process associated with another utility within the proposed corridor. Use of BLM-managed land upslope of the CAP will include stipulations for authorized activities upslope of the CAP to ensure existing drainage patterns are not changed.

Public Comments (LR-28):

Comment: In addition, we respectfully request that use of BLM land adjacent to the CAP right-of-way for a utility corridor be restricted to the downslope (canal right, looking downstream) side. We have concerns that construction, maintenance, and the presence of utilities upslope of the CAP could result in damage to the canal itself, changes to the drainage patterns that could adversely affect the canal embankment, and degradation of CAP water quality. (Bureau of Reclamation, Glendale, AZ - Comment: #1509, letter #399)

Comment: On Page 278, section 2.9.3. Standard Operating Procedures, Bradshaw-Harquahala Planning Area, Utility and Transportation

Corridors and Communication Sites, the document explains how BLM designates utility corridors. The text states, in part, "A corridor is defined only if it contains or is planned for one or more of the following major facilities." These include electrical transmission facilities having a capacity of 115 kV or greater voltage, and significant canals that provide delivery of water to urban areas. We now understand BLM's rationale for designating our right-of-way as a utility corridor; however, use of the CAP for this purpose is in conflict with use of the corridor for the CAP. In constructing the CAP, we acquired private lands in fee specifically to eliminate conflicts with other uses and potential encroachment from other utilities. Our own policy is to deny lateral encroachments within our CAP right-of-way; we prefer right-angle crossings of the CAP. Consistent with right-of-way A-22075, any use of Reclamation right-of-way would require our approval and we anticipate we would not approve use of it for a utility corridor. (Bureau of Reclamation, Glendale, AZ - Comment: #1508, letter #399)

Public Concern (LR-29):

An array of comments was received asking why only SR 74 and SR 69 are identified as having a specific one-mile wide corridor width.

Respondents requests that all State highways be considered as corridors, with the understanding that there are corridors where a large distance, or a variable distance, separates the existing center of the right-of-way, and that the 1/4 mile on either side of the highway centerline is applied consistently for planning purposes.

Response (LR-29):

Although each state highway in the planning area does not receive specific mention, all are regarded as transportation corridors. Thank you for pointing out that there are corridors where variable distances separate the existing center and widths of rights-of-way. State Routes 74 and 69, which connect Phoenix with the growing communities of Wickenburg and Prescott, are within the referenced Management Units, so they are discussed in conjunction with those management units. Other transportation corridors were specifically mentioned in other

management units, for example, in section 2.6.2.2.3.2 – Lands and Realty, we mention the transportation corridors along US 89, US 60, the Wickenburg Bypass and the CanaMex highway corridor.

Public Comments (LR-29):

Comment: Section 2.7.1 "Land Use Allocations", Page 212: "In response to a projected regional transportation demand, designate all State highway system routes (Interstate, U.S. routes, and Arizona State routes) as transportation corridors in the Bradshaw-Harquahala Planning Area. Specifically, facilities significant enough to be the basis for corridor designation are the following: natural gas and other pipelines at least 10 inches in diameter, electric transmission facilities accommodating 115 kV lines or greater voltage, and significant canals delivering water to urban areas." ADOT requests that BLM designate I-17 as transportation corridor in the AFNM planning area. ;' (Arizona Department of Transportation, Phoenix, AZ - Comment: #1442, letter #397)

Comment: Section 2.6.2.2.2 Lands and Realty, Castle Hot Springs MU, Utility and Transportation corridors: Page 180: The sentence "All State highway system routes would be designated as transportation corridors, including a new 1-mile-wide corridor along SR 74, 1/2 mile on either side of the highway centerline." needs clarification. ADOT would like to know why only SR 74 (and SR 69) is identified as having a specific one-mile wide corridor width. ADOT requests that all State highways be considered as corridors, with the understanding that there are corridors where a larger distance, or a variable distance separates the existing center of the right-of-way, and that the 1/4 mile on either side of the highway centerline is applied consistently for planning purposes. (Arizona Department of Transportation, Phoenix, AZ - Comment: #1438, letter #397)

Public Concern (LR-30):

Respondent feels more study is needed to determine impact of a utility corridor near

Bumble Bee/Crown King Road on riparian areas.

Response (LR-30):

Utility Corridor decisions in an RMP are designed to constrain future utility proposals by limiting development to certain areas. Impacts resulting from a proposed utility would be analyzed and mitigated at the time of the proposal. It is impossible to assess impacts of future proposals without specific information regarding the type, size, location, and other specifics of the proposal. Generally we seek to avoid impacts to riparian areas. Any proposal for a new utility line would include analyses of potential impacts on riparian zones and project design or mitigation measures that could be implemented to avoid or reduce impacts.

Public Comments (LR-30):

Comment: have an additional concern aside from the monument of the proposed utility corridors and the impact on riparian areas in the Bumble Bee/Crown King Road area and feel that although I know we have done many planning meetings - many people are not aware of this proposal and would object. I feel more study is needed in this area. (Individual - Comment: #312, letter #171)

Public Concern (LR-31):

Commenter feels BLM should evaluate the impacts of corridors in the monument to corridors outside the monument through a landscape-scale cumulative impact analysis.

Response (LR-31):

There are no rights-of-way or corridors proposed in the AFNM. Any new right-of-way actions west of I-17 would require site specific NEPA analysis.

Public Comments (LR-31):

Comment: Since this is a rapidly growing area, there will be significant pressure on the BLM to grant rights-of-way to growing utilities. If new ROWs are proposed for the Monument, it should be only as a last resort because the alternative is to create a new corridor/ROW outside the

Monument that would impact previously undisturbed area, such as wilderness-quality lands or critical wildlife habitat. This would require BLM to perform a landscape-scale cumulative impact analysis and make a decision considering landscape-level effects.

Recommendation: We recommend that the BLM evaluate all of the impacts described above, and compare them in a cumulative impact analysis to evaluate the best manner to have the least impact possible. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2268, letter #343)

Public Concern (LR-32):

Respondent wants to know what the centerline is for the Central Arizona Project Hayden-Rhodes Aqueduct (formerly Granite Reef Aqueduct).

Response (LR-32):

The Utility Corridor in the No Action Alternative (Alternative A) is centered on the Central Arizona Project canal and extends ½ mile either side of the canal.

Public Comments (LR-32):

Comment: 1. Page 44, section 2.2.2.2. Alternative A Bradshaw-Harquahala Planning Area, Lands and Realty, Utility and Transportation Corridors and Communications Sites. a. Table 2-1. Use Corridors within Lower Gila North Planning Area. This table indicates 8LM has designated the Central Arizona Project Hayden-Rhodes Aqueduct (formerly Granite Reef Aqueduct), as a multiple-use corridor with a width of one mile. This would be retained under Alternative A, the No Action alternative. Upon what center line is this 1-mile width based: 1/2 mile on either side of the aqueduct, 1 mile north of the aqueduct, or 1 mile south of the aqueduct? (Bureau of Reclamation, Glendale, AZ - Comment: #1507, letter #399)

Public Concern (LR-33):

Several comments request BLM to identify administrative or management actions for transportation corridors and facilities, as are provided for utilities and communications facilities.

Response (LR-33):

Section 2.13— Interrelationships, has been modified to acknowledge the relationship between BLM, ADOT, and FHWA as outlined in Memorandum of Understanding (MOU) No. AZ-931-0309 AMENDMENT #2, signed March 21, 2006.

Public Comments (LR-33):

Comment: 10. Chapter 2, Section 2.7 .i- Management Common to Both Planning Areas, "Land Use Allocations", Page 212: The DEIS states BLM has designated all state highway routes as transportation corridors within the BHRP A. However, no administrative or management actions are identified for transportation corridors, as are provided for utilities and communication facilities. [We encourage BLM to identify such actions for transportation facilities within the BHRP. (Federal Highway Administration, Phoenix, AZ - Comment: #1426, letter #162)

Public Concern (LR-34):

Respondents are elated to read that "sufficient utility and transportation corridors are proposed in all alternatives to meet increasing energy demands for urban expansion in Central Arizona."

Response (LR-34):

During scoping and throughout plan preparation, we contacted utility companies in the region to get input on their possible needs to meet future demand. The utility and corridors analyzed and reflected in the Proposed Alternative reflect those meetings and the input we have received since.

Public Comments (LR-34):

Comment: We are glad to read in the report that "sufficient utility and transportation corridors are proposed in all Alternatives to meet increasing energy demands for urban expansion in Central Arizona". Most of the people in the Phoenix metropolitan area that value these BLM lands for their open space and recreation opportunities, place even greater value on their lights, air conditioners and automobiles, and

these corridors need to be readily available when needed for additional transmission line and pipeline facilities. (Individual, Phoenix, AZ - Comment: #474, letter #204)

Public Concern (LR-35):

Respondent opposes the widening of the Belmont Mountain Utility Corridor.

Response (LR-35):

The widths of this corridors allows for flexibility in the siting of specific utilities. The increased width also could accommodate new energy demands associated with urban expansion, yet it is possible that the entire corridor width would not be allocated to the construction of new utilities. Any new right-of-way actions would require site specific NEPA analysis to analyze effects on visual, natural, and cultural resources, as well as cumulative impacts from multiple utility.

Public Comments (LR-35):

Comment: Further, the TAC opposes Alternative E regarding the widening of the Belmont Mountain Utility Corridor. This routing was sold to the community by Arizona Public Service as a safety and reliability leg for the energy needs of the Town of Surprise and metro Phoenix. The narrow corridor is adequate for that defined need. The right of way width shown in Alternative D should be maintained. (Tonopah Area Coalition, Tonopah, AZ - Comment: #1119, letter #347)

Public Concern (LR-36):

Commenters suggested that the statement found in alternative A “Small utility distribution systems would continue to be developed on an as-needed basis throughout the planning area. These small distribution systems would include all uses such as electrical lines, gas and water pipelines, and access roads, These distribution systems would be authorized when consistent with environmental and land use considerations” be included in all alternatives. Commenters would also like BLM to add the statement to the values and plans of the surrounding communities.”

Response (LR-36):

The provision for continued issuance of these types of Land Use Authorizations is included in the Common to All section 2.7.1.2 under the Land Use Allocation called Land Use Authorizations.

Public Comments (LR-36):

Comment: 6.Alternative A - Pages 44 & 45, 2.2.2.2 Lands and Realty, Utility and Transportation Corridors and Communication Sites: “All alternatives should include this statement from Alternative A: Small utility distribution systems would continue to be developed on an as-needed basis throughout the planning area. These small distribution systems would include all uses such as electrical lines, gas and water pipelines, and access roads. These distribution systems would be authorized when consistent with environmental and land use considerations.” Please add the following to the above statement, as well as the values and plans of the surrounding communities.” (Black Canyon Trail Coalition, In, Black Canyon City, AZ - Comment: #1272, letter #280)

Public Concern (LR-37):

Respondents request that the final Plan identify Castle Hot Springs Road as a public roadway in which the BLM will grant additional rights-of-ways to make the road a dedicated public right-of-way.

Response (LR-37):

The action of dedicating a road as a “public roadway” is an action of the local government, either county or city. BLM has issued rights-of-way to Maricopa and Yavapai Counties for Castle Hot Springs Road and can issue whatever rights-of-way are needed, if they are requested. However, it is not within BLMs jurisdiction to dedicate a public roadway.

Public Comments (LR-37):

Comment: We recently met with the City of Peoria and have had several meeting with Bureau of Land Management (BLM) representatives to determine the right-of-way status of, Castle Hot Springs Road. We own the

private land in 'the south V2 of Section 26, T7N, R1W and need to establish legal access to the property. The paved portion of Castle Hot Springs Road ends south of our site but the graded portion of Castle Hot Springs Road continues through and north of our site. Our consultant, Christine Sheehy, we met with Kris Luna and Angela Manuel of the City of Peoria regarding the right-of-way status of Castle Hot Springs Road. We are still in the process of reviewing legal descriptions and maps to determine the right-of-way status of Castle Hot Springs Road from our site to Highway 74. We may still need to obtain right-of-way from the BLM on some portions of Castle Hot Springs Road, which we hope BLM will entertain. We respectfully request that the final AFNM/Bradshaw-Harquahala Plan identify Castle Hot Springs Road as a public roadway in which the BLM will grant additional rights-of-way to make Castle Hot Springs Road a dedicated public right-of-way. (Peoria Holdings, LLC, Scottsdale, AZ - Comment: #1413, letter #390)

Public Concern (LR-38):

Respondents felt no further development should occur in power line ROW that crosses the central eastern portions of Perry Mesa.

Response (LR-38):

We are not considering a utility corridor along that ROW and we currently have no application for additional facilities within this right-of-way. No utility corridors will be designated across Perry Mesa or other areas of the national monument, as new utility lines could adversely affect scenic qualities and other monument values. However, the Proclamation respects valid existing rights, which include authorized rights-of-way for the operation and maintenance of existing utility lines. Maintenance activities will be monitored to ensure that they do not adversely affect monument values.

Public Comments (LR-38):

Comment: The siting of utility corridors can lead to loss or fragmentation of habitat, soil disturbance, encroachment of invasive plant species, reduction of wild and scenic character,

and increased human disturbance, among other impacts to monument objects. In addition, the cumulative impacts of facility construction, increased roadway use, and regular maintenance activities can significantly impair monument objects. As a result of these impacts, no new rights-of-way should be granted within the monument's utility corridor. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1822, letter #340)

Comment: No further development should occur in the powerline rights-of-way that cross the central and eastern portions of Perry Mesa. These rights-of-way impact important biological, cultural, recreational, and other resources both inside and outside the monument. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2117, letter #339)

Public Concern (LR-39):

Comments were received addressing the multi-purpose utility corridor proposed in Alternative E. The respondents feel the corridor could be further improved to accommodate additional types of co-existing multiple uses. Additionally, consideration should be given to widening the existing multi-use corridor from the west boundary of the current proposed Phoenix Lateral pipeline centerline.

Response (LR-39):

We reviewed relevant new information regarding the Black Canyon Utility Corridor provided by the Transwestern Pipeline Company and have revised the corridor location accordingly. The new location overlaps the corridor analyzed in the Draft RMPs/Draft EIS and is in the same ecological types and same general area. Analysis conducted in our review indicates the location portrayed on Map 2-79 and described in section 2.6.2.2.1.2 of our Proposed RMPs/Final EIS is not a substantial change from that analyzed in the Draft RMP/Draft EIS and better achieves the reasons for designating utility corridors in resource management plans.

Public Comments (LR-39):

Comment: We [Transwestern Pipeline Company] believe that the Preferred Alternative (Alternative E), recommended for the establishment of a multi-purpose utility and transportation corridor that extends one to two miles west of the centerline of I-17, could be further improved to accommodate additional types of coexisting multiple uses. The proposed corridor described in Alternative E may not effectively or efficiently accommodate the varied types of utilities that may utilize the multi-use corridor. (Transwestern Pipeline, Houston, TX - Comment: #1495, letter #383)

Comment: Consideration should be given to widening the existing multi-use corridor from the west boundary of the current proposed Phoenix Lateral pipeline centerline. This would allow for accommodation of future underground utilities and provide the opportunity to locate future facilities such that they can be installed, operated, accessed and maintained with increased safety and minimized environmental impact that may not be available if only the current proposed multi-use corridor is utilized. (Transwestern Pipeline, Houston, TX - Comment: #1498, letter #383)

Public Concern (LR-40):

Respondent questions whether Map 2-13 is inconsistent with Map 2-20.

Response (LR-40):

Map 2-13 shows only the utility corridor within the Agua Fria National Monument, while Map 2-20 show the corridors only within the Bradshaw-Harquahala Planning Area. The maps are not inconsistent; however the omission of data not relevant to the particular maps may give that appearance. The versions of these maps in the Proposed RMP/ final EIS show all corridors within both planning areas so their relationships can be discerned.

Public Comments (LR-40):

Comment: 8. Chapter 2, Section 2.3.2.1.1., Page 60: The discussion of utility and transportation corridors refers to Map 2-20, which shows the

Black Canyon multi-use corridor as being restricted to the west side of I-17. Is there an inconsistency between Maps 2-13 and 2-20? (Federal Highway Administration, Phoenix, AZ - Comment: #1423, letter #162)

Public Concern (LR-41):

Respondents request that BLM remove route building prohibitions in the Vulture Mountain ACEC and replace them with no highway transportation corridors allowed, while also creating a ½ mile buffer zone to protect nesting wildlife and to differentiate OHV transportation from highway transportation.

Response (LR-41):

We believe that the management actions as listed for the Vulture Peak ACEC provide the best opportunities to achieve the desired future condition. Those management actions are integral for the protection and maintenance of the habitat features for the raptors within the area. Potential new routes are a site specific implementation level decision and will be evaluated and decided as proposals are received. Consideration of no highway corridors was evaluated in the No Action Alternative, and we believe the best opportunity for future traffic planning is in the establishment of transportation corridors relative to the potential CanaMex and Wickenburg bypass proposals.

Public Comments (LR-41):

Comment: Hassayampa Management Unit 2.6.2.2.3.1 Special Area Designation page 187 Vulture Mountain ACEC This area has in the past been looked at for a high speed paved transportation corridor for highway traffic. We request that you remove any route building prohibitions (that do not affect ACEC purpose) and replace with NO Highway Transportation Corridors allowed. Create a ½ mile buffer zone around peaks to protect nesting wildlife. This needs to differentiate Recreation (OHV) transportation from Highway type Transportation. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1665, letter #261)

5.4.5 SOIL, AIR, AND WATER RESOURCES

Public Concern (WS-1):

Several comments were received suggesting BLM provide additional mitigation to vehicle routes in areas of highly erodible soils including additional closures or changing allocations or designations. Additionally, in AFNM, BLM should identify locations of highly erodible soils and adopt mitigation measures to avoid further impacts to impaired waters to reduce sediment load, especially in turbid streams.

Response (WS-1):

Additional mitigation for OHV routes in areas of highly erodible soils will be addressed as mitigation actions within specific Travel Management Plans. Our inventoried routes will be compared with Natural Resource Conservation Service soils data to determine if routes are located in areas with moderate to severe soil erosion hazard. The evaluation for routes in PM₁₀ non-attainment areas and routes with fugitive dust issues will be part of the route evaluation process.

Proposed mitigation actions (closure, seasonal restrictions, speed limits, change in use, surfacing, and surface treatments) will also be addressed as part of the adaptive management for Travel and Transportation Management. For example, if air quality issues reach unacceptable or noncompliant levels, then dirt or other non-surfaced routes creating the air quality problem or noncompliance could be closed to travel until route conditions change or are corrected.

Please see text changes under 2.7.2.10 and 2.7.3.8, mitigation discussions in section 4.25, and Appendix T.

Public Comments (WS-1):

Comment: Incomplete sediment control measures. The methods of sediment control

associated with the closure of 69 miles of roads in the planning areas as described in Section 4.8.7: Alternative E could be improved. The roads are located in moderate to very severe potential soil erodibility areas. While the road closure will reduce soil disturbance, erosion, and compaction by OHV use, additional actions could further control soil erosion in these areas. The introduction of native vegetation to the closed roads would expedite the succession process and establish a community of rooted plants. Minimization of trampling by grazing livestock in the initial months after closure and planting would aid in the establishment of the plant community that collectively decrease soil loss to erosion. (Individual, Champaign, IL - Comment: #1896, letter #201)

Comment: The DEIS indicates that some road routes in the Monument that would be opened located in areas with high erodibility potentially (ranging up to very severe potential, p. 450). The DEIS does not indicate where these areas are located or whether all routes in high erodibility areas will be closed. Recommendation: In the FEIS, identify locations of high erodibility soils. If routes in these areas will be open, apply additional mitigation to reduce impacts from OHVs such as additional route closures, or changing land designations (from Front Country Recreation Management Zone (RMZ) to Back Country RMZ, for example). (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2178, letter #396)

Public Concern (WS-2):

Commenter suggests BLM provide information in FEIS regarding where most OHV emissions occur and how the information was gathered. BLM should estimate PM₁₀ emissions from OHV use if possible, and discuss how SRMAs will be managed to reduce air quality effects including fugitive dust. Management actions suggested include requiring permits or using gates, fences, and other barriers to exclude use on high pollution days.

Response (WS-2):

The suggested actions (gates, fences, signs, and other barriers) will become part of the adaptive

management in the Travel Management and Air Quality sections of the plan. This measure will allow BLM to curtail fugitive dust and PM₁₀ emissions during extreme air pollution forecasts.

Arizona and Maricopa County air quality rules are being revised to address methods for attaining air quality standards within the current nonattainment areas. BLM activities within the nonattainment area will be modified to conform with state and county air quality rules. Upon completion of the Resource Management Plan, a subsequent Air Quality Compliance Plan, which will constitute an implementation level plan, and environmental analysis will be conducted to determine the alternative and appropriate means to comply with those rules.

Public Comments (WS-2):

Comment: The DEIS states that on a countywide basis, OHVs generate much fugitive dust and tailpipe emissions. Most of these emissions occur in remote areas and are unlikely to contribute to any meaningful regional air quality impacts affecting nonattainment or sensitive downwind area (p.457). The basis for this conclusion is not clear. Because Phoenix may not make its 12/31/2006 attainment date for PM₁₀ NAAQS, stricter measures may be warranted for the Phoenix area and it is possible that OHV use might be among the new sources regulated to control dust emissions. As such, more information should be provided in the FEIS to quantify estimated emissions where possible and justify conclusions of insignificance. Recommendation: Provide information in the FEIS regarding locations where most OHV emissions occur and how this information was gathered. Estimate PM₁₀ emissions from OHV use if possible, and discuss how SRMAs will be managed to reduce air quality effects including fugitive dust. Suggest controls could include the use of gates, fences, and other barriers to exclude use on high pollution days, or requiring permits to limit OHV use. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2181, letter #396)

Public Concern (WS-3):

Commenter feels the plan needs to say that all construction activities associated with the RMP, including ongoing maintenance, permitted activities, etc., utilize dust control measures. The FEIS should reference Maricopa County's dust control measures, some of which may apply even outside of the non-attainment area.

Response (WS-3):

Arizona and Maricopa County air quality rules are being revised to address methods for attaining air quality standards within the current nonattainment areas. BLM activities within the nonattainment area will be modified to conform to state and county air quality rules. Upon completion of the Resource Management Plan, a subsequent Air Quality Compliance Plan, which will constitute an implementation level plan and environmental analysis, will be conducted to determine the alternative and appropriate means to comply with those rules.

Public Comments (WS-3):

Comment: The DEIS states that utilities permitted in the utility corridor would generate fugitive dust impacts and would implement dust control best management practices. EPA recommends all construction associated with the Resource Management Plan, including ongoing maintenance, permitted activities etc., utilize dust control measures. The FEIS should reference Maricopa County's dust control measures, some of which apply to all areas of the county, not just in nonattainment areas. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2182, letter #396)

Public Concern (WS-4):

Several commenters feel a complete analysis is required to determine if the emissions associated with the Federal action (both construction and operational emissions) are subject to the requirements for a formal conformity determination under 40 CFR 93, subpart B. The "applicability" analysis involves quantification of emissions caused by a Federal action that are generated within non-attainment or maintenance areas, that are reasonably foreseeable, and that the Federal agency can predictably control and

will maintain control over due to a continuing program responsibility. A formal conformity determination is then required for all such emissions that exceed de minimis thresholds set forth in the rule.

Response (WS-4):

Recreational activities, road maintenance, prescribed burning and mining operations are among the emissions-generating activities that are reasonably foreseeable and over which the BLM may exercise control due to a continuing program responsibility. Recreational use of public lands within the planning areas includes horseback riding, hiking, camping, mineral mining, and OHV use. Of these uses, the greatest impact upon the Phoenix Metropolitan Area PM₁₀ nonattainment area is expected to be from OHV use.

The 2005 Periodic Emissions Inventory for PM₁₀ for the Maricopa County, Arizona Nonattainment Area included an estimated annual emission of OHV fugitive dust at 2,159 tons per year (Maricopa County Air Quality Department, May 2007). In order to quantify the contribution of OHV fugitive dust from public land use, the BLM plans to prepare an emissions inventory as part of developing an Air Quality General Conformity analysis and determination. The General Conformity analysis and determination will follow procedures set forth in 40 CFR 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans. The Air Quality General Conformity analysis and determination is conducted at an implementation level and will comply with applicable County and State air quality rules, which are currently going through rule changes. Therefore, the conformity analysis and determination will be completed after the Record of Decision is signed, but before additional OHV activities are authorized. Upon signing the Record of Decision, no OHV or other activities that may contribute to or inhibit the County from reaching attainment will be authorized, except for those actions that may be typically excluded by regulation (such as at 40 CFR 93.158) until the conformity determination process is complete.

Public Comments (WS-4):

Comment: The General Conformity discussion in the DEIS, however, does not address any emissions-generating activities (other than those associated with land disposal), and the General Conformity rule does require an applicability determination by BLM for all emissions caused by the adoption and implementation of the RMP that are generated within nonattainment or maintenance areas, that are reasonably foreseeable, and that BLM can practicably control and will maintain control over due to a continuing program responsibility. A formal conformity determination consistent with the criteria set forth at 40 CFR 93.158 is required for any such emissions that exceed the applicable de minimis threshold.

Recommendation: A complete analysis is required to determine if the emissions associated with the Federal action (both construction, and operational emissions) are subject to the requirements for a formal conformity determination under the General Conformity rule codified at 40 CFR 93, subpart B. The "applicability" analysis involves quantification of emissions caused by a Federal action that are generated within nonattainment or maintenance areas, that are reasonably foreseeable, and that the Federal agency can practicably control and will maintain control over due to a continuing program responsibility. A formal conformity determination is then required for all such emissions that exceed de minimis thresholds set forth in the rule. Emissions-generating activities covered by the rule would presumably include, but not be limited to, construction of new facilities, OHV use, and prescribed burning caused by implementation of the RMP. In this instance, the applicable pollutants and geographic areas include CO emissions generated within the CO "maintenance" area, VOC and NOx emissions generated Within the 8-hour ozone nonattainment area, and PM-10 emissions generated within the PM-10 nonattainment area. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2184, letter #396)

Comment: The general conformity determination should include the correct de minimis levels. The applicable de minimis

thresholds are 100 tons per year for CO, 100 tons per year for 8-hour ozone precursors (VOC or NO_x), and 70 tons per year for PM-10. Such an applicability determination (and conformity determination if necessary based on the applicability determination) must be completed for at least the alternative that BLM intends to select prior to BLM's action on the RMP. If the determination is completed before the FEIS is published, it should be included as an appendix to the FEIS. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2185, letter #396)

Public Concern (WS-5):

Several comments were received concerning the 47 miles of riparian corridor in the Agua Fria National Monument. Commenters recommended that the BLM should take various actions to protect riparian segments that are not in proper functioning condition (PFC). Additionally, they recommend discussion of additional protections for Non-PFC segments and modifying the Preferred Alternative to include mitigations, such as removal of livestock or restrictions on OHV use in the Final Environmental Impact Statement (FEIS), BLM should Map or provide descriptive information regarding the location of riparian segments in the planning area that are not in proper functioning condition (PFC). Additionally, they recommend discussion of additional protections for Non-PFC segments and modifying the Preferred Alternative to include mitigations, such as removal of livestock or restrictions on OHV use.

Response (WS-5):

The management objectives and prescriptions in this document are designed to achieve the Arizona Land Health Standards which will protect and restore riparian conditions. The condition of all riparian areas as determined by monitoring is presented in Appendix Q1 and Q2.

Public Comments (WS-5):

Comment: These (Non-PFC) segments (in Appendix Q1/Q2) should receive higher protections from livestock grazing, OHV use, road impacts, and mining impacts.
Recommendation: Discuss additional protections

for these areas and modify the preferred alternative to include these mitigations. For example, if livestock are a cause of preventing attainment of PFC, year-round restrictions on grazing in these riparian areas should be implemented; if off-highway vehicle (OHV) use is implicated, stricter land designations should be associated with those areas, etc. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2170, letter #396)

Comment: I agree that riparian areas must be protected and that would require reduction in livestock grazing and OHV use. The high fecal coliform and turbidity levels found in the surface waters are probably caused by these uses of our public lands. The misuses by these entities also endanger the desert tortoise. (Individual, Mesa, AZ - Comment: #1156, letter #376)

Public Concern (WS-6):

Commenter is concerned about changes to stream banks.

Response (WS-6):

Bank alteration measurement includes all streambanks that are altered at the time of measurement. The allowable 25% bank alteration currently only applies to the five streams occupied by Gila chub, Gila topminnow and desert pupfish. Three of those 5 streams are inaccessible to both livestock and vehicles. The 25% threshold was based on the methods described in the Biological Assessment and agreed upon in consultation with the U.S. Fish and Wildlife Service. This threshold is included as a Term and Condition in the Biological Opinion for Silver Creek and Indian Creek [02-21-03-F-0409-R1, November 2, 2006].

Public Comments (WS-6):

Comment: Concerning Section 2.7.1.4 Page 217, column 1 3rd paragraph, commenter stated, "Stream bank alteration...would be limited to 25 percent annually Comment This could result in nearly all of the stream banks being altered in just a few years." (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1377, letter #401)

Public Concern (WS-7):

Respondents strongly support management that prohibits surface water diversions and groundwater pumping that removes water from the monument or adversely affects values, but would also like to add "Water diversions and groundwater pumping that removes water should not adversely affect the surrounding communities."

Response (WS-7):

The Monument Proclamation established a Federal reserved water right which mandates BLM to secure legal entitlement to a quantity of water sufficient to protect the water-dependant values within the monument. The referenced management action is intended to protect that water right. BLM has no authority to limit water use that might "adversely affect the surrounding communities" outside of the National Monument or on other non-public lands and cannot add that statement to our Resource Management Plan. Authority for allocation and adjudication of water use rests with the Arizona Department of Water Resources. However, when BLM receives a request to drill a well or develop water on or across the public lands, it is required by the NEPA process to address all impacts associated with authorizing an action, including any impacts to water use on surrounding areas; and any decision made by BLM is a protestable action.

Public Comments (WS-7):

Comment: 10. Public comment and concern not addressed in any alternative but needs to include in all applicable management actions: As stated in the Agua Fria section of these comments, please add the statement that, "water diversions and groundwater pumping that removes water should not adversely affect the surrounding communities." (Individual, Black Canyon City, AZ - Comment: #1339, letter #282)

Comment: Management Common to All Action Alternatives - Page 233. 2.7.2.4 Soil, Air, and Water resources. -We absolutely support this Management Action to prohibit surface water diversions and groundwater pumping that

removes water from the Monument or adversely affects the Monument's values. -Please change the statement, "water diversions and groundwater pumping that removes water from the Monument and adversely affects the Monuments values " to also include, "and should not adversely affect the surrounding communities". (New River/Desert Hills Community Association, Phoenix, AZ - Comment: #1528, letter #393)

Public Concern (WS-8):

Commenters suggest that the FEIS should provide information about all CWA Section 303(d) impaired waters and efforts to develop Total Maximum Daily Loads in the project area, as well as discuss existing restoration and enhancement efforts for those waters and how the project will coordinate with these efforts.

Response (WS-8):

The only 303(d) water in the Agua Fria Watershed is Turkey Creek on the Prescott National Forest. The only 303(d) water on BLM-managed lands in the planning areas is French Gulch, a tributary to the Hassayampa River. The causes of non-attainment are historic mining related and would not be affected by decisions in this document. Nevertheless, we will continue to work with the Arizona Department of Water Resources, other agencies and partners to monitor water quality in selected streams and to avoid actions that could contribute to violations of water quality standards.

Public Comments (WS-8):

Comment: The Clean Water Act (CWA) requires states to develop a list of water segments which do not or are not expected to meet applicable water quality standards, establish a priority ranking of those segments, and develop action plans called Total Maximum Daily Loads (TMDLs) to improve water quality. The DEIS states that surface water quality in the planning area has been determined by the Arizona Department of Environmental Quality (ADEQ) in most cases to be impaired, containing pollutants above EPA standards, and that turbidity, arsenic, and fecal coliforms are

the most common pollutants contributing to these impaired streams (p. s-xiii). The DEIS also states that prescriptions for soil, air, and water resources would protect water quality to meet Federal and State standards for designated uses (p. 475). The DEIS does not discuss CWA 303(d) listing in the project areas, whether TMDLs have been established for those water bodies, how the proposed project will coordinate with existing protection efforts, and what impact the proposed project might have on meeting CWA Section 303 goals. Recommendation: The FEIS should provide information about all CWA Section 303(d) impaired waters and efforts to develop TMDLs in the project area, existing restoration and enhancement efforts for those waters and how the project will coordinate with these efforts. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2172, letter #396)

Public Concern (WS-9):

Respondent feels that Browns Canyon should not qualify as a riparian area and should be exempted under Standard 2 as outlined under Arizona Standards for Rangeland Health and Guidelines.

Response (WS-9):

Browns Canyon meets the Bureau definition of riparian contained in Technical Reference 1737-9 (1993). Neither the presence of the silted in dam nor the seasonal nature of the stream preclude its classification as riparian. The presence of vegetation dependent upon free water in the soil is evident.

Public Comments (WS-9):

Comment: We do not see how Browns Canyon qualifies as a riparian. This riparian area is artificially created as a result of a man made dam, under Section 4 permit #A3-4-339 and State water claims #38-18063. The dam is 6' high and 70' long and the water was stated as seasonal. We feel this is exempted under Standard 2 as outlined under Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. (Individual, Kingman, AZ - Comment: #1176, letter #352)

Public Concern (WS-10):

Respondent is concerned about the mechanized water development that is proposed under Alternatives A and E. The ADEQ and ADWR groundwater data bases failed to locate wells within a 5 mile radius of T 91/2, R 3E, S 29.

Response (WS-10):

Site-specific planning, evaluation, and implementation of potential management actions are beyond the scope of this RMP and are addressed through the use of individual, site-specific plans. This comment will be forwarded for use in the allotment planning for the individual grazing allotment referenced.

Public Comments (WS-10):

Comment: Under Alternative E, grazing would continue in the uplands. Considering the current drought conditions, it is reasonable to presume that holders of grazing allotments will want to add tanks and deepen wells that supply them or supply the 10,000 gallon tanks. A search of the ADEQ and ADWR groundwater data bases failed to locate wells with a 5 miles radius of T 91/2, R 3E, S 29, the afore mentioned Joes Hill Quadrangle. There has been a referral to depth to water in wells at ranches in the Agua Fria River Corridor but no data for the upland wells. Water retention is mentioned through out the AGNM/Bradshaw Management Plan. Accomplishment of that seems to be transportation route planning and livestock management on various classes of soils. Juggling these considerations using Arizona Standards for Rangeland Health and Guidelines for Grazing Administration, Standard One: Upland Sites with regard to the Alternatives, Volume 1, page 209; Alternatives A and E would allow for mechanized water development. (Sonoran Audubon Society - Comment: #1246, letter #287)

Public Concern (WS-11):

Numerous comments were received concerning BLM's role in protecting the quality and supply of water resources in the monument, as water is vital to the well being of many monument objects. Commenters feel BLM should proactively protect water resources and riparian

areas, as they are crucial to sustainability in the desert. Further, it is suggested that the Bureau maintain close coordination with the Arizona Department of Water Resources as we develop strategies to implement water and water right related measures.

Response (WS-11):

The Agua Fria National Monument Proclamation created a federal reserved water right upon establishment of the Monument. The provisions of section 2.7.2.3 are designed to identify, quantify and notify the Arizona Department of Water Resources of that reserved water right.

Public Comments (WS-11):

Comment: Riparian ecosystems in the southwest are some of the most endangered ecosystems in our country. The BLM should do everything possible to protect this habitat from any further destruction, (Individual, Prescott, AZ - Comment: #818, letter #157)

Comment: The Arizona Department of Water Resources has reviewed the "Agua Fria National Monument and Bradshaw-Harquahala Draft Resource Management Plan and Draft Environmental Impact Statement" and we submit the following comments. Pursuant to statute: 'the director [Department of Water Resources] has general control and supervision of surface water, its appropriation and distribution and of groundwater to the extent provided by this title, except distribution of water reserved to special officers appointed by courts under existing judgments or decrees' - ARS 45-103 As described in the subject draft RMP/EIS, the Bureau would, under all action alternatives: 'Identify, quantify and secure legal entitlement to all existing water sources on the public lands and seek to acquire water rights, when possible, to ensure water availability to meet multiple-resource needs. Assert Federal reserved water rights, where suitable, in Agua Fria National Monument and five wilderness areas to secure water for the purpose of the reservations'. -RMPs/EIS at 214 I suggest that the Bureau maintain close coordination with the Department as it develops strategies to

implement water and water right related measures. (ADWR - Comment: #846, letter #296)

5.4.6 BIOLOGICAL RESOURCES

Public Concern (TE-1):

Respondents request protection of habitat for sensitive or threatened animals and plants, creation of wildlife corridors, and acknowledgement of long-term sustainable uses of wildlife populations.

Response (TE-1):

The BLM believes these concerns are addressed in the Proposed Plan.

Public Comments (TE-1):

Comment: Pronghorn, desert tortoise, and other creatures are suffering due to encroaching human impacts; I want the BLM to protect the habitat of sensitive or threatened animals and plants. (Individual, Prescott, AZ - Comment: #838, letter #310)

Comment: Ideally, you will work to connect these areas with others where ever possible and create designated wilderness wildlife corridors that are true "wells of nature" and reflect the current science associated with the original purpose of legislation that created the park service and made America a world leader in progressive thinking. (Individual, Laveen, AZ - Comment: #795, letter #305)

Public Concern (TE-2):

Respondent is concerned that Section 4.11.10 does not discuss impacts to biological resources from mining for landscape boulders.

Response (TE-2):

The impacts to biological resources from minerals management including mineral material sales are evaluated on a case-by-case basis. As stated in section 4.11.10, impacts would be mitigated and avoided to the extent allowable by regulation. Due to mitigation,

BLM contributions to cumulative impacts are expected to be negligible.

Public Comments (TE-2):

Comment: Concerning Section 4.11.10 Page Pages 498 to 499, commenter stated, “Does not discuss impacts to Biological resources from mining for landscape boulders.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1398, letter #401)

Public Concern (TE-3):

Commenter believes the Biological Resources section should contain more emphasis on wildlife in general. At a minimum, this section should include game species and the State's Special Status Species.

Response (TE-3):

The Biological Resources and Wildlife and Fisheries sections of the Executive Summary have been rewritten to more closely reflect the plan contents. Management of game species and the state’s special status species are addressed in detail in Section 2.7.1.4.

Public Comments (TE-3):

Comment: Concerning Executive Summary Page s-xiii, Biological Resources, commenter stated, “The most sensitive wildlife species... Comment The Biological Resources section should contain more emphasis on wildlife in general. At a minimum this section should include game species and the State's Special Status Species.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1357, letter #401)

Public Concern (TE-4):

Commenter wants the final RMP to maintain:

- *Reasonable vehicle based motorized access on existing roads and trails*
- *A continuation of dispersed vehicle based undeveloped camping without designated sites*
- *No obstacles presented to active wildlife management and conservation activities*

Response (TE-4):

The Phoenix District believes the Proposed Plan meets the commenter’s expressed desires very well. Wildlife management and conservation activities will continue to be conducted in ways that meet the BLM and AGFD wildlife management objectives.

Public Comments (TE-4):

Comment: For the record we (ADBSS) would hope that the final RMP would maintain 1) reasonable vehicle based motorized recreational access on existing roads and trails, 2) a continuation of dispersed vehicle based undeveloped camping without designated sites and 3) no obstacles presented to active wildlife management and conservation activities. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2148, letter #342)

Public Concern (TE-5):

Commenters want the Preferred Alternative to be reasonable, consistent with a “conservation” approach and reflect the “mutual agreement” of AGFD.

Response (TE-5):

We believe the Preferred Alternative is reasonable and complies with laws, Presidential Proclamation, and regulations that govern management of public lands, especially the Federal Land Policy and Management Act. We will continue to work very closely with the AGFD. The Statewide Memorandum of Understanding between BLM and AGFD should help to further define our working relationships.

Public Comments (TE-5):

Comment: The preferred alternative must be reasonable, consistent with a conservation approach, and reflect the mutual agreement of the AGFD (Yuma Valley Rod and Gun Club, Inc, Yuma, AZ - Comment: #1067, letter #163)

Public Concern (TE-6):

Respondents want AGFD to manage wildlife, including wildlife dependent recreation, and BLM and AGFD should continue to conduct cooperative wildlife management.

Response (TE-6):

The separation of responsibilities between BLM and Arizona Game and Fish Department (AGFD) is usually along the lines of BLM managing wildlife habitat and the AGFD managing wildlife populations. As for “wildlife dependent recreation,” FLPMA gives BLM authority to manage recreation on BLM-managed lands. In the case of hunting and fishing, the AGFD issues licenses for the take of game, but BLM is responsible for managing the “recreation” part of the activity. In other words, FLPMA gives BLM the authority to determine where people can camp, where they can drive, what modes of travel might be allowed, place limits on seasons people might be allowed into an area, limits on group sizes, determination of areas for day use only, or impose other management limitations or restrictions to meet land use goals for an area. The fact the recreation activity is wildlife based does not exempt it from BLM’s responsibilities under FLPMA.

The separation of wildlife management responsibilities between BLM and AGFD make it imperative that BLM and AGFD work together cooperatively to achieve the optimum benefit for wildlife. Due to our different missions, that is not always easy or straight forward. The multiple-use mission given BLM by FLPMA doesn’t allow BLM to always place wildlife management above other public land uses. Recreation is currently an important use of public lands and one that is in high demand in Central Arizona. Wildlife management activities are not always compatible with recreation use or management. BLM will continue to work closely with AGFD to find the best solutions for both meeting our multiple use mandate and optimizing conditions for wildlife. The Statewide Memorandum of Understanding between BLM and the AGFD is an important tool in defining that working relationship.

Public Comments (TE-6):

Comment: BLM should manage the land, the Game and Fish Department should manage wildlife, wildlife dependent outdoor recreation

including hunting. Cooperative wildlife management activities should continue between the Department and the Bureau of Land Management. (Yuma Valley Rod and Gun Club - Comment: #2051, letter #150)

Comment: Elements the Arizona Antelope Foundation supports in the management of AFNM include: Coordinate with AGFD on hunting and fishing policies to ensure public safety, especially if there are areas of increased visitor use. (The Arizona Antelope Foundation, Phoenix, AZ - Comment: #2004, letter #273)

Public Concern (TE-7):

Respondents are concerned that impacts to wildlife water developments or other activities for wildlife management may be impacted by various land allocations, such as TMAs, RMZs, and ACECs. They would like to see an accurate analysis of these impacts and clarify language to indicate these actions will not be impeded.

Response (TE-7):

Section 2.7.1.4 describes a number of wildlife management activities that could be implemented as well as management common to all areas that emphasizes the role of wildlife management. However, the list in Section 2.7.1.4 are not intended to be exhaustive and additional Arizona Game and Fish Department proposed activities would be addressed in the future as appropriate. In any case, all proposals that might have an impact to natural or physical resources will require future site-specific environmental analysis appropriate to the activity and area proposed.

Public Comments (TE-7):

Comment: We (ADBSS) are particularly concerned with realizing the impacts to wildlife water developments within the various TMA's and RMZ's and would like to see an accurate analysis provided in the final RMP. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2147, letter #342)

Comment: The DRMP should more clearly identify that special species ACEC's and various special species management and administrative

actions do not inhibit or impede activities benefiting other wildlife species. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2144, letter #342)

Public Concern (TE-8):

Commenters oppose predator control as an issue in the RMPs and feel analysis was not adequate because it did not reference the 1999 predator environmental assessment (completed by Animal Plant and Health Inspection Service (APHIS)). They note that the document doesn't recognize the legal authorities of wildlife services for predator control, at either the Federal or State levels, and request that the discussion be modified as it is currently in violation of a 1995 MOU between BLM and APHIS. Additionally, the document used an old name and failed to invite APHIS Wildlife Services as a Cooperating Agency.

Response (TE-8):

Predator control was not an issue in the RMPs/EIS. It was mentioned only in the No Action Alternative, (Alternative A) which was made up of decisions from previous, (often obsolete) decision documents. This was not carried forward into either the Preferred Alternative (Alternative E) or in the Common to All Sections, so it will be vacated in the final version of our plan.

Additionally, the old name was used because the referenced decision came directly from a decision document written before the name change and APHIS Wildlife Services was not invited as a Cooperating Agency because predator control was not an issue, and because inclusion of it in the RMPs/EIS would violate the 1995 MOU between our agencies. The request to be a Cooperating Agency has been forwarded to the BLM Arizona State Office for formal consideration.

Alternative A does not reference either the MOU or EA mentioned because the decisions in Alternative A predate both the MOU and the EA. However, the language you suggest describes a management interrelationship between BLM and APHIS-WS that is

appropriate to include in the document section 2.13 – Interrelationships. That section was modified to include the language you suggested.

Public Comments (TE-8):

Comment: The BLM specifically identifies the need to "Modify existing agreements with the Animal and Plant Health Inspection Service (APHIS) animal damage control, specifically targeting individual predators rather than predator populations." The inclusion of predator management in the draft EIS specifically in relation to WS is in violation of the 1995 Memorandum of Understanding between the BLM and WS. In the MOU, it was agreed upon that WS would complete the NEPA documents and decision records on activities related to predator control primarily for livestock protection on BLM lands. WS completed an environmental assessment (EA) for predator work on public lands in 1999. The BLM would complete NEPA compliance for nonpredator wildlife damage management activities initiated by BLM to protect natural resources and facilities. (U.S. Department of Agriculture, Phoenix, AZ - Comment: #1501, letter #271)

Comment: I am requesting that the discussion to modify "Animal Damage Control" documents be removed as an issue for consideration or be treated as common to all alternatives with the following language: "Animal Damage Control will be conducted by APHIS- WS consistent with the national Memorandum of Understanding between BLM and APHIS-WS. Planning of wildlife damage management will include consideration of BLM resources, including wilderness and roadless areas. APHIS-WS is responsible for NEPA compliance on wildlife damage management projects they conduct. Wildlife damage management may also be conducted by the State of Arizona or their designee, consistent with the creation of the national monuments." (U.S. Department of Agriculture, Phoenix, AZ - Comment: #1505, letter #271)

Public Concern (TE-9):

Commenter recommends making changes to the Preferred Alternative to provide additional

protections for resources, including riparian areas, air quality, and wildlife.

Response (TE-9):

We believe the plan addresses your concerns.

Public Comments (TE-9):

Comment: Based on our review, we have rated the DEIS as Environmental Concerns - Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions"). EPA is concerned with the health of riparian resources in the planning area, including water quality and soils, and with impacts to air quality from OHV use in areas that currently do not meet air quality standards for particulate matter less than 10 microns (PM10). We are also concerned that the resource management plan predicts resource conditions to deteriorate somewhat in the long term as recreation continues to increase in the planning area. While land protections and recreation management actions will help reduce impacts, the cumulative impacts from growth in the Phoenix area might offset the benefits from these management actions. Because of these traits, EPA recommends several changes to the Preferred Alternative to provide additional protections for resources, including riparian areas, air quality and wildlife. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2167, letter #396)

Public Concern (TE-10):

Respondents feel that Chapter 3 should include detailed descriptions of the habitat requirements for each special status species, delineate this habitat in the planning area, and discuss current population status and trends, especially as the habitat conditions and population trends may be affected by actions in the planning area. The EIS should describe desired future conditions specific to each special status species' habitat requirements, and actions for achieving these. Wildlife species of concern should include not just threatened and endangered species and special concern species, but also all monument objects.

Response (TE-10):

The Resource Management Plans are a landscape-level plan, and analysis is conducted at a landscape level. At that level it is often difficult or impossible to derive specific quantified impacts. Actions required to implement the plan would receive more detailed scrutiny and environmental analysis that could more specifically address possible effects to biological resources and specific wildlife populations.

An additional table describing special status species occurrence and habitat use in the planning areas has been added as Appendix U. Riparian habitat condition data is presented in Appendix Q1 and Q2.

Analysis in Chapter 4 has been expanded to describe how various types of activities can impact biological resources relative to the proposed action.

Public Comments (TE-10):

Comment: The Draft RMP describes a number of actions that impact special status species in the planning area in Chapter 4, including roads, livestock grazing, habitat fragmentation and disturbance, vegetation treatments, and recreation. The fact that these actions would occur under all alternatives requires a rigorous environmental analysis of effects to special status species in the EIS. The draft RMP/EIS should provide detailed information about habitat requirements, baseline information on current habitat conditions, and the desired future conditions for all special status species. The effects analysis in the DEIS is inadequate, providing in many cases only generalities and assumptions, rather than clear directions and baseline data. Habitat requirements: Chapter 3: Affected Environment should include detailed descriptions of the habitat requirements for each species, delineate this habitat in the planning areas, and discuss current population status and trends, especially as the habitat conditions and population trends may be affected by actions in the planning area. While some general information is provided for some species, it is completely lacking for others. For example, the only information provided for game species is a list of whether the species is present, including

for species that are also Monument Objects (e.g. pronghorn, javelina, mule deer, and mountain lions) (3.5.3) RMP at 397. There is no information provided about habitat or species trends, except for a map of bighorn sheep habitat (Map 3-10) and a general statement that "recent drought conditions have generally affected large game population trends." (3.5.3) RMP at 398. There is little to no discussion of current conditions for special status species, except general statements about whether a species is likely to be present, and what general threats it possess (3.5.5) RMP at 398 to 402. Significantly, there is no information presented at all for several species that are monument objects, including the lowland leopard frog, the Mexican garter snake, and the common black hawk. As mentioned previously, in order to comply with the Monument Proclamation, the BLM must be able to demonstrate that it is prioritizing protection of these species. When there is no information presented on the status or trends of these species, it is impossible to evaluate the potential impacts of management activities on their future population status, and therefore the impact assessment is inherently flawed and inadequate. Desired future conditions: While we support the statements listed under Desired Future Conditions for special status species [(2.7.1.4) RMP at 214 to 220], they do not constitute an analysis or a plan. Instead, they are broad statements, mostly communicating the agencies' intention to comply with the Endangered Species Act and other regulations pertaining to special status species management. The EIS should describe desired future conditions specific to each special status species' habitat requirements, and actions for achieving these. In addition, the same comments apply as above. The BLM should include desired future conditions for all Monument Objects. Conclusion: While the draft RMP does contain numerous lists of species, and references applicable laws, plans, and guidance, this does not constitute an analysis, even at the programmatic level. The EIS should provide a clear management vision that is consistent with the requirements of the Endangered Species Act to protect habitat and provide for the recovery of all special status species and Monument Objects. This vision must include an analysis of habitat

requirements, baseline information regarding current conditions, and desired future conditions for each species. The BLM and NPS should seek to go beyond maintenance of the status quo with a plan that will ensure the health, recovery, increase, and long-term survival of the plant and wildlife populations that inhabit the landscape currently and those that may in the future if conditions are right. Recommendation: BLM must present data on the status, trends, and potential future trends of all wildlife species of concern in Chapter 3 and 4. Wildlife species of concern should include not just threatened and endangered species and special concern species, but also all Monument Objects. In particular, there is currently no information of several Monument Objects, including the lowland leopard frog, the Mexican garter snake, and the common black hawk. The Final RMP must include a thorough analysis of the current and projected status of species, and provide clear and consistent management goals to help species recover. BLM must provide this information if it is to complete its requirements under NEPA to provide an analysis of direct, indirect, and cumulative impacts. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2273, letter #343)

Public Concern (TE-11):

Respondents suggest designating the Upper Agua Fria River Basin WHA to improve pronghorn and mule deer movement, and provide thousands of acres of Category I desert tortoise habitat. They urge conservative grazing practices in grassland habitats to assure sufficient forage for pronghorn and standing cover for both fawn hiding cover and nesting grasslands birds. Commenters are also concerned that seasonal access limitations and Special Recreation Uses could impede access for volunteer work, scientific research, site monitoring, and interpretive development.

Response (TE-11):

The management contained in Common to All Alternatives is adequate to protect the wildlife habitat in the Upper Agua Fria River Basin area. The area is not suitable for desert tortoise as it is

higher than the known elevation range for this species.

We will continue to coordinate with the Arizona Game & Fish Department, the Tonto and Prescott National Forests, and other agencies in planning and implementing actions to protect pronghorn habitat and populations in the national monument and other grasslands in the nearby Upper Agua Fria River Basin area.

Public Comments (TE-11):

Comment: EPA recommends the following changes to the preferred alternative for the protection of wildlife: Designate the Upper Agua Fria River Basin WHA to improve pronghorn and mule deer movement, and provide thousands of acres of Category I desert tortoise habitat (p. 308). (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2196, letter #396)

Comment: 2.6.1.3 Biological Resources We support the recommended designation of a Pronghorn Antelope Wildlife Habitat Area (WHA) Designation of identified pronghorn antelope habitat in AFNM. The proposed Pronghorn Antelope Fawning Habitat (WHA) would be the area of focus for grasslands birds and a recommendation that the Sonoran Audubon Society has developed to expand the Important Bird Area to include this habitat. Grasslands dependent bird species have been documented nesting on the AFNM in the grasslands, including the Cassin's Sparrow, which is documented in the survey block on the AFNM for the Arizona Breeding Bird Atlas (Corman and Gervaise-Wise.2005.University of New Mexico Press) and was confirmed in the summer of 2005 on Perry Mesa by the Sonoran Audubon Society. We urge conservative grazing practices in these habitats to assure sufficient forage for pronghorn and standing cover for both fawn hiding cover and nesting grasslands birds, particularly in the spring and during pronghorn fawning in late spring and early summer. (Audubon Arizona, Phoenix, AZ - Comment: #1232, letter #279)

Comment: The herd of pronghorn in the Monument is separated from other populations as a result of fragmented habitat due to Interstate 17. The management of the grasslands on the mesas for the benefit of this population is imperative. SAS is the steward for this grassland IBA. The designation of a pronghorn antelope management area on Perry Mesa would be useful to the IBA expansion plans into the grasslands. The desire is to establish an area search for upland bird populations in the grasslands proximate to Joe's Hill. That coincides with identified antelope fawning areas. The proposed Pronghorn Antelope Fawning Habitat (WHA) would be the area of focus for SAS grasslands birds. The proposed seasonal access limitations could impede accomplishment of that objective without more extensive coordination with the BLM for scheduled visits. Also a concern that Special Recreation Uses are all that will be allowed during the spring summer raises the question about access for Sonoran Audubon to do the volunteer work, ref. page 506, Alternatives C, D and E, "Limiting vehicle routes in pronghorn corridors might restrict access to cultural resources, which would protect sites from human intrusions, but would limit opportunities for scientific research, site monitoring, and interpretive development". This problem is common to many volunteer groups and in wilderness areas. (Sonoran Audubon Society - Comment: #1243, letter #287)

Comment: Elements the Arizona Antelope Foundation supports in the management of AFNM include: Pronghorn Antelope Wildlife Habitat Area (WHA) -Designation of identified pronghorn antelope habitat in AFNM. (The Arizona Antelope Foundation, Phoenix, AZ - Comment: #2005, letter #273)

Public Concern (TE-12):

Commenter feels BLM should propose solutions for vegetation communities that are below ideal conditions, and should impose use restrictions in these areas.

Response (TE-12):

The plan includes the land health standards for watershed and riparian function as well as

desired plant community. It also describes desired future conditions for vegetation which we believe are appropriate and achievable.

Public Comments (TE-12):

Comment: The BLM should propose solutions for vegetation communities that are below ideal conditions, and should impose use restrictions in these areas. (Center for Biological Diversity, Tucson, AZ - Comment: #1569, letter #338)

Public Concern (TE-13):

Respondents feel non-native species should not be used under any circumstance within the planning area and that BLM should use native species when restoring or rehabilitating rangelands.

Response (TE-13):

As stated in 2.7.1.4, the use and perpetuation of native species would be emphasized when restoring or rehabilitating rangelands. We feel the conditions under which non-native species would be considered adequately address the associated risks.

Public Comments (TE-13):

Comment: Non-native species should [NOT] be used under any circumstance within the planning area. The state of Arizona has a long history of using non-native species for management reasons, only to have those species escape and become noxious invaders of our wildlands. Restoration and rehabilitation cannot be achieved using non-native species and the use of native species should be mandated in the plan. The use of non-native perennial species and grasses risks the displacement of native species of the same vegetation type. Only locally-genotypic native plant species should be used. (Center for Biological Diversity, Tucson, AZ - Comment: #1592, letter #338)

Comment: Elements the Arizona Antelope Foundation supports in the management of AFNM include: Use native species when restoring or rehabilitating disturbed or degraded rangelands. Non-native plants may be used under limited circumstances in accordance with the Land Health Standards and Guidelines. (The

Arizona Antelope Foundation, Phoenix, AZ - Comment: #2002, letter #273)

Public Concern (TE-14):

Commenters recommend that BLM consider proactive management for the loach minnow in the Agua Fria River Drainage.

Response (TE-14):

Loach minnow have never been documented as occurring in the Agua Fria River Drainage. The potential habitat on BLM-administered lands is not currently suitable due to non-native fish infestation. The plan contains conservation actions for riparian/aquatic habitat, exotic species and spikedace. We believe these actions are adequate to protect and restore habitat for loach minnow as well. If the AGFD or USFWS propose stocking the loach minnow into the Agua Fria River Drainage, BLM would, at that time, consider the proposal.

Public Comments (TE-14):

Comment: We would like to commend BLM for its proactive management stance for Gila topminnow, Gila chub, desert pupfish, and spikedace in the Agua Fria River drainage. We recommend that BLM also consider proactive management actions for the threatened loach minnow in the Agua Fria River basin. Although loach minnow was not found in historical collections from the Agua Fria River basin, according to our fisheries expert, Mr. Rob Clarkson, there is no reason to assume they were not once present there. Consideration of loach minnow should not be discounted merely because of inadequate sampling before the onset of human perturbations that may have resulted in the species' loss. Significant opportunities for conservation actions for loach minnow may be present in the drainage and we encourage BLM to pursue them aggressively. Other agencies and organizations have made similar recommendations. (Bureau of Reclamation, Glendale, AZ - Comment: #1516, letter #399)

Public Concern (TE-15):

Respondent wants historic bighorn sheep habitat identified in the Agua Fria National Monument.

Response (TE-15):

The map presented in the plan was of occupied desert bighorn sheep habitat, not potential habitat. The AFNM contains historic habitat for this species. The plan allows for reintroductions and transplants of desert bighorn sheep into the AFNM. (See document section 2.7.1.4 – Biological Resources in Management Common to Both Planning Areas.)

Public Comments (TE-15):

Comment: We (ADBSS) are grateful that the DRMP identifies bighorn sheep habitat within the Harquahala management area. We are distraught, however, that no bighorn habitat was identified in the Agua Fria planning area. Much of that area historically contained bighorn sheep and it should be a candidate for future reintroductions. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2140, letter #342)

Public Concern (TE-16):

Commenters believe the management emphasis on recreation is inconsistent with bighorn sheep management and found it difficult to assess impacts to bighorn sheep conservation.

Response (TE-16):

Game species, including bighorn sheep, are given management priority in Section 2.7.1.4, Priority Species and Priority Habitats. If resource conflicts arise between recreation and these priority species, they would be resolved in favor of the wildlife resources. Also included in Section 2.7.1.4 are several Desired Future Conditions (DFCs) which additionally prioritize wildlife habitat management across all areas.

Several Wildlife Habitat Areas (WHAs) are allocated for priority management of wildlife resources, including desert bighorn sheep.

Section 202 (c) (9) of the Federal Land Policy and Management Act of 1976, as amended (FLPMA), requires Federal agencies to consider State, local and tribal plans, to the extent practical to assist in resolving inconsistencies between Federal and non-Federal plans and provide for meaningful involvement by the State

in the development of the plan. We believe the plan is consistent with FLPMA.

Public Comment (TE-16):

Comment: Further, the Department [AZGFD] believes a management emphasis on recreation in this area is inconsistent with the Department's bighorn sheep management plans and is thus not in compliance with Section 202 (c) (9). (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1348, letter #401)

Comment: We (ADBSS) found it difficult to assess the impacts to bighorn sheep conservation by aligning known bighorn sheep habitat with the various prescriptions and allocations for Recreation Management Zones, Special Recreation Management Areas, Primitive Travel Management Areas, Wilderness Characteristics, Visual Resource Management and Areas of Critical Environmental Concern. Certainly there must be an easier way to ensure that conflicts between these varied resource management strategies do not exist and that they do not, either individually or collectively, present an obstacle to bighorn sheep conservation or towards providing opportunities for responsive wildlife dependent recreation. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2141, letter #342)

Public Concern (TE-17):

Commenter recommends clarifying if the Preferred Alternative would restrict motorized events in Category II desert tortoise habitat.

Response (TE-17):

Limitations to motorized events in desert tortoise habitat can be found in document section 2.7.1.4 – Biological Resources in the Management Common to Both Planning Areas. In summary, motorized events would not be authorized between March 1 and October 15.

Public Comments (TE-17):

Comment: EPA recommends the following changes to the preferred alternative for the protection of wildlife: It is not clear if the preferred alternative would restrict motorized events in Category II desert tortoise habitat (p.

309). The preferred alternative should include similar tortoise protections if applicable. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2197, letter #396)

Public Concern (TE-18):

Several comments were received recommending that the pronghorn habitat be given priority protection, including limiting human use and grazing in pronghorn habitats. Pronghorn are protected under the Monument Proclamation. They feel that Alternative E does not adequately protect the population and suggest alternative management actions.

Response (TE-18):

We believe your concerns are addressed in the plan and that the management prescriptions contained in the plan adequately provide for the conservation of pronghorn in the Agua Fria National Monument.

Public Comments (TE-18):

Comment: AAF strongly supports giving maintenance of wildlife habitat management priority in resolving resource conflicts and application of prescribed fire and fuels management projects to improve habitat for pronghorn fawning and movement. (The Arizona Antelope Foundation, Phoenix, AZ - Comment: #2011, letter #273)

Comment: PRONGHORN ANTELOPE In a nutshell: Phase out cattle grazing, remove the fences from the various grazing pastures, close off some roads on Perry Mesa, Black Mesa, and the area north of the Bloody Basin Road. Then propose and eventually designate some Wilderness, and then leave the Pronghorn alone. At this point, after all this as been accomplished, all of our monitoring, manipulating, and meddling with the Pronghorn will be unnecessary and you will have accomplished the intent of the Proclamation. (Individual - Comment: #769, letter #46)

Public Concern (TE-19):

In Section 2.6.1.3, respondents have concerns about pronghorn use of Black Mesa and would

like to see scaled down of amenities placed at Badger Springs. In addition, they would like BLM to avoid upgrade of roads that might impact pronghorn and work with AGFD to determine if seasonal closures at Badger Springs might be appropriate.

Response (TE-19):

Many factors affect when, how, and how much use pronghorn make of Black Mesa. We recognize public use of the Badger Springs area could be one of those factors. We have, and will continue to work with Arizona Game and Fish Department to minimize any effect public use of the Badger Springs area will have on pronghorn. Suitable mitigation will be applied and could include closure of the area in the spring, day use only in the spring, or other management actions as determined to be appropriate.

Any development in the Badger Springs area would be required to consider any effect on pronghorn and other monument resources. Monument resources would have to be protected before any development was approved.

Public Comments (TE-19):

Comment: We urge the BLM to work with the Arizona Game & Fish Department to determine whether periodic seasonal closures or restrictions on camping and other human activities around Badger Springs might assist in drawing the pronghorn back to their habitat on Black Mesa. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1829, letter #340)

Comment: Biological Resources 2.6.1.3 The PA provides inadequate or, at best, weak protection of pronghorn habitat. We (Friends of the Agua Fria National Monument) are particularly alarmed by the low utilization of the southern end of Black Mesa by pronghorn. It is likely that several factors have combined to cause the pronghorn's absence from Black Mesa: fires have damaged the vegetative cover, there is significant competition with cattle, and vehicular use on and near the mesa, particular near the Sunset Point exit, continues to increase. It is particularly disturbing that the pronghorn have

quit using this habitat as a lambing area. We feel that a concerted effort should be made to encourage pronghorn to utilize Black Mesa, especially its southern half. Therefore, we would like to see the scaling down of any amenities placed in the pronghorn's passageway to the Mesa. For instance, the BLM should limit developments such as large parking, staging, and campground areas near Badger Springs to reduce human interference in pronghorn movement. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2065, letter #339)

Public Concern (TE-20):

Several comments were received addressing the need for BLM to give preference to protecting pronghorn habitat when proposing interpretive features for the Bloody Basin Road.

Response (TE-20):

Interpretation of the La Plata site, and public use of that site, will be monitored for impacts to pronghorn behavior that might affect their use of the pronghorn habitat or movement to fawning grounds to the south. If it is determined use of the site has adverse impacts to the pronghorn, mitigation will result. It is our judgment at this time that there will be no impact. As shown on Map 2-73, there is little overlap between the high-use SCRMA for Pueblo la Plata and the areas mapped as pronghorn fawning habitat and movement corridors. Interpretive development would take place outside the latter areas. Future signage within the monument will be balanced for impacts to other resources, including pronghorn fawning and movement habitats.

Public Comments (TE-20):

Comment: While we do not oppose the interpretive features proposed (p158, paragraph 2), we believe that preference must be given to protecting pronghorn habitat. However, we recognize the value of a limited amount of interpretive signage and features for the Bloody Basin Road provided this does not lead to conflict with pronghorn or other wildlife. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2059, letter #339)

Comment: As the roadway (Bloody Basin Road) currently acts as a barrier to pronghorn movement, the BLM should take great care in designing interpretive features so they do not further exacerbate this issue. For instance, creating large pullouts that would congregate human use and idling vehicles could frighten pronghorn and impede their movement. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1819, letter #340)

Public Concern (TE-21):

Comments were received regarding Sections 2.6.1.3 and 2.6.1.5 of the RMP. Respondents prefer closure of pronghorn fawning habitat to Special Recreation Permits (SRPs) be April 1 to June 15 to protect the habitat and limit human activity in the area. However, some are concerned that restrictions may be year-long or highly restrict SRPs activities that could result in large scale access closures of the monument and subsequent unnecessary user conflicts.

Response (TE-21):

The pronghorn fawning areas were identified by the Arizona Game and Fish Department based on survey and monitoring data. The April 1 to June 1 closure to SRPs identified in the Proposed Plan developed in cooperation with the Department.

Special Recreation Permits are issued to recreation related activities conducted either for commercial purposes or for large gatherings, such as hiking or OHV club outings. Because they are usually issued for groups larger than typical casual recreation groups, this prescription is designed to minimize human disturbance of pronghorn during the critical fawning season.

Public Comments (TE-21):

Comment: In addition, SRP activities should not occur in pronghorn fawning habitat from April 1 until at least June 15 to better protect pronghorn. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1849, letter #340)

Comment: We do not want the pronghorn population to be used as an excuse to limit vehicular access in the back country unless it is truly warranted. Toward that concern we are worried about the action in preferred alternative "E" to: "Close pronghorn fawning areas to Special Recreation permit activities between April 1 and June 1 annually." The proposal seems highly restrictive and has fees associated with it. As a volunteer organization that often has work projects in these habitats it seems overly regulatory to place this stipulation on the grasslands used by pronghorn antelope. We are unaware of any specific plans by the BLM to ascertain definitively where pronghorn antelope fawning areas are, and they do change. We fear this stipulation may result in large scale access closures within AFNM in the name of pronghorn, resulting in user group conflicts that are unnecessary. (The Arizona Antelope Foundation, Phoenix, AZ - Comment: #2010, letter #273)

Public Concern (TE-22)

Several responses were received in relation to the protection of the wildlife on the monument. Respondents feel to protect wildlife identified in the Proclamation and make informed road management decisions, BLM should use spatial analysis (GIS) techniques and the latest wildlife data to evaluate impacts of the route system on wildlife, such as desert tortoise, pronghorn, mountain lion, bighorn sheep, and mule deer, in each alternative. Additionally, respondents feel that the assessment of environmental impacts on wildlife resources is incomplete and inadequate because it does not accurately evaluate the effect of motorized vehicles and routes on these resources.

Response (TE-22)

The BLM believes that environmental impacts are adequately addressed. Regardless of the route network or the Resource Management Plan decisions, it is our intention to protect the resources of the monument to the best of our ability. To that end, and short of making the monument off-limits to all humans, standard operating procedures in the monument dictate we conduct site specific analysis of any activity

proposed to determine if and how much impact might be expected to monument resources. We would mitigate expected impacts before the activity could be authorized. We would also monitor the activity to determine if we were successful in protecting monument resources or if changes in mitigation were needed to protect monument resources.

The routes, including their uses and potential/known impacts, were evaluated in the context of whether they could remain in use without impairing the objects and sensitive resources of the monument. The route evaluation was conducted using data from potentially affected resources and the recommendations of resource specialists as to the necessity of the routes and the adverse affects that were known or likely to occur to monument objects. If monument objects would not be protected with continued use of the route, they were closed, or their potential impacts were eliminated through some form of mitigation (e.g. Limited to Administrative Use Only).

The analysis conducted by the Wilderness Society and Sierra Club assumes a road has an impact due to its very existence. The most important "metric" affecting the scale of a road's impact is not measured, which is the nature of use the road gets. The barren linear feature represented by a road has very little fragmenting effect to wildlife habitat or has little impact on cultural sites that are not within the actual roadway. The disturbance of people and vehicles is what fragments habitat and puts cultural sites at risk. The body of knowledge has little or no research on the number, type, volume, season, or other vehicle related "metrics" that are the real measures of how much impact a motorized route might have on wildlife species or disturbance of cultural sites. Most of the literature assumes a higher traffic load than any road or route within the national monument. The list of wildlife species was an illustration of the monument objects described in the Proclamation, which are the "... expansive mosaic of semi-desert grassland, cut by ribbons of valuable riparian forest" and "The diversity of vegetative communities, topographical features, and relative availability of water..." If

these objects are protected, the habitats of the wildlife found in the monument will also be protected. We believe—and the route evaluation data supports—the route network in the national monument protects the monument objects and provides the best approach for doing that while allowing acceptable public access and enjoyment of the monument.

Public Comments (TE-22)

Comment: We submit that the assessment of environmental impacts on wildlife resources (4.11.12, RMP at 500-501) is also incomplete and inadequate because it does not accurately evaluate the effect of motorized vehicles and routes on these resources. Scientific literature is available documenting direct and indirect impacts on wildlife species, and has been previously submitted to the BLM in comments throughout this planning process (see comments incorporating previous AWC and Sierra Club comments, above). We again incorporate our previous comments by reference, and will reiterate some of the key scientific references available. Adverse effects of roads on wildlife have been well documented in several recent literature reviews (Trombulak and Frissell 2000, Gucinski et al. 2001, Gains et al. 2003, Wyoming Game and Fish Department 2004, and New Mexico Department of Game and Fish 2005). Some literature provides general information and guidelines on the impacts of different types of motorized routes and related activities on specific species. Others go further and give specific thresholds that can be used to predict the impacts of specific degrees of habitat fragmentation from roads on species. Yet, the Draft EIS does not tap this wealth of information in the peer review and government agency literature. These literature reviews specifically cite papers that study the impacts of roads on wildlife species found in the Planning Areas including pronghorn, desert tortoise, mountain lion and big game species. As mentioned above, in 2004 we submitted a report *Protecting Northern Arizona's National Monuments: The Challenges of Transportation Management* (Thomson et. al 2004), demonstrating the use of such literature in conjunction with the fragmentation metrics to predict impacts on wildlife species (attached for your review). We

have also produced two additional reports with similar techniques *Ecological Effects of a Transportation Network on Wildlife: A Spatial Analysis of the Upper Missouri Breaks National Monument* (Hartley et. al 2003) and, most recently *Wildlife at a Crossroads: Energy Development in Western Wyoming, Effects of Roads on Habitat in the Upper Green River Valley* (Thomson et. al 2005). (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2230, letter #343)

Comment: To protect wildlife identified in the Proclamation and make informed road management decision we are repeating our earlier request that the BLM use spatial analysis (GIS) techniques and the latest wildlife data and research to evaluate the impacts of the route system in each alternative: 1. Assemble wildlife habitat use information through compliance with agency obligations to use "accurate scientific information" of "high quality," and in sufficient quantity to perform the requisite thorough analysis. Information on the impacts of roads on wildlife can be collected from the published literature available for threatened and endangered species and other key plant and animal species in the area. The goal is to provide data needed to devise the parameters of fragmentation metrics and interpret the results. The information should include, but not be limited to, distribution of habitat types, the impacts of road density on local species, the distance of road effects to determine the width of effect zones for infrastructure features, and species dispersal distances to evaluate the size of core areas. As previously noted, we have already submitted scientific literature that could be used for this purpose. 2. Generate transportation network scenarios based on the multiple resources the BLM is required to manage using reliable data and high-quality analysis. o Generate GIS data layers for all roads in each proposed transportation network alternative in a draft environmental impact statement. o Limit the potential transportation network scenarios to those that achieve long-term protection of a region's many resources for multiple use. o Limit roads included in the scenarios in order to: (i) eliminate user-created "wildcat" (illegal) routes in the transportation system; (ii) ensure

that each road is justified and managed through an analysis of impacts on resources at the level required by NEPA, taking into account spatial patterns of roads in addition to road length; (iii) ensure that each road is necessary for its specified and defined uses. 3. Calculate landscape fragmentation metrics for all road network alternatives, guided by the best available science and supporting studies conducted in accordance with sound and objective scientific practices. Include, at a minimum, road density, road effect zones, and core areas. Metric parameters and the evaluation of results should be relevant to ecological conditions, species that are present, and human uses of the landscape. In the previous section, we recommended "threshold values" for desert tortoise, pronghorn, mountain lion, bighorn sheep, and mule deer, that are supported by the scientific literature and could be applied to this step. 4. Integrate the results of fragmentation analysis into management plan alternatives and use them as the basis for selecting the preferred alternative. Evaluate landscape fragmentation metrics for alternative travel networks to determine the impacts on specific local species and the necessary actions to protect habitat. Incorporate the results into proposed management alternatives. Through the application of the metrics to relevant ecological conditions and other uses, evaluate the direct, indirect, and cumulative impacts of the various alternatives. The preferred alternative should be determined and modified based on the metrics with an objective to reduce impacts on wildlife. Include these wildlife impacts with other ecological impact data in the planning documents throughout the land-use planning process and subsequent management or land-use decisions. This analysis, once undertaken, would help the BLM assess whether its proposed route network is likely to negatively affect sensitive species. In addition, and similar to the recommendation in section IV.G in the comments above, for the Bradshaw-Harquahala Planning Area, we recommend that the BLM undertake this type of analysis when it begins a future route designation process. The concerns related to cultural resources and wildlife outlined here should be assessed in an environmental impact analysis for the affected

environment and environmental impact sections of an analysis. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2240, letter #343)

Public Concern (TE-23):

Respondents are concerned that vehicle access be managed in a fair way and that limitations on vehicle travel not be overly restrictive. Further, they are concerned about the meaning of the statement "limit or suitably mitigate vehicle routes that cross known pronghorn movement corridors and have a type and volume of use that modifies pronghorn behavior in ways that fragment their habitat or adversely affect fawning."

Response (TE-23):

The referenced statement is intended to articulate the need to provide protection to pronghorn under the National Monument Proclamation, and especially to describe various methods to mitigate fragmentation of habitat from motorized vehicles if it is determined to be affecting pronghorn fawning success.

Public Comments (TE-23):

Comment: Plans that limit motorized vehicles to designated roads and trails should assure reasonable access for legal activities including hunting. We are concerned that vehicle access be managed in a fair way and that limitations on vehicle travel not be overly restrictive. We are concerned about what exactly is meant by: "limit or suitably mitigate vehicle routes that cross known pronghorn movement corridors and have a type and volume of use that modifies pronghorn behavior in ways that fragment their habitat or adversely affect fawning. Implement seasonal restrictions or closures when vehicle use degrades habitat values." (The Arizona Antelope Foundation, Phoenix, AZ - Comment: #2008, letter #273)

Public Concern (TE-24):

Respondents want BLM to more realistically assess the adverse environmental effects of motorized travel, chaining, and so-called "restoration" tree cutting.

Response (TE-24):

We believe the analysis of impacts is adequate at the landscape level. Site-specific analysis of any proposed vegetation or fuels treatment project will be conducted and ensure that the project achieves desired resource objectives.

Public Comments (TE-24):

Comment: We want BLM to more realistically assess the adverse environmental effects of motorized travel, chaining, and so-called "restoration" tree cutting. (Individual, Prescott, AZ - Comment: #321, letter #173)

Public Concern (TE-25):

Respondent suggests BLM change wording regarding wildlife releases to allow for new populations, reintroductions, transplantations, and/or augmentations of species listed in section 2.7.1.4 as well as allow for future species not currently listed.

Response (TE-25):

Wildlife releases for the purpose of reestablishment are addressed under Section 2.7.1.4 Priority Species and Priority Habitats. The wording has been changed to reflect the recommendation.

Public Comments (TE-25):

Comment: Concerning Section 2.7.1.4 Page 220, column 1 6th paragraph, commenter stated, "These types of wildlife releases are not intended to establish new populations Comment The Department may want to establish new populations in order to manage wildlife. This restriction needs to be removed." (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1378, letter #401)

Comment: Section 2.7.1.4 Page 216, column 1, 3rd Paragraph Statement Species that may be reintroduced, transplanted, or augmented include pronghorn; desert bighorn sheep; mule deer; desert tortoise; beavers; lowland leopard frogs; Mexican garter snakes; and native fishes like spikedace. Comment Reword to state; Species that may be reintroduced, transplanted, or augmented include but aren't limited to:

pronghorn; desert bighorn sheep; mule deer; desert tortoise; beavers; lowland leopard frogs; Mexican garter snakes; and native fishes like spikedace,... (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1376, letter #401)

5.4.7 CULTURAL RESOURCES**Public Concern (CL-1):**

Commenter wants to know how to relay information when unknown historic and cultural sites and artifacts are discovered.

Response (CL-1):

If you discover an archaeological site, you should contact the nearest office of the Bureau of Land Management, U.S. Forest Service, Arizona State Land Department, or other appropriate land managing agency to report your discovery. For sites found in the Agua Fria National Monument, you would contact staff in the BLM Phoenix District at 623-580-5500. Ask to speak with an archaeologist or cultural resource specialist to report your discovery. The archaeologist may already be aware of the site. If not, provide a description of its location and characteristics. If possible, offer photos, a map of the location, or map coordinates recorded with a GPS unit. In doing so, you may be contributing information that will be helpful in studying and protecting the site.

Please do not remove or disturb anything at the site. Avoid the temptation to collect something to show to the archaeologist. By removing an item, you could disturb what archaeologists call its "context" within the site. Context refers to the positions and relationships among artifacts and other features within a site, which provide important information for scientific research. Despite good intentions, if you remove something from a site, you may be breaking a law. The Archaeological Resources Protection Act and other federal and state laws prohibit collecting, excavating, or otherwise disturbing sites without a permit for scientific research. In general, these laws apply to any sites that are

more than 50 years old, which includes historic mining, ranching, and homesteading sites as well as those dating to prehistoric times.

If you would like to learn more about archaeology or to actively participate in the study and protection of archaeological sites, consider joining an organization such as the Arizona Archaeological Society or the Arizona Site Steward Program.

Public Comments (CL-1):

Comment: in the Agua Fria monument, a friend of mine found a couple of sites that I don't know if anyone else knows about and it would be neat to know what to do with that kind of information. There mainly historical sites, cowboy kind of stuff, its pretty cool. (Individual, New River, AZ - Comment: #120, letter #72)

Public Concern (CL-2):

Pursuant to NEPA, commenters believe BLM needs adequate baseline information about the current transportation system and its connection to cultural resources in order to understand the current condition and effects of roads and public access and evaluate and mitigate the potential impacts.

Response (CL-2):

The cultural resources sections in Chapters 3 and 4 are based on a careful review of all available baseline information for the monument, as well as the portion of the Perry Mesa Archaeological District in the adjacent Tonto National Forest. In addition to unpublished maps and site files, sources include a comprehensive archaeological overview (Ahlstrom and Roberts 1995) and a vandalism study (Ahlstrom et. al. 1992). These sources summarize the distribution of known prehistoric sites by size and location, the history and effects of vandalism, and the vulnerability of sites to vandalism.

The baseline information clearly reveals that larger, more visible sites have been more vulnerable to vandalism. Most sites with rock walls, containing more than 20 rooms, have been damaged by illegal digging and artifact theft. This size class includes about 8% of the known

sites on Perry Mesa. Smaller ruins and sites without architecture have largely escaped vandalism, except for isolated instances at some of the larger, more conspicuous areas of rock art. The more vulnerable, visible sites tend to be located near canyon rims. The density of architectural sites and rock art, as well as less visible sites, tends to be higher in the areas surrounding the largest pueblos.

Public Comments (CL-2):

Comment: BLM recognizes that visitation in Agua Fria will increase as the Phoenix metropolitan area continues to grow, and in particular the increasing popularity of OHV use on BLM lands. See Draft RMP at 2-407. However, the Draft RMP provides limited information about the baseline condition of the current transportation system, as well as the integral connection of that system to cultural resources within the Monument. Such baseline information is critical because Agua Fria National Monument was created for the primary purpose of preserving and protecting the significant prehistoric, historic, and cultural resources, including historic landscapes. Without adequate baseline information about cultural resources, it is difficult to understand the current condition and effects of roads and public access, much less evaluate and mitigate the potential impacts, especially the areas where unauthorized, two-track roads will remain "open." BLM should provide greater detail about cultural resources and the current impacts caused by the transportation system, information that is critical to BLM's required NEPA analysis of the potential environmental impacts associated with proposed actions. (Individual, National Trust for Historic Preservation, Washington, D.C. - Comment: #1800, letter #402)

Comment: Inadequate baseline information about the current transportation system and cultural resources. The Draft RMP fails to provide adequate baseline information about the cultural and historic resource within the Monument, pursuant to the NEPA. Establishing baseline conditions of the affected environment is an essential requirement of the NEPA process. See Half Moon Bay Fisherman's Marketing

Ass'n v. Carlucci, 857 F.2d 505, 510 (9th Cir. 1988). The NEPA process mandates a "coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that the agency will not act on incomplete information, only to regret its decision after it is too late to correct. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989) (internal citations omitted). (Individual, National Trust for Historic Preservation, Washington, D.C. - Comment: #1799, letter #402)

Public Concern (CL-3):

Citizens want BLM to ensure the preservation of archaeological artifacts within the monument. This is important for professionals and future generations. Other respondents believe these resources should be shared with the public in a manageable manner.

Response (CL-3):

The protection of archaeological resources is an important objective for both planning areas, and the overriding objective for the Agua Fria National Monument. Sections 2.7.1.5, 2.7.2.6, and 2.7.3.6 describe management actions that would be taken to identify and protect cultural resources. Public education is a way to promote broader understanding and appreciation of the important, irreplaceable scientific and heritage values of archaeological sites. The resource management plan proposes to implement interpretive development at selected sites, which are already accessible and known to the public, to offer opportunities for public visitation and education that will foster long-term public support for resource protection.

Outside the national monument, many areas are open to development or other activities that could affect archaeological sites. The preference is to design development projects, such as highways and transmission lines, so that they avoid impacts to cultural resources. However, site avoidance and long-term preservation are not always feasible or possible. In such cases, the BLM may require that scientific data recovery, or other measures, be implemented to mitigate the adverse effects of a project.

Public Comments (CL-3):

Comment: Within that resource are valuable archeological sites of the period 1250 to 1450 and the most important thing about those sites is the knowledge they contain as to why the ancient civilizations that were in the southwest disappeared into the desert. One of the prominent reasons put forward is drought, the inability to sustain population. Those sites are treasures that may be observed but should be definitely be preserved for the professionals with razor wire if needed. (Individual, Prescott, AZ - Comment: #371, letter #225)

Comment: This archeological stuff this gentleman is talking about, maybe it should be shared with some of the public. So it needs to be handled right, so it needs to fix the area so it's manageable, so that these people can protect it but also so people can see it. We going to get a population that is not going to stop, the ground is not going to grow. So we can't put everyone into little cubicles and say, I'm sorry we've got to save this. Save it for what" (Individual, Yuma, AZ - Comment: #2046, letter #154)

Public Concern (CL-4):

Respondent believes BLM has failed to integrate a management program for carrying out proactive stewardship responsibilities for the known and unknown cultural resource within the Monument, pursuant to Section 110 of NHPA. Therefore, BLM should provide a detailed cultural resource management plan within the RMP that specifically outlines how BLM will seek to protect such resources, inventory and evaluate the Monument for cultural resources, and nominate appropriate resources to the National Register.

Response (CL-4):

A "cultural resource management plan," as described, is an implementation level plan. Some of the items requested are standard procedures, such as how cultural resource inventory is conducted and how sites are nominated to the National Register of Historic Places. The specific strategies and details requested would be developed in an

implementation plan. Please refer to Sections 2.7.1.5 and 2.7.2.6, which describe management Common to All Action alternatives for cultural resource management, in the entire planning area and specifically for the national monument. These sections define the range of actions that would be conducted to identify, evaluate, and protect cultural resources, in accordance with applicable laws and regulations. In the plan implementation phase, these types of management actions would be developed and prioritized in more detail, then applied to specific areas and sites. These actions could include the development and implementation of site-specific Cultural Resource Project Plans, as described in BLM Manual 8130. Inventory priorities for the national monument are described on pages 235-236. In the areas of Perry Mesa, Black Mesa, and the Agua Fria River Canyon, newly discovered prehistoric sites (with good physical integrity) would automatically be added to the National Register listing as contributing properties within the existing Perry Mesa National Register District.

Public Comments (CL-4):

Comment: BLM has failed to integrate a management program for carrying out their proactive stewardship responsibilities for the known and unknown cultural resource within the Monument, pursuant to Section 110 of the NHPA. Section 110 of the NHPA requires BLM to outline a program to proactively inventory and evaluate cultural resources, and nominate cultural resources to the National Register of Historic Places, and protect historic properties. 16 U.S.C. 470h-2(a). References to proactive management, such as stabilizing sites and encouraging scientific research, are vague and do not reflect the program plan required by Section 110. Given the tremendous known and as yet unidentified resources within the Monument, BLM must be held accountable for a more definitive cultural resource management plan in accordance with Section 110, as opposed to the vague commitments made with the Draft RMP. Additionally, President Bush's Executive Order, entitled "Preserve America," reiterates BLM's responsibility to manage public lands in the spirit of stewardship of cultural and historic resources. Executive Order 13287 (Mar. 3,

2003). Executive Order 13287 requires each Federal agency to "prepare an assessment of the current status of its inventory of historic properties," expanding on the requirement found in section 110(a)(2) of the NHPA. Id. 3; see 16 U.S.C. 470(h)-2(a)(2). Additionally, the President requests that each agency "ensure that the management of historic properties in its ownership is conducted in a manner that promotes the long-term preservation and use of those properties." Id. 4 (emphasis added). The Draft RMP should take stronger steps not only to ensure compliance with the NHPA, but also to ensure that BLM has considered and integrated President Bush's proactive stewardship agenda. Recommendation: We recommend that BLM provide a detailed cultural resource management plan within the RMP. Such a plan should outline with specific detail about how BLM will seek to protect identified and unidentified resources. Also, the plan should provide sufficient detail as to how it will not only inventory and evaluate the Monument for cultural resources, but also nominate appropriate resources to the National Register. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2221, letter #343)

Public Concern (CL-5):

Respondents believe BLM needs to request the views of the State Historic Preservation Officer and seek information from other interested parties who are likely to know about historic properties in the area to identify historic properties that may be affected by management decisions. The respondents believe the few archeological site studies completed are insufficient and illegal.

Response (CL-5):

The BLM has consulted with the State Historic Preservation Officer (SHPO) and other interested parties throughout scoping and other phases of the RMP planning process. We have continued to consult with the SHPO through coordination meetings, as well as discussions related to specific undertakings. The SHPO and staff offer a valuable source of technical expertise in matters relating to National Register eligibility and historic preservation.

In accordance with federal laws and the procedures identified in BLM Manual 8110, Identifying and Evaluating Cultural Resources, we conduct thorough reviews of all proposed undertakings. Reviews of existing files and databases, archaeological surveys, tribal consultations, and public scoping are among the actions taken to identify historic properties and to evaluate National Register eligibility and effects of proposed actions.

Community partnerships will enable us to gain more knowledge about local resources and to work with local groups, such as historical societies, to further identify and evaluate historic properties.

Public Comments (CL-5):

Comment: BLM must request the views of the State Historic Preservation Officer and seek information from other interested parties who are likely to know about historic properties in the area. Has the BLM searched for, or consulted with these individuals? The agency must make a "reasonably good faith effort" to identify historic properties that may be affected by its undertakings and gather sufficient information to evaluate the eligibility of these properties for the National Register. The few archeological site studies are insufficient and illegal. (Center for Biological Diversity, Tucson, AZ - Comment: #1590, letter #338)

Public Concern (CL-6):

Respondent wants to know if BLM has conducted a literature search to determine whether grazing management may affect, any areas listed or eligible for listing, on the National Register of Historic Places as required by The National Historic Preservation Act.

Response (CL-6):

The BLM completes literature reviews in conjunction with environmental assessments of all proposed grazing permit renewals. Archaeologists compile and review existing information in cultural resources files, maps, databases, and reports to identify past surveys, numbers and characteristics of archaeological

sites, condition of sites, and presence of any sites or areas that are listed or have been determined as eligible for listing on the National Register of Historic Places.

Public Comments (CL-6):

Comment: The National Historic Preservation Act (NHPA) requires the BLM to make a literature search to determine whether grazing management may affect, any areas listed, or eligible for listing, on the National Register of Historic Places. Has BLM conducted such a search? (Center for Biological Diversity, Tucson, AZ - Comment: #1589, letter #338)

Public Concern (CL-7):

Respondent believes BLM must address the management challenges in protecting the cultural and historic resources, which are part of the NLCS (National Landscape Conservation System) and were listed as part of the 11 Most Endangered Historic Places for 2005.

Response (CL-7):

The National Landscape Conservation System was established to protect many of the nationally significant cultural resources administered by the BLM, such as those within the Agua Fria National Monument. As you point out, many sites are at risk from vandalism and other factors. Efforts by the National Trust for Historic Preservation and other groups have increased public awareness of the importance of these resources and the need to understand and protect them for the benefit of the American people. In line with these objectives, the Proposed Management Plan emphasizes actions related to inventory, monitoring, protection, scientific research, preservation of heritage values, and public education.

Public Comments (CL-7):

Comment: The NLCS as a system within BLM's structure, and Agua Fria in particular, present BLM with challenges that must be addressed - how to protect the System's nationally significant cultural and historic resources, which are in jeopardy due to vandalism, looting, illegal off-road vehicle use, mismanaged grazing, development, and lack of

inventory. Concerned about this imminent loss of our national heritage, the National Trust listed the NLCS on the 11 Most Endangered Historic Places for 2005. Through an increased emphasis by BLM on this new management role, as well as an adequate RMP that focuses future management of each NLCS unit on appropriate, BLM can overcome the challenges that threaten the NLCS' unique cultural and historic resources, such as the resources found in Agua Fria. (Individual, National Trust for Historic Preservation, Washington, D.C. - Comment: #1785, letter #402)

Public Concern (CL-8):

Comment suggests that Section 4.10, which states that the Bureau of Reclamation did cultural survey for the CAP, should also mention they did 100 percent Class III survey for the entire Lake Pleasant Regional Park.

Response (CL-8):

The mention of cultural survey along the Central Arizona Project Canal is found in section 3.6. The section was modified to include note that the Bureau of Reclamation conducted 100% Class III cultural survey in the Lake Pleasant Regional Park as well.

Public Comments (CL-8):

Comment: Page 404, Section 3.6, Cultural Resources. The document indicates the CAP aqueduct has been surveyed for cultural resources. Reclamation has also intensively surveyed (Class III) the entire Lake Pleasant Regional Park. (Bureau of Reclamation, Glendale, AZ - Comment: #1513, letter #399)

Public Concern (CL-9):

Respondents request BLM survey the entire monument to protect cultural resources. In doing any archaeological survey, they believe it is critical that at least one systematic ceramic collection be made at each site with ceramics as these collections are inexpensive and enormously useful for research. Further, survey should be completed before providing access for recreation to provide critical information and understanding of the wider universe of cultural sites, specifically around Perry Mesa.

Response (CL-9):

The management plan identifies field inventories as an important aspect of cultural resource management. Ideally, we would be able to complete a 100 percent survey of the monument, compiling a complete database of site types and locations. In reality, at an estimated cost of \$40 per acre, it would cost more than \$2.5 million to completely survey the monument. Since inventory is very expensive, the Administrative Actions in section 2.7.2.6 include inventory priorities, based on geographic gaps in archaeological data, vulnerability to vandalism or other types of disturbance, and enhanced coverage of the areas surrounding the major prehistoric villages. The ultimate goal for cultural inventory is 100 percent, and efforts by academic institutions or other partners could help reduce the unit costs of surveys. BLM also believes systematic cultural resource surveys are critical to understanding both the prehistoric and historic occupants of the area, as well as providing a baseline of resources in the monument. We will continue to pursue funding and partnerships to complete field surveys and documentation of cultural resources.

We agree that it is useful to collect systematic, representative samples of pottery types and to maintain these collections in museums or other appropriate repositories, in order to make them accessible to researchers. We have also inventoried existing museum collections from the national monument, to evaluate their information potential and to make them more accessible to researchers. Future collections, however, will be managed to support scientific research and public education, while minimizing surface disturbances and removing only the numbers of artifacts necessary to implement approved research designs.

Public Comments (CL-9):

Comment: In doing any archaeological survey it is critical that at least one systematic ceramic collection be made at each site with ceramics. These collections are inexpensive to collect and are quite compact (minimizing curation cost) but

they are enormously useful for research, including site dating and identification of areas with which exchange relations were established. If these collections are not made when the survey is done it is likely that they will not be made or even be possible in the future given the increased public use of the monument and limited federal funds for survey, and particularly, for resurvey. (Individual - Comment: #2161, letter #297)

Comment: the BLM should complete a full inventory of the Agua Fria National Monument for their cultural resources before providing any access for recreation. I believe that the information I read said that only six percent of the monument has been surveyed so far. I think it would be a disservice to the monument and to all of the public to not inventory those areas first and the actual reason why the monument was set up before taking anything else into consideration. (Individual, Prescott, AZ - Comment: #701, letter #227)

Public Concern (CL-10):

Respondent strongly believes that it would be unwise to allocate archaeological sites to formal use categories, such as "Conservation for Future Use," that would remove them from consideration for ground-disturbing scientific research because predictions can not be made indicating what investigations will be needed to answer compelling research questions in the future. Furthermore, it is easy to imagine a situation in which it would be extremely useful to do minor sampling (e.g. very small fractions of one percent) of a large number of widely distributed sites.

Response (CL-10):

Among the sites allocated to "conservation for future use" are Rattlesnake Pueblo and other prehistoric masonry structures in the back country zone, south of Perry Tank Canyon on Perry Mesa. The plan proposes that, at these types of sites, scientific studies would be permitted but limited to surveys, mapping, and other non-invasive documentation methods. This allocation is consistent with the maintenance of primitive, undisturbed

conditions in the most remote zones of the monument and in remote areas managed for wilderness characteristics. The intent is to direct more intensive research activities toward sites that can yield important information, but are more accessible, vulnerable to damage from visitors, and suitable for interpretive development.

However, a clarification is in order, because an allocation to this category does not necessarily preclude the use of ground-disturbing scientific methods. According to BLM Manual 8110, a cultural property included in this category is deemed worthy of segregation from all other land or resource uses, including cultural resource uses that would threaten the maintenance of its present condition or setting, as pertinent, and will remain in this use category until specified provisions are met in the future.

In the implementation phase of planning, it will be possible to specify provisions that would allow for limited scientific excavations at these sites. The permit applicant would need to justify why this work would be a critical component of an approved research design, and why this information could not be obtained elsewhere in the monument.

Public Comments (CL-10):

Comment: Management Common to All Action Alternatives & Management Common to Agua Fria National Monument -Cultural Resources (p. 221-2, 234-6) These management ideas seem generally reasonable though I do offer a few suggestions for changes. First, I strongly believe that it would be unwise to allocate archaeological sites to formal use categories, such as "Conservation for Future Use," that would categorically remove any of them from consideration for ground-disturbing scientific research. We cannot predict what investigations will be needed to answer compelling research questions in the future. Furthermore, it is very easy to imagine a situation in which it would be extremely useful to do extremely minor sampling (e.g. very small fractions of 1%) of a large number of widely distributed sites. An example might be a proposal to do a few 5cm diameter soil cores (i.e. about 3 square inches each) at each of a large number of agricultural

sites. Such an investigation would have a negligible impact on the sites but could be extremely important from a scientific standpoint. However, the possibility of such a study could be foreclosed by a policy that included categorical exclusion of sites from research through their assignment to use categories that did not allow for research use. The availability of funding for investigator instigated research is small enough and the costs of archaeological research are sufficiently large that even without BLM oversight, there would appear to be little risk of overexploitation of the cultural resources for research. In any case, all archaeological research would have to be appropriately permitted, so the BLM would always be in a position to review research designs and decide whether the impact on the cultural resources is outweighed by the scientific benefit of information obtained. (Individual - Comment: #2158, letter #297)

Public Concern (CL-11):

Respondents do not support selection of prehistoric cultural sites for interpretive development, educational uses, and public visitation and request continued consultation on the selection and allocation of such sites.

Response (CL-11):

Sites were allocated to public and scientific uses in accordance with BLM Manual 8110.41, which addresses allocations to cultural resource use categories. Cultural properties, or classes of cultural properties, may be allocated to one or more categories, considering the properties' characteristics, condition, setting, location, accessibility, and perceived values. Appendix E contains an excerpt from BLM Manual 8110, which describes the use categories in greater detail.

Public use, realized through interpretive development of prehistoric and historic period sites, would be limited to a small number of sites, within limited areas of the Agua Fria NM and Bradshaw-Harquahala Planning Area. The vast majority of archaeological sites will be excluded from public use. Site protection will be an important consideration in the design of

interpretive developments. Public use will be implemented in a manner consistent with the Archaeological Resources Protection Act (16 U.S.C. 470 ii(c)), which directs each Federal land manager to “establish a program to increase public awareness of the significance of the archaeological resources located on public lands ... and the need to protect such resources.”

Scientific use applies to any cultural property determined to be available for consideration as the subject of scientific or historical study, using currently available research techniques. Most types of sites in the planning areas, if they retain sufficient integrity to yield scientific information, are regarded as potentially suitable for some degree of scientific use.

In the Bradshaw-Harquahala Planning Area, sites that could not be avoided by proposed construction projects, such as highways or pipelines, would be subjected to scientific data recovery in order to mitigate adverse effects. These types of projects would rarely occur in the national monument. In the absence of construction projects in either area, the highest priority would be placed on the use of non-invasive techniques, such as detailed site mapping and photography. Priorities for research would emphasize sites that are more accessible or have been damaged by erosion, vandalism or other activities, placing their informational values at risk. At sites that are not threatened by ongoing impacts, the BLM may approve research designs that are submitted by qualified scientists, if permitting the research would make a significant contribution to scientific knowledge or provide information useful for resource management purposes. Strict limitations would be placed on any excavations, to avoid the disturbance or displacement of human remains. The BLM would conduct tribal consultations relating to proposed data recovery projects and treatment of objects protected under the Native American Graves Protection and Repatriation Act.

A very small proportion of all sites would be allocated to public use for interpretive development. In the majority of cases, within both planning areas, the specific sites that have

been allocated to public use are accessible from well-traveled roads, visually conspicuous, and already known to the public. In many cases, the locations of these sites have been made public, without the permission of the BLM, through publication in books, articles, and websites. The same characteristics that place these sites at risk also make them potentially suitable for interpretive and educational uses. Sites that are remote, inconspicuous, well-preserved, and unknown to the public have not, and would not be, allocated to public use.

Interpretive development need not be inconsistent with resource protection. For example, Pueblo la Plata is an accessible site that has been featured, without consent from the BLM, in several hiking and travel publications. A well-designed interpretive plan would help protect the site by channeling and managing the visitors, and by providing them with educational information that conveys a preservation message, an understanding of scientific values, and an appreciation of cultural heritage values. We find that the majority of visitors to archaeological sites are respectful and appreciative of the opportunity to visit sites and to learn about the people of the past and their ingenuity and perseverance in challenging landscapes. These educational opportunities result in greater public understanding and appreciation, which supports stronger commitments to resource protection, based on personal experience.

We have reconsidered the proposed allocations for High Public Use SCRMA's in the Agua Fria National Monument and have changed the allocation of the Rollie Site from High Use to Moderate Use. In the context of this management plan, 'high' and 'moderate' use are relative terms—the former allows for a more diverse range of facilities and uses. However, even in High Public Use areas, development is intended to be low-key and unobtrusive, and considerably less extensive than is the case at interpreted sites in many national parks and monuments.

Section 2.7.1.5 describes the qualities that were, and would be, considered in allocating

prehistoric and historic sites to the category of public use. These factors include the presence of above-ground features, such as structures or rock art, which are of interest to the public and are amenable to interpretive development; the condition of the site and the feasibility of treating or stabilizing selected areas to withstand visitation; accessibility to travel routes; and visitor safety. Any proposed action at a public use site would require an analysis to analyze potential impacts and ensure the protection of resources. This analysis would include consultation with Native American tribes. Section 2.7.1.5 describes administrative actions that will guide the development and implementation of interpretive site plans that are designed to protect the sites, while offering opportunities for public enjoyment and educational messages that emphasize the protection of cultural resource values. Interpretive plans will include long-term monitoring and protection measures.

We understand that the Hopi Tribe claims cultural affiliation to the Hohokam, Sinagua, and other prehistoric cultural groups in Arizona and therefore supports the identification and protection of prehistoric sites in the Agua Fria National Monument and Bradshaw-Harquahala Planning Area. We value the perspectives and advice of the Hopi Tribe, and we will continue to consult with the Tribe, in order to address tribal concerns as we implement the decisions of our Resource Management Plans. Prior to the publication of the Draft RMP/EIS, BLM staff attended two meetings with staff from the Hopi Cultural Preservation Office at the tribal headquarters in Kykotsmovi, Arizona. These meetings included discussions of cultural resource management issues in both planning areas. The Hopi Tribe also received the summary of preliminary alternatives, which included the proposed public use allocations, when this document was released for public review. We would prefer to incorporate tribal perspectives, and to address tribal concerns, as we develop educational and interpretive programs, and we will continue to consult with the tribe in relation to these matters.

Public Comments (CL-11):

Comment: We do not believe that developing prehistoric sites for heritage tourism contributes to their long-term preservation. Therefore, we do not support the management of selective prehistoric sites for interpretive development, educational uses and public visitation. And therefore, in Alternative B and C, we have not been consulted on and do not support the High and Moderate Levels of Public Use in Tables 2-3 and 2-4 for the identified prehistoric sites. And in Alternative E we have not been consulted on and do not support the High and Moderate Use on Page 159 for the identified prehistoric sites. (Hopi Cultural Preservation Office, Kykotsmovi, AZ - Comment: #1148, letter #384)

Comment: We are interested in the process by which it has been determined that the Pueblo la Plata area, the Rollie Site (AZ N:16:231 [ASM]), Baby Canyon Pueblo, Pueblo Pato, the Badger Spring rock art site, the Assatre Creek site, Agua Fria Fort, Fort Tule, and site AZ T:4:1 (PC), prehistoric hilltop sites, are allocated to public use. Further, we are also interested in the process by which it has been determined that the Running Deer Site (NA 5856), Archaic site (AZ N:16:224 [ASM]), the Humbolt Ruin (NA 4637), the Euler site, the Spanish Hill Fort, the DeNoyelles site, and Spring Pueblo are allocated to scientific use. Finally, how will other prehistoric sites be selected for interpretive development, educational uses, and public visitation or for scientific use? (Hopi Cultural Preservation Office, Kykotsmovi, AZ - Comment: #1150, letter #384)

Public Concern (CL-12):

Numerous comments were received suggesting BLM consider eliminating Moderate Use and High Use SCRMA to protect pronghorn habitat and riparian areas, particularly the Rollie Site on Black Mesa and the pronghorn WHA. Additionally, cultural sites should not have vehicular access closer than one mile. This will reduce concentration of visitors and possible facilities.

Response:

In the context of this management plan, ‘high’ and ‘moderate’ use are relative terms—the former allows for a more diverse range of facilities and uses. However, even in High Public Use areas, development is intended to be low-key and unobtrusive, and considerably less extensive than is the case at interpreted sites in many national parks and monuments. Developing sites for high or moderate use provides access to sites that both educates the visitor and builds support for the national monument and cultural resource protection

In High Use areas, facilities developed for visitor use would be designed to reduce and mitigate any visual impacts or site modifications. Interpretive plans could incorporate one or more of the following facilities or activities: hardened walking trails and loop trails; interpretive signs; information kiosks; visitor sign-in registers; benches; small shade ramadas; limited stabilization of ruins; development of brochures and other educational materials; access for approved educational programs; and consideration for site tours authorized under the conditions of special permits. Such facilities as parking areas, restrooms, and picnic tables, if constructed at all, would be located away from archaeological sites to avoid direct or visual impacts, and would be linked to the sites by trails. There would be no paved roads or parking lots.

Visitor related development at Moderate Use sites is done in a very low profile manner and we expect visitation to be low enough not to affect pronghorn behavior or fragment their habitat. However, before any development is done, a site specific environmental analysis would be conducted and possible affects to pronghorn (along with monument objects) would be analyzed. No development could be done that potentially adversely affects monument resources. In addition, interpretive development within moderate use SCRMA’s would be focused on certain sites or areas, leaving the majority of these zones undeveloped.

We have reviewed the proposed allocations for High Public Use SCRMA’s and have changed

the allocation of the Rollie Site from High Use to Moderate Use. High Public Use SCRMA's now include the Pueblo la Plata area on Perry Mesa, and the Teskey Homestead area, east of Cordes Lakes. Interpretive development within the Teskey homestead and Pueblo la Plata high use SCRMA's would take place outside of the pronghorn fawning habitat and movement corridors shown on Map 2-73.

Interpretive development need not be inconsistent with resource protection. Pueblo la Plata is an accessible site that has been featured, without consent from the BLM, in several hiking and travel publications. A well-designed interpretive plan would help protect the site by channeling and managing the visitors, and by providing them with educational information that conveys a conservation message and an understanding and appreciation of current scientific research at the site. We anticipate that public appreciation of the monument's cultural resources, gained through managed opportunities to visit a small number of interpreted sites, will translate into increased public support and new volunteers for resource protection.

Specific language establishing criteria for any recreation related development (including development and interpretation of cultural sites) in pronghorn habitat is in Section 2.6.1.3. In addition, the non-impairment requirement for management of the areas determined suitable for Wild and Scenic River Designation would restrict development within those corridors. Finally, any activity proposed in the national monument would be analyzed for possible impacts to monument resources and its compatibility with the Monument Proclamation.

Public Comments (CL-12):

Comment: I am hoping that the BLM will protect the Pronghorn fawning habitat to the greatest extent as possible, particularly by not placing moderate use special cultural resource management areas in these regions. (Individual, Prescott, AZ - Comment: #792, letter #228)

Comment: The National Trust is concerned that the "high public use" designation for Special

Cultural Resource Management Areas (SCRMA) may promote public use and access over the protection of cultural and historic resources. BLM establishes a list of potential management actions for "high public use" areas, including "building of visitor facilities, which may include gravel parking areas, restrooms, picnic tables, trash receptacles, or benches." See Draft RMP at 2-235. The Preferred Alternative has identified 1,570 acres as "high public use" areas, which includes Pueblo la Plata and Fort Silver, Rollie Site, and Historic Teskey homestead. Id. at 2-159. We do support controlled visitation and public access to the Monument's significant historic sites, as long as BLM has considered whether visitation and public access will compromise the integrity of these resources. We are concerned about the "high public use" designation for the resource areas identified in the Preferred Alternative because it provides the appearance that BLM intends to manage these areas with many enhancements and modifications, which may destroy or adversely impact the sites integrity. (Individual, National Trust for Historic Preservation, Washington, D.C. - Comment: #1790, letter #402)

5.4.8 RECREATION RESOURCES

Public Concern (RR-1):

Respondent feels the plan does not achieve an appropriate balance to sustain a diversity of recreation benefits and opportunities, and instead emphasizes either wilderness or intense, facility-oriented recreation.

Response (RR-1):

We feel the plan supports a broad diversity of recreation types. More intensely managed Special Recreation Management Areas (SRMAs) and Recreation Management Zones are found mainly in the more intensively visited urban interface areas and regions closer to Phoenix metropolitan areas. Public lands including the large tract areas like Harquahala Mountains, the Belmont Mountains, and the Big Horn Mountains are proposed to be managed as

Extensive Recreation Management Areas (ERMAs). ERMAs are areas where our management will be custodial and intensive recreation investments will not be made. These areas promote dispersed use, leaving a variety of recreation opportunities to the public. BLM recreation programs will still fund OHV evaluation and designation travel management planning and implement resource protection measures where needed. Except for resource protection and visitor safety, few other recreation management investments would be made over the life of the plan in ERMAs. We believe our administered public lands will continue to support a broad diversity of recreation types and anticipate visitor choice and the variety of recreation experiences uses will be high in both SRMAs and ERMAs.

Public Comments (RR-1):

Comment: Concerning Section 1.5.2 Page 29, column 2, 5th bullet, commenter stated, “Sustain a diversity of recreation benefits and opportunities ... Does not achieve an appropriate balance related to this goal with emphasis on either wilderness or intense facility-oriented recreation.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1361, letter #401)

Public Concern (RR-2):

Respondent was concerned about trash and pollution in monument and planning area.

Response (RR-2):

Outdoor education and user ethics enhance the way the public use their lands. Programs such as *Tread Lightly!* and *Leave No Trace* continue to educate users and tune the public into becoming stewards of the land. Members of the Friend’s of the Agua Fria National Monument contribute greatly in cleaning up areas, providing user education, and promoting good stewardship on these lands. We urge citizens to volunteer in public outreach and educational awareness projects. In addition, a toll free number has been established, 1-800-637-9152, to report resource based crimes such as vandalism, dumping, and other suspicious activity. Promoting stewardship of the land by

all users will greatly reduce negative consequences of the social, physical, and biological resources.

Public Comments (RR-2):

Comment: I am very concerned about the way people respect the public lands, as far as litter, polluting the water, like the Agua Fria River and any areas out in the desert areas. I’ve been out in those desert areas and I don’t want to see the same thing happening up here in an established park area with undue litter scattered around by unconcerned outdoorsmen (Individual, Black Canyon City, AZ - Comment: #28, letter #87)

Public Concern (RR-3):

Several comments were received addressing the inclusion of a variety of recreational uses in the various Recreation Management Zones delineated in the draft RMP. Though a “key component” of the WORC document and vision was a “world class equestrian trail”, their intent is to support multiple use and other recreation uses such as livestock grazing, OHV, and managing for a DFC that emphasizes values for open space, scenic and visual quality, and cultural and biological assets.

Response (RR-3):

Within the planning area, it is one of BLMs stated goals that we provide a variety of quality recreation experiences, including a variety of challenges and experiences for motorized recreation. We believe the best way to achieve that goal and minimize impacts to natural and cultural resources, along with minimizing conflict with other uses, is through designation of a motorized route network. We will be inviting public participation in that process so a broad range of interests can be represented in the designated route network.

The organization of the Resource Management Plan may make the multiple-use aspect of the lands within the Wickenburg Community Recreation Management Zone difficult to discern. Though we have allocated the area to described recreation uses and support the concept of a “world class equestrian trail” system, grazing, OHV use on designated routes,

mining, hunting, and other activities will also occur within the area. We are excited about the broad support Wickenburg Outdoor Recreation Committee has engendered (WORC). We realize there are details to be worked out and planned, and conflict may arise. With the type of broad support WORC has developed, anything can be surmounted.

Public Comments (RR-3):

Comment: WORC applauds the inclusion of a variety of recreational uses in the various Recreation Management Zones delineated in the draft RMP. The statement, "Establish a system of high-quality equestrian and motorized trails surrounding Wickenburg...(that) would afford many opportunities for all recreationists and enhance the lifestyle, culture and cultural history of community residents," summarizes the comments that prevailed during our public scoping meetings. Limiting motorized use to designated routes, and developing and designating comprehensive motorized and non-motorized trail systems as stated in the draft plan will ensure that potential conflicts among the various user groups are minimized. (Wickenburg Outdoor Recreation Committee (WORC), Wickenburg, AZ - Comment: #1910, letter #398)

Comment: 1.4.3.5.(p. 24). The vision statement in our (Wickenburg Outdoor Recreation Committee) April 10, 2003 input to BLM's federal land use planning entitled "Use of Federal Lands Surrounding Wickenburg: Proposed Actions for the Bradshaw-Harquahala Management Plan" specifically mentioned equestrian trails, as stated here in the draft RMP. However, the WORC document was more inclusive of other land uses and management actions that include managing lands for multiple use, including livestock grazing and OHV use; and managing lands for a desired future condition that emphasizes values of open space, scenic and visual quality, and cultural and biological assets. Our "key component" in retaining the open space associated with federal lands around Wickenburg is to develop a "world class equestrian trail," but our intent is to support other recreational uses on these federal lands. We make this point for clarification

purposes, and to reiterate that the broad base of support from WORC members is the result of our inclusive approach to this planning process. (Wickenburg Outdoor Recreation Committee (WORC), Wickenburg, AZ - Comment: #1902, letter #398)

Public Concern (RR-4):

Respondents are concerned that the Recreational Resource plans for Alternative E are in direct conflict with the Desired Future Conditions and Management Actions listed in the Biological Resources, Section 2.6.1.3.

Response (RR-4):

A multidisciplinary approach was used by all the staff members when crafting Alternative E. This plan sustained multiple reviews by staff members within the Phoenix District, staff reviews by the Arizona State Office, and the BLM Washington, D.C. planning office. Recreation uses identified in Alternative E did not appear to be in conflict with Alternative E biological resources. In addition, monitoring and adaptive management will be used to minimize or mitigate potential resource conflicts.

Public Comments (RR-4):

Comment: 2.Alternate E - Page 159, 2.6.1.5 Recreation Resources: The Recreational Resource plans for Alternative E are also in direct conflict with the Desired Future Condition and Management Actions listed under Alternate E's Biological Resources (2.6.1.3) as described on page 158. (Individual, Black Canyon City, AZ - Comment: #1322, letter #282)

Public Concern (RR-5):

Respondents are concerned about firewood collection in the Planning Area and would like BLM to reconsider this issue.

Response (RR-5):

BLM will monitor vegetation use and resource disturbance and could temporarily or permanently suspend firewood collection to prevent resource damage in the monument.

Vandalism to existing vegetation should be reported to BLM at 1-800-637-9152.

Public Comments (RR-5):

Comment: A new problem, that of wood collection, is has taken a new twist and this issue should be reconsidered. In recent years we've seen group camps clear all down wood in a large area in just a few days. Then trimming of live trees begins. Now some long-term winter campers are even pulling down large ironwood trees this year, for use next season. This trend, combined with increasing amounts of RV camping, makes us believe that neither commercial nor non-commercial firewood collection should be allowed within the HMMU. (Tonopah Area Coalition, Tonopah, AZ - Comment: #1113, letter #347)

Public Concern (RR-6):

Several comments received indicated that some people agree with having no developed campgrounds in the monument, while others suggest that BLM should accommodate visitors with more dispersed camping and facilities to protect monument resources.

Response (RR-6):

Development of campgrounds was analyzed in Alternatives B and C. It was determined to have too great an impact on monument resources to carry forward into the Proposed Alternative. The philosophy of development in BLM national monuments has been to relegate it to the perimeter of the monument, or to rely on services of neighboring communities if they have the capacity to provide them. In the case of a visitor center and developed campgrounds, both Cordes Lakes and Black Canyon City have the capacity to provide those services, and both communities are within a short drive of the monument for relatively easy access. This strategy develops a partnership relationship between nearby communities and the national monument that strengthens a shared identity and can encourage citizen stewardship in those communities. There is a potential economic benefit to the nearby communities, while minimizing the impact footprint of visitors to the

monument. Dispersed camping will be allowed in existing disturbed sites, providing a more remote experience for those who seek it. Developed campgrounds can be installed on adjacent public lands outside the monument or in nearby communities, if there is a demand. To date, overnight visitation to the monument has not increased to any appreciable degree due to the lack of facilities. Hunters currently represent the largest group of overnight campers.

Public Comments (RR-6):

Comment: Dispersed Camping. The proposed rules regarding dispersed camping in Agua Fria National Monument's Front Country RMZ and Passage RMZ (see pages 160-161 and 163-164) appear too restrictive. I believe the rules proposed by Alternative B are a better choice, i.e., no permits. If use patterns and monitoring indicate a more restrictive approach is needed, then BLM could invoke additional rules. (Individual, Sierra Vista, AZ - Comment: #1133, letter #286)

Comment: The on-going impact of a huge and growing urban city (Phoenix) on the Agua Fria and Bradshaw-Harquahala National Monuments can not be ignored but it can be effectively managed by adequate budget for though-out campgrounds with environmental education components. (Citizens Water Advocacy Group of Prescott, Prescott, AZ - Comment: #764, letter #20)

Public Concern (RR-7):

Several comments were received suggesting closing camping spurs around the Box Wash area is not desirable and suggest other options to manage camping in the area.

Response (RR-7):

It is the intent of BLM to provide areas for camping except in areas that may merit resource protection or where visitor safety is a concern. Dispersed motorized camping would be permitted within 100 feet of the centerline of the designated routes. This distance is the maximum allowed and its purpose is to cut down on the proliferation of spur roads on the open landscape while providing distance from

the road for safety and to enhance the camping experience.

The recreation niche for this area is organized prospecting groups and motorized recreationists. We do not discourage dispersed camping. While most people camp responsibly, there are some who leave their mark where they go, whether it is a group camp or dispersed site. Some sites become hammered with use. To maintain the natural setting, including proliferation of vegetation, reducing litter, eliminating improper dumping of fluids from self-contained camping units, providing for visitor safety in reducing congestion (Vulture Mine Area) and to provide for scenic views and restful outdoor opportunities to enjoy nature, some actions may be necessary to provide for the values you outlined in your letter. Your comment regarding posting and numbering sites along the edges of the access road to the Vulture Mine Trailhead will be analyzed as we begin the process of implementing this document.

Public Comments (RR-7):

Comment: CAMPSITES: There is language in the proposed document about closing some of the "camping spurs" which are deemed undesirable for reasons which are unclear to me. Campsites are a necessary, integral part of recreational use. Although Box Wash is now the only campsite heavily used, as the population of Arizona grows, all campsites will be needed. There are certainly not an excessive number. Dispersed off road camping is a longstanding tradition of the National Forests. Why should the BLM restrict it? If the plan is to jam us all into Box Wash, this is a REVOLUTING idea. This destroys enjoyment of the solitude of the natural surroundings. Closeness is good only for reunions and planned groups. Remember that all roads and campsites put together occupy only a tiny percentage of the land; certainly less than 5% and probably only 2% or 3%. And with any kind of reasonable use they don't damage the other 95% to 98% of the land. And this is our observation of what exists here. The land around the roads and campsites remains essentially as it was 10 years ago. (Individual, Prescott, AZ - Comment: #1969, letter #57)

Comment: The camping site at Vulture Mine Road, on the North side of Box Wash is heavily used and too crowded for our personal tastes, but it surely is valuable to those who go there to be near the hiking trailhead, to ride in Box Wash or just for the magnificent view. If, however, it is judged to be too close to, or to impede access to the trailhead, we suggest that camping there be confined to posted, numbered sites along the edges of the space, rather than have the entire site closed. For this, appropriate language could be added to the second par. from the top of the right side of p. 253, reading: "Alternatively, a limited number of permitted campsites could be designated and posted." (Individual, Prescott, AZ - Comment: #1989, letter #270)

Public Concern (RR-8):

Commenters suggested BLM allow the use of all established camping spurs but not allow new campsites to be created without specific administrative approval and designation. They suggest BLM include the following language: "Camping and vehicle pull-off from roads and trails is limited to those sites with significant prior use clearly marked by vehicle tracks, unless a new site is authorized administratively."

Response (RR-8):

Visitors camping and parking along roads and routes will be strongly encouraged through visitor information and signing to select and use camp and parking sites with clear evidence of prior use. Evidence is indicated by vehicle access, a lack of vegetation, bare mineral soils and other casual use and dispersed campsite amenities like fire rings.

Public Comments (RR-8):

Comment: We think the adoption of the language in the draft of permitting camping within 100 ft. of all designated routes (p. 253) is less desirable than confining it to presently established camping spaces (by preexisting vehicle tracks), as the language in the draft almost invites people to make new tracks-new sites. We believe new sites should only be made upon application and approval. These dry BLM

lands are not as resilient as land in the National Forests, so the same language is not necessarily appropriate. The language to accomplish our preferred solution; i.e. camping only at previously well established campsites and camping spurs, unless upon specifically authorized new campsites, would be simple enough but might have to be put in several places. It would be, "Camping and vehicle pull-off from roads and trails is limited to those sites with significant prior use clearly marked by vehicle tracks, unless a new site is authorized administratively." (Individual, Prescott, AZ - Comment: #1988, letter #270)

Public Concern (RR-9):

Respondent feels that the 14-day limit for camping should be more flexible and based on site specific conditions.

Response (RR-9):

The 14-day camping limit is set by national BLM policy.

Public Comments (RR-9):

Comment: Camping. Under section 2.7.3, Management Common to the Bradshaw-Harquahala Planning Area, the rule on 14-day limit for camping appears too restrictive (see page 253). The rule states that the limit may be reached by "occupying more than one site within a 25 mile radius within a 90 day period". Much of the planning area is remote and does not contain long-term visitor areas. I believe the 14-day rule should be more flexible and be based on site specific conditions. A smaller radius (e.g. 5 miles) may be adequate instead of a 25 mile radius. Similarly, a smaller timeframe (e.g. 28 days) may be adequate instead of the 90 day period. I recall that members of the public have complained about this rule during a Resource Advisory Committee meeting. (Individual, Sierra Vista, AZ - Comment: #1139, letter #286)

Public Concern (RR-10):

Numerous comments were received that expressed interest in constructing a visitor's center within or adjacent to the monument while others did not want any major developments to

occur within the proximity of the monument or along I-17.

Response (RR-10):

The philosophy of development in the national monument has been to relegate it to the perimeter of the monument, or to rely on services of neighboring communities if they have the capacity to provide them. In the case of a visitor center and developed campgrounds, both Cordes Lakes and Black Canyon City have the capacity to provide those services, and both communities are within a short drive of the monument for relatively easy access. This strategy develops a partnership relationship between nearby communities and the national monument that strengthens a shared identity and can encourage citizen stewardship in those communities. There is a potential economic benefit to the nearby communities, while minimizing the impact footprint of visitors to the monument.

In regard to the possibility of a visitor center near the historic Richinbar Mine on Black Mesa, there are a number of constraints associated with that location:

The mine property is an inholding of private land, which contains known and potential safety hazards, such as open mine shafts and hazardous chemicals.

There is no safe access route from Interstate 17. Safe access would require the construction of a new exit, the construction of a new road across the mesa, or the opening and improvement of a route now designated for closure. This could potentially impact significant cultural sites and permanently eliminate pronghorn from their fawning habitat on Black Mesa.

Sites in this area were considered for interpretive development, but rejected due to the access limitations and a conflict with pronghorn fawning habitat.

In 2000, the Arizona Department of Transportation (ADOT) proposed to construct the Sunrise Rest Area, partially within the

monument adjacent to Interstate 17. ADOT subsequently suspended the project, to focus on its plans to revamp the existing Sunset Point rest area. Currently, ADOT does not plan to construct a rest area within the monument. Any plans to reconsider the Sunrise rest area would be subject to a NEPA analysis that would consider the impacts on monument objects.

Public Comments (RR-10):

Comment: Minimize the proliferation of signs of humans on this wonderful, relatively untouched landscape (AFNM)! No visitor center or major developments. No lights or light pollution of the night sky! No flush toilets! (Individual, Black Canyon City, AZ - Comment: #1943, letter #353)

Comment: I would like to see the future plans of the monument to include more interpretive facilities such as a small visitor center, kiosks at entrances to the monument, and possible kiosks or staffed visitor center at the Sunset Point Rest Area. The different management alternatives do call for interpretive facilities at some of the archaeological sites and I believe this is a step in the right direction. These interpretive plans should also include information about the regions biological and geological resources as well. (Individual - Comment: #1487, letter #333)

Public Concern (RR-11):

Several comments were received addressing the need for more signs to educate the public, while other comments expressed concern that BLM has improperly placed signs about OHV use of washes in the Vulture Mine Area.

Response (RR-11):

We recognize signing is important in areas to help the public act responsibly. Once this RMP is approved, we will involve the public in the travel and transportation plan for route designation. Until then, current guidance authority comes from the existing approved RMP. During the up-coming route designation process, which is a public process, we invite many of these comments. BLM recognizes that interpretive signs at strategic areas enhance the

public's understanding of the resource and elicit a positive response by the majority of people.

Public Comments (RR-11):

Comment: Additionally, several motorbikes drove down Badger Springs (bypassing the trailhead by accessing the wash from upstream). We informed them that they were not allowed down the Agua Fria, and they turned around. We are not confrontational people, and this interaction, again, distracted us from our appreciation of the area. We recommend more signs and perhaps additional gates upstream of the main trailhead. (Individual, Prescott, AZ - Comment: #825, letter #311)

Comment: I have to mention the currently posted signs re "off highway vehicles" which state in part, "Driving in washes is permitted when they are part of existing roads and trails", implying that otherwise driving in washes is prohibited. These signs were put up in 2003 shortly before any hearings on the current plans were held and did not, as far as I know, receive any public comment. This is surely improper. BLM should revise this part of the signs and we will volunteer to help them do it. (Individual, Prescott, AZ - Comment: #1968, letter #57)

Public Concern (RR-12):

Respondents feel that the BLM should adopt a management plan that will protect monument objects by congregating vehicle and visitor amenities.

Response (RR-12):

We feel we have adequately addressed this issue in the document through the zoning, recreation opportunity spectrum, visual resource management, and adaptive management measures which will allow flexibility to manage for growth while protecting the monument's objects.

Public Comments (RR-12):

Comment: Monument visitation is expected to grow exponentially during the life of this

management plan. Carefully managing this visitation is required to ensure that future generations will still be able to enjoy the monument as the wild and spectacular place it is today. This is particularly true where increased human use will have significant impacts on monument objects, such as cultural sites and pronghorn habitat. Therefore, the BLM should adopt a management plan that seeks to limit this impact by reducing the planned congregation of vehicles and visitor amenities. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1841, letter #340)

Public Concern (RR-13):

Numerous comments were received requesting the preservation of hunting.

Response (RR-13):

Hunting on BLM areas will continue as usual, and is regulated by the Arizona Game and Fish Department.

Our route inventory indicated that there are 170 miles of road within the monument of which 100 miles will remain open on this 71,000 acre parcel. The 70 miles of roads closed are to protect the resources; and not targeted to preclude the hunter from non-motorized use.

Public Comments (RR-13):

Comment: I would like to see hunting along the Agua Fria River preserved. (Individual - Comment: #78, letter #98)

Comment: As a woman hunter in Arizona, I would like to comment on this plan and respectfully ask that all lands involved be kept open and accessible to hunting. Our state has a great hunting heritage and future generations should be able to participate. Wildlife habitat and protection is a real concern to hunters. Keeping our resources here in Arizona will help fund our state's programs to do just that. (Individual, Glendale, AZ - Comment: #98, letter #39)

Public Concern (RR-14):

Respondents feel BLM needs to re-evaluate the data on population growth to accurately assess impacts on resources from increasing OHV use.

Response (RR-14):

A host of filters exist to protect the monument from an explosion of visitor use as your letter predicts. These filters include: Visual Resource Management; ROS; and front country, passage, and backcountry zones. The Proclamation dictates the mission and charges BLM with the very least of maintaining the existing objects. Under the Proclamation, if visitor use affects the objects in the monument the monument manager must respond to adaptive management to alleviate the situation. Some actions may include controlled motorized access into the monument which can be accomplished easily since there are primarily three access areas; there are no plans to develop the monument to the extent of a National Park Service area, so facilities will be sparse, roads will remain rough, and the character of the landscape is harsh; all of which will keep visitors primarily in the front country and to areas that the BLM plans for visitor use, such as Pueblo la Plata and Badger Springs Wash Trail. Generally, BLM has identified that most visitors who use the monument have an elevated appreciation of archaeology, are hunters which visit during the opening week of big game, and those hiking to the Agua Fria River. Backcountry use is not expected to spike. Passage zone use is not expected to increase much more due to the rough, jarring roads. Points where most visitors congregate will be monitored, while it is not expected to see a substantial increase in the backcountry zone and most of the passage zone.

Recreational activities that are in conflict with the Monument Proclamation will not be allowed. These include paint ball and target shooting. Ranger patrols, staff specialists, and external support such as other agency personnel; the Friend's of the Agua Fria National Monument; and volunteers have kept and will continue to keep management apprised of existing conditions. We encourage our public to have

dialogue with our rangers and office staff on conditions and scenarios they encounter.

Public Comments (RR-14):

Comment: The draft RMP includes population data, but these data are incomplete for the agency to adequately evaluate the impact of population growth over the life of the RMP. In addition, the RMP states that "BLM's staff noted an increase in the recreation use of public lands through analysis of the data and through personal observation." (3.15.5) RMP at 418. However, the RMP contains no data regarding the population growth expected over the life of the plan, or analysis as to how this growth could affect the Monument or planning area. A simple search of population projections available through the Arizona Department of Economic Security revealed that the population is expected to increase by two-thirds over the life of the RMP to over 5.2 million people in the two-county "Economic Study Area" identified by BLM (3.15.1) RMP at 415. Population 2005-2025 of "Economic Study Area" identified in Draft RMP 2005 2025 Percent Change Yavapai County 175,693 260,779 Maricopa County 3,329,561 4,948,423 Total 3,505,254 5,209,202 67% Source: Arizona Department of Economic Security (<http://www.workforce.az.gov/?PAGEID=67&SUBID=138>) Besides this explosive growth, other factors that could reasonably be expected to increase visitation to the Monument include its growing name recognition and the steady growth in the popularity of off-road vehicles and all-terrain vehicles. The draft RMP recognizes this growth in popularity, by stating "OHV use constitutes a rapidly growing recreation use of BLM's lands. Between 1997 and 2001, the number of OHVs sold in Arizona increased from 7,964 to 23,568." (3.15.5) Draft RMP at 418. This is a nearly 300% increase in off-road vehicles. Based on these numbers, it can reasonably be expected that visitation to the Monument will increase dramatically over the life of the RMP, and that a significant amount of this growth will occur on motorized travel routes in the monument. However, most of the impact analysis appears to assume that the use level on motorized travel routes will stay approximately the same. As we have shown with the above

information on population growth and the increase in ORVs, this is not a valid assumption. Recommendation: The agencies should develop an estimate for the expected level of motorized use on routes across the Monument, acknowledging reasonably foreseeable increases in use, and consider this estimate in all impact analyses, in order to comply with NEPA's requirement to consider direct, indirect and cumulative (including reasonably foreseeable future) environmental impacts. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2226, letter #343)

Comment: There is an interesting thing that we all have to face is that as the population of Arizona grows at 48% every 10 years, the private land is valuable for wildlife habitat, watershed and not creating as much dust, gets eaten up as the population moves in. So the public lands become that much more valuable not only for their wildlife and watershed capabilities but also recreation so we have a compounding effect that happens to the landscape. And it is none of our faults&we are going to have to deal with the problem that is presented to us and so there is going to be some restrictions that come with that and it is not because we did anything wrong it is because there are more numbers. (Arizona Wilderness Coalition, Prescott, AZ - Comment: #1212, letter #137)

Public Concern (RR-15):

Respondents request a staging area for OHV and equestrian loading/unloading on Bloody Basin Road near the interchange with I-17.

Response (RR-15):

The front country zone allocation within the monument would allow for various support services such as a staging area near Interstate 17, provided that additional analysis will support such a facility. The decision to develop a specific site for parking and staging (or for other recreation related uses) is considered an implementation decision and could be made as part of a more site specific implementation plan with its own more detailed environmental analysis. Several options could be explored,

such as a staging area outside the monument, west of Interstate 17 on Bloody Basin Road, or the entrance to the Badger Springs area also provides an ample site for a staging area.

Public Comments (RR-15):

Comment: Provide for a staging area just off of I17 and Bloody Basin Road for OHV and equestrian / load /unloading. Not all will use the high clearance vehicles mentioned. (Comment: #196, form #2)

Comment: Provide for a staging area just off of I17 and Bloody Basin Road for OHV and equestrian / load /unloading. Not all will use the high clearance vehicles mentioned. Restrict to street licensed use only. (Individual, Mesa, AZ - Comment: #2024, letter #380)

Public Concern (RR-16):

Numerous comments were received indicating the need to increase small staging areas to help manage for dust and to increase dispersed OHV use, while other comments opposed developments for OHV.

Response (RR-16):

We have reconsidered the description of recreation support facilities in several areas as may be found in the recreation discussions of document Section 2.6.2.2. Specific placement and design of facilities is an implementation level action and would be the product of future, more detailed planning and environmental analysis.

Public Comments (RR-16):

Comment: DFC Management Actions page 175 Under Develop one Staging area.... Consider more than one small staging area. Plan for smaller staging areas (1 acre or less) especially for motorized. With the increased PM 10 and future PM 2.5 dust regulations, it will be very difficult to manage dust from large staging parking areas. We request that you allow for more, smaller Staging areas and disperse them thru out the planning area. We also request that you consider more dispersed OHV use and not

concentrate OHV use in small areas. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1646, letter #261)

Comment: I oppose the creation of additional facilities for vehicle-based recreation (Individual, Laveen, AZ - Comment: #742, letter #304)

Public Concern (RR-17):

Respondents believe by separating non-motorized and motorized uses through management decisions, the RMP has split the access to multiuse grants.

Response (RR-17):

The decision to manage particular routes for motorized, non-motorized or a combination of these uses is an implementation decision to be made during transportation planning. We do not believe that grants will be any less available as a result of the plan layout. BLM will continue to apply for grants to support motorized and non-motorized recreation. Where it is feasible, grants will incorporate both motorized and non-motorized elements.

Public Comments (RR-17):

Comment: 2.6.2.2.5 Recreation and Resources Management Actions page 182 Under Identify, analyze... Again you have separated the motorized from the non-motorized. In doing so you split your access to multiuse grants. (could combine motorized and non motorized grant monies if truly multiuse trails) (Whiplash Motorsports, Phoenix, AZ - Comment: #1734, letter #389)

Public Concern (RR-18):

Respondents want to see the ideas that OHV recreationists provided BLM at the public workshops implemented. Additionally, they would like to recommend implementing an interactive process with user groups and other stakeholders to evaluate limitations on vehicular access.

Response (RR-18):

The input provided by OHV recreationists at meetings, in letters, in emails, and on the telephone were all considered in the decisions in this plan. It is BLM's responsibility to provide for a diversity of recreation opportunities, both motorized and non-motorized, all in conformance with FLPMA's mandate to provide multiple use while sustaining the productivity of the public lands. The recreation planning presented in the Proposed Action Alternative meets this mandate.

Much of the input provided by OHV enthusiasts pertains to route network design and specific route uses. These are implementation decisions that will be a product of transportation planning. The process of conducting route evaluation and designation, then conducting transportation planning is discussed in Appendix D. This process includes further public participation, more detailed, site specific NEPA analysis and coordination of uses over large areas including multiple jurisdictions.

Public Comments (RR-18):

Comment: The workshops (I attended two of them) were dominated by motorized OHV recreationists, yet the proposed plan seems to come up very short in the motorized use area. I never see people walking the trails at Table Mesa. Why so much attention to non-motorized use in the plan? It is obvious that someone must have "misplaced" all of those good ideas that everyone contributed at the workshops. This is indeed unsatisfactory. Time to dig them up and put them into the plan, which is what we were so many times promised when we came to the workshops. (Individual - Comment: #500, letter #252)

Comment: AAF strongly recommends implementing an interactive process with user groups and other stakeholders to evaluate limitations on vehicular access and use in a fair and equitable manner through discussion and presentation of data supporting the claims of adverse impacts. We do not want the pronghorn population to be used as an excuse to limit vehicular access in the back country unless it is

truly warranted. (The Arizona Antelope Foundation, Phoenix, AZ - Comment: #2009, letter #273)

Public Concern (RR-19):

Respondents believe that OHV recreation is an activity that can be readily obtained elsewhere; whether that is in the Bradshaw-Harquahala Planning Area or in the adjacent Tonto National Forest. Thus, OHV recreation should be limited in the monument in order to protect monument objects. As a result, the limited transportation network required by the proclamation should not take OHV recreation into account when determining which roads to remain open to public use or administrative use, and which to be closed to all motor vehicles.

Response (RR-19):

OHV use is an acceptable activity in the monument, if it is confined to routes designated as open. Most public visitation to the monument, except along parts of Bloody Basin Road and Badger Springs Road, is realized through travel in OHVs, whether the vehicles are trucks, SUVs, ATVs, or motorcycles. OHV use is restricted within the monument and is allowed only where and when the monument resources are adequately protected. Under the proposed route network in Alternative E, about 41% of the current route network would be closed or restricted.

Though OHV recreation can be readily conducted in other places, the combination of activities on the AFNM are uncommon. The area's rugged roads, long-distance vistas, undisturbed grasslands, and numerous cultural sites allow for an interesting combination of slow-speed driving, sightseeing, nature study, and observation of cultural features. Thus, the resources on the monument create a distinctive recreation experience for all users, motorized and non-motorized alike. OHV use is highly restricted and managed within the monument and is allowed only where and when the monument resources are adequately protected.

Human behavior is the definitive issue and there will be monitoring processes put in place to

detect, correct, mitigate or eliminate adverse impacts to the monument from poor visitor behavior. Increased litter, vandalism, and resource damage are caused by inappropriate human behavior, not the means of access. Easy access, of course, can exacerbate these resource issues.

BLM has the proclamation to guide us for the protection of the objects and the enhancement of biological resources. It says nothing in regard to maintaining, increasing or decreasing the amounts, types, or mixes of recreation opportunities and experiences. We are attempting to accomplish that with this plan.

If current levels or increased OHV or other recreational uses in the AFNM detract from the preservation or conservation of monument objects, these uses will be modified, mitigated, or eliminated from affected areas. Mitigation measures could include additional route closures. Signs and other public education efforts will encourage drivers to follow *Tread Lightly* guidelines to promote safe and ethical behavior.

Public Comments (RR-19):

Comment: Section 2.7.2.7 explains that "recreation within the monument boundaries would focus on activities or experiences that depend on the monument's resources and cannot readily be obtained elsewhere," and that "recreation uses that do not depend on the lands within the monument would be encouraged to move to other BLM lands." Unfortunately, Alternative E fails to heed this important prescription. We believe that OHV recreation is an activity that can be readily obtained elsewhere: whether that is in the Bradshaw-Harquahala planning area or in the adjacent Tonto National Forest: and should be therefore limited within the monument in order to protect monument objects. As a result, the limited transportation network required by the proclamation should not take OHV recreation into account when determining which roads to remain open to public use, which to remain open to administrative use, and which to be closed to all motor vehicles. A more extensive road

network would allow for significantly increased motorized recreation, and in turn, greater negative impacts to monument objects. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1847, letter #340)

Comment: 2. We want BLM to enhance and give preference to non-motorized activities in Agua Fria Monument. ORV/OHV use in protected areas is excessive and destructive. (Individual, Prescott, AZ - Comment: #317, letter #173)

Public Concern (RR-20):

Several comments were received in favor of promoting motorized recreation opportunities and in favor of limiting motorized recreation opportunities.

Response (RR-20):

Every activity occurring on the public lands has the potential to impact to the natural, physical, or cultural resources. All recreation activities, regardless of their source, could have these impacts. Improper motorized recreation can cause the following negative impacts: soil and vegetative compression and disturbance; disturbance to wildlife; fugitive dust and other emissions in violation of air quality standards; damage to cultural resources; and the noise of internal combustion engines. This is of concern because of the increase in OHV use.

The Proposed Plan is an attempt to address these impacts, recognizing motorized recreation as a valid and common use of the public lands, while attempting to manage that use to minimize impacts to physical, natural, and cultural resources of the public lands. FLPMA says the BLM should plan for multiple use and sustained yield. The term "sustained yield" means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

BLM believes the Proposed Plan represents the best mix of uses to achieve the Policy set above

in FLPMA, including the management of motorized recreation.

Public Comments (RR-20):

Comment: Specifically, please reduce or eliminate motorized events and motorized use in the Vulture mine area. With the increased participation in motorized use and the constant expansion of urban areas, existing open areas are being inundated with trash and debris. (Individual - Comment: #1465, letter #367)

Comment: Many of our events (Arizona RockRats) are held on BLM lands for reasons such as rocky terrain and publicity of trails, location to Phoenix, scenic qualities and permit availability. We would ask the BLM not to limit OHV use to certain areas, keep current road/trail networks open and plan for the creation of new trail/road networks, as the Phoenix Metropolitan area grows ever outward. (AZ RockRats, Phoenix, AZ - Comment: #176, letter #265)

Public Concern (RR-21):

Respondents want BLM to consider expanding technical opportunities (rock crawling).

Response (RR-21):

Areas available for technical motorized recreation (rock crawling) will be selected in implementation of the Proposed Plan. Selection of areas for this use will include an assessment of impacts to natural and cultural resources. A decision to use an area for the purpose of technical motorized recreation would be based on an acceptable level of impact and consistency with other resource objectives.

Public Comments (RR-21):

Comment: The recognition of "motorized technical activities" (2.7.3.8) as a valid use is appreciated. Inclusion of this as legitimate use an important aspect of use for 4wheelers. (Verde Valley 4 Wheelers, Cottonwood, AZ - Comment: #1955, letter #400)

Comment: Please consider expanding the technical trails available for those OHV users that participate in rock crawling. (Individual - Comment: #503, letter #252)

Public Concern (RR-22):

An array of comments was received, questioning the scientific data for designating desert tortoise habitat. Additionally, respondents feel that BLM needs to re-evaluate the Boulder Creek area designation to allow for the extreme challenge of 4x4 recreations.

Response (RR-22):

The desert tortoise data was inadvertently omitted from the map presented in the draft document (See errata sheet on the web site). That error has been corrected in the Proposed RMPs/Final EIS and Map 2-92 now shows desert tortoise habitat categories developed as a consequence of field inventory.

Public Comments (RR-22):

Comment: I would support Alternative E with my amendments below:] I am all for wild life and preserving it, it is part of the reason we like to get out and see the country side. However I hear more an more about the owls, this plant, the tortoise closing down areas. Funny how in 23 years I have yet to see a tortoise in any of these areas that have been closed down, in fact I have seen none in the wild in Arizona at all. Do they really exist" I have yet to see scientific data, only heard requests to protect from those who oppose OHV use. They have something to gain by stating that they exist in the area, however offer no proof. Please define what type of scientific data is required before an area or trail will be closed and that a new trail will be opened in its place. (Individual - Comment: #757, letter #293)

Comment: Please re-evaluate the Boulder Creek area designation to allow for the extreme challenge of 4x4 recreation. Your planning document indicates "desert tortoise" thusly NO OHV. This is unacceptable. I request specific evaluations of areas be made..... Not just the use of a map depicting "desert tortoise" habitat. (Individual, Mesa, AZ - Comment: #2030, letter #380)

Public Concern (RR-23):

Respondent would like BLM to utilize the OHV closed classification for areas that do not have roads and routes in them right now, in order to simplify the route planning process in the future.

Response (RR-23):

The OHV open/closed classification was not used as you observe. The 'open' classification explanation can be found in Chapter 2, Alternative Considered, But Not Analyzed (2.8). The 'closed' classification was not used due to the level of flexibility BLM wants to retain in the Planning Area. While it is recognized that an OHV-closed designation applies only to the public's use of routes, there are sufficient checks and balances in place to prevent unnecessary route construction.

Public Comments (RR-23):

Comment: In the general sense, the BLM has chosen not to have any open areas in the field office. If they have, they're very small and I haven't noticed them. They have also not chosen to use the OHV closed classification for areas that don't have roads and routes in them right now. When we move into the route planning process, it'll make that so much easier if we have some areas where we know that we're not going to put a route in there or whatnot, so we should use the closed classification in the plan. (Arizona Wilderness Coalition, Prescott, AZ - Comment: #1103, letter #76)

Public Concern (RR-24):

Respondents suggest BLM consider "open" OHV areas. Comments suggests the plain south of Vulture mine area and in the Harcuvar Management Unit.

Response (RR-24):

Open use areas were considered in development of our plan and were not carried forward as a management option for the following reasons:

1. Sand dunes and areas devoid of vegetation are most suited to open-use areas as they have the least conflict with soils, vegetation, and wildlife

disturbance. There are no places of this sort in the planning area.

2. The highest demand for open use areas are near the city, which is within air quality non-attainment zones, and particularly are in non-attainment for PM 10. The flat areas near the city, such as the Vulture area you described, are made up primarily of silty soils that produce large quantities of dust. Dust production is strictly controlled within the non-attainment areas. Outside the non-attainment area, dust production is still a potential problem if the fugitive dust plume moves onto someone else's land. The area you are suggesting is very close to private land which already has development plans filed with the City of Buckeye and/or Maricopa County.

3. Resource conflict with other uses, livestock grazing, wildlife habitat (especially desert tortoise and wildlife movement corridors), and recreation activities such as hunting, hiking, and horseback riding, make open-use areas essentially single-use areas. BLM is authorized to create these, but must consider the sections of FLPMA which mandate multiple use and sustained yield of natural resources.

4. Private land owners, the Arizona State Land Department, and residential and master planned community developers generally will oppose open OHV use areas near their properties due to dust, noise, and traffic issues.

5. Section 2.8 of the Draft RMPs document states in part: "Designating areas open to cross-country OHV use was not proposed because a complete designated route system will be prepared after the RMP is approved."

For these reasons, we have chosen not to entertain open-use areas in this planning effort.

Public Comments (RR-24):

Comment: Vulture mine area would be a possible location for a OHV open area. (Open plain south of Vulture, in the "flats") (Comment: #201, form #2)

Comment: 2.6.2.2.5 Harcuvar Management Unit This would be a possible location for a OHV open area. Your planning document does not address the need for this type of recreation area and it is an important type of recreation that if not given a managed area to play, will create it's own area & more than likely not where you would have wanted it. (Whiplash Motorsports, Phoenix, AZ - Comment: #1758, letter #389)

Public Concern (RR-25):

Respondents support the Preferred Alternative for Special Recreation Permits and concessions within the monument; however, commenters recommend that the BLM expand the limitations on SRPs. Several comments were received requesting SRPs only be issued in the monument if they pose no potential harm to monument objects. They should be carefully evaluated for any negative impact on cultural sites, wildlife, soil, invasive species, rare plants, water quality, and wilderness character (including opportunities for solitude and primitive an unconfined recreation).

Response (RR-25):

The decisions for SRPs and concessions are carried forward to the Proposed Alternative. Any activity proposed in the national monument, including SRPs and concessions, would be analyzed for the possible conflicts you mention and authorization would depend on the outcome of that analysis.

Public Comments (RR-25):

Comment: Please limit the granting of Special Recreation Permits (SRPs) to prevent overrunning the monument with human traffic. SRPs should be granted only when and where they do not harm monument objects. SRP requests must be analyzed for their impact on: cultural and historical objects and culturally important sites, fossils and geologically important sites, native biodiversity, wildlife habitat, native monument species including sensitive species, watershed health and water quality, soil erosion and compaction, seeps and springs, scenic qualities, opportunities for solitude, the spread of exotic plants, native vegetation diversity and abundance, and

cumulative visitor impact. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2081, letter #339)

Comment: Minimize (or eliminate) commercial tours (in AFNM) while allowing individual or family recreation and exploration. (Individual, Black Canyon City, AZ - Comment: #1937, letter #353)

Public Concern (RR-26):

Several comments were received expressing a desire to both increase opportunities for motorized events and to decrease opportunities for motorized events in the Planning Areas.

Response (RR-26):

Under BLM's multiple-use mandate, recreation including motorized events is sanctioned. We believe we addressed the issue of balance between motorized events, motorized casual use, and other forms of recreation by allocating a maximum number of motorized races in each zone. Erosion and trail widening is an issue and this is also addressed in another response about trail sustainability.

Subheadings exist under the Special Recreation Permits section. Under the Competitive Races subheading, allocations have been made for use. This allocation is based on balancing competitive races throughout SRMSs or RMZs, so casual users can also enjoy use. It is the intent to not tie up good OHV riding areas only to those who compete in racing.

BLM believes it adequately addressed the need to balance various uses such as OHV events against other uses.

Public Comments (RR-26):

Comment: Please reduce and or eliminate motorized events in your planning and in more of the planning areas...erosion and trail expansion is always an issue in areas with OHV use, often resulting in detrimental effects....Lastly, my wife and I find solitude and serenity endangered in our local deserts and

increasingly threatened by the OHV community. (Individual - Comment: #1464, letter #367)

Comment: Allow permit and/or event limits to be established later in response to monitoring of resources, users, or social conflicts. We are opposed to this action unless the action is taken based solely on documented scientific information. Not the "Hinny Penny the sky is falling or might fall syndrome", otherwise there should be NO limits or restrictions made for special use permits. Just because someone objects to the word "off road" should in no way have any influence on permits being issued in established areas. (Individual, Sun City, Arizona - Comment: #2294, letter #386)

Public Concern (RR-27):

Respondents feel that BLM does not state the limits for confining motorized competitive races or which trails in the RMZs are left open. BLM also fails to state if the RMZs consider the cross jurisdictional trails historically used for events.

Response (RR-27):

When BLM receives a proposal to conduct a competitive race, we must analyze the roads and trails identified in the proposal. The more miles of roads and trails we have to analyze, the longer the process takes. Not all roads and trails may be opened for sanctioned events because of existing resource conditions such as wildlife and archaeology concerns, access issues, etc. If there are no issues, or issues that can be mitigated then the road may be used for competitive races, providing the recreation niche recognizes OHV as a primary recreation activity. BLM recognizes that a variety of trails and length of course enhance the recreation experience. The determination of which routes will be available for competitive racing will be done as a part of transportation planning and will consider route sustainability as well as possible resource and user conflicts.

Public Comments (RR-27):

Comment: UNDER: page 191 Management Actions "Confine motorized competitive races&" In this document you have set limits for

this activity, you do not state so here, are all trails in RMZ open to motorized competitive races or are they limited" Do trails included in these tow RMZ consider the cross jurisdictional trails historically used for these event" (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1670, letter #261).

Public Concern (RR-28):

Respondents want BLM to reconsider the miles of route available for competitive events, and where and how many competitive motorized events should be allowed, specifically the Stanton RMZ, Hassayampa SRMA, and within the Harquahala Mountain MU (north and south of the Belmont/Big Horn Mountains). They feel that BLM is singling out or ignoring the OHV users' long history of off-road use and competition, while favoring non-motorized use.

Response (RR-28):

We have reconsidered where to have events, how many events to permit, and how to allocate routes to competitive racing in our Proposed Alternative. The recreation discussions under the Management Units in Section 2.6.2.2 discuss additional RMZs where races would be considered and that the number of events and miles of route allocated will be based on trail sustainability. Sustainability determination will consider environmental factors (including, but not limited to: soil erosion, wildlife or cultural resource conflicts, conflicts with grazing management, air quality) as well as social concerns (including, but not limited to: noise, conflict with casual uses or other organized events, conflicts with other recreation activities such as hunting).

Public Comments (RR-28):

Comment: Please do not RESTRICT, DENY, LIMIT OR PROHIBIT COMPETITIVE EVENTS and family use in this plan. Spending time in the desert has been part of my family tradition sense I was a kid. My family and friends have been enjoying the woods and desert on motorcycles, 3 wheelers, and recently in the last few years on quads. Now I can continue to share these times with my kids. These are times of family bonding, camping, exploring and

respect for the beautiful public lands that makes this country so great. These times brings the family together, and makes memories that last a life time. Please do not take this tradition away from my family. (Individual - Comment: #236, letter #292)

Comment: Land Use allocation pages 193,194 and 195 described as San Domingo Wash RMZ (16.040 acres BLM) While, we agree that this area has existing tracks and routes for extensive motorized use, as well as competitive use and are encouraged that BLM would like to allocate 10 miles of single and two track routes, it is not nearly enough. To have a quality OHV event as you are already aware a much larger track of land is needed a minimum of 50 miles. Again BLM wishes to LIMIT motorized competitive events to (2) this IS NOT acceptable to any current or past user or promoter of competitive events. Limits appear to be arbitrary AND definitely not based on any true scientific data and will most certainly cause the demise of several responsible promoters currently using BLM lands. We feel that permits should NOT be limited but rather addressed individually as it is now. Same issue with regard to Vulture Mine RMZ (30,100 acres BLM) page 195 under MANAGEMENT ACTIONS. Locate 15 miles of single and two track, motorized routes to provide an array of challenges for truck, buggy, ATV, and motorcycle competitive races. We applaud you for your efforts IF you are considering adding an extra 15 miles to the already existing trails and routes. If not this IS NOT AN ACCEPTABLE AMOUNT OF TRAILS FOR QUALITY COMPETITIVE EVENTS AND BLM IS WELL AWARE OF IT; AS YOU HAVE BEEN PERMITTING COMPETITIVE EVENTS FOR WELL OVER 40 YEARS IN THIS AREA. It looks like BLM is trying their best to squeeze out competitive use of public lands by either making the area and or the fees so unreasonable that putting on a quality event will be impossible. Same page paragraph G...Limit the number of motorized competitive races to 4 per year. WE OBJECT AND WANT NO LIMITS to the amount of events permitted but viewed on a case-by-case basis. (Whiplash Motorsports, Phoenix, AZ - Comment: #1752, letter #389)

Public Concern (RR-29):

Commenters suggest an alternative approach be developed to limit the numbers of competitive motorized events to 30 throughout the whole Planning Area. This would disperse use among RMZs by rotating which one would bear the largest number of events within a given time frame.

Response (RR-29):

We have reconsidered where, how many events, and how to allocate routes to competitive racing in our Proposed Alternative. The recreation discussions under the Management Units in Section 2.6.2.2 discuss additional RMZs where races would be considered and that the number of events and miles of route allocated will be based on trail sustainability. Sustainability determination will consider environmental factors (including, but not limited to: soil erosion, wildlife or cultural resource conflicts, conflicts with grazing management, air quality) as well as social concerns (including, but not limited to: noise, conflict with casual uses or other organized events, conflicts with other recreation activities such as hunting.)

Public Comments (RR-29):

Comment: OHV and Mechanized Competitive Events Suggested solution: Allow number of motorized competitive races based on number of events held in other areas of this Plan i.e. set a total limit for the area as a whole plan allow a max 25 races total for whole plan. More popular area will carry majority of use....mitigate impacts to that area for more intense use. Each year after, now that you have data, you could rotate the RMZ that would incur the most use, thereby resting areas for one to two seasons. Never allow the majority of the motorized Competitive events to be held in any one RMZ two years in a row. This will make use sustainable and allow continuation of this type of event. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1675, letter #261)

Comment: UNDER: page194 Management Actions "Locate at least 10 miles..." More than

10 miles of trail will be required to keep trails sustainable for OHV competitive events. Do not limit. Are all trails in this area open to Competitive events” Example , a AMA National Enduro requires a minimum of 85 miles of course or a 25 mile course that has 3 laps for 3 different classes of competitors would be over used in one event must vary trails for this type of event. Allow resting and different course layouts for each event. Must have area dispersed enough to protect trails from over use and allow connectivity to other adjoining agency lands. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1671, letter #261)

Public Concern (RR-30):

Commenters suggest reducing competitive events from eight to three to protect soils in the Bradshaw-Harquahala Planning Area and to limit events in PM₁₀ non-attainment areas.

Response (RR-30):

OHV or non-motorized travel routes causing or contributing to BLM non-compliance with Maricopa County’s PM₁₀ and fugitive dust regulations and standards will be evaluated and appropriate actions taken to bring the route or routes into compliance with air quality regulations. The compliance action could take many forms: route closure, seasonal route closure, dust-abatement treatments, surfacing, watering or re-routing the trail to areas with stable soils. These actions, undertaken on specific routes, or on a route network, could under the worst case, lead to the long-term scenario addressed under Alternative D.

BLM, however, believes that Alternative E offers the best solution to managing dust and keeping popular areas open to OHV travel and citizen enjoyment. Adaptive Management of our routes and route networks will allow BLM to take needed and flexible actions on routes and route networks in non-compliance with air quality rules. Alternative E allows BLM to take action on a gradual basis, attempting to resolve air quality non-compliance issues on an “as we go” basis, instead of promoting a “rolling near-mandated closure” over the 10 to 20 year life of the plan. Under Alternative D, there would be

limited incentives to find solutions to non-compliance except closure or user displacement. BLM prefers the flexibility of Alternative E to work out solutions and options, in association with our deeply involved community and user groups, instead of implementing “rote” or near “mandated” area closures due to non-compliance over the next 20-years. This provides BLM with maximum flexibility over the life of the plan in addressing vehicle-travel related impacts to air quality per the PM₁₀ non-attainment area within Maricopa County.

BLM will only authorize organized motorized and competitive and speed events when they are in compliance with Maricopa County air quality regulations, including PM₁₀ non-attainment areas and fugitive dust rules. All special recreation permits authorized would ensure compliance with Federal, State, county, and local air quality regulations.

Arizona and Maricopa County air quality rules are being revised to address methods for attaining air quality standards within the current nonattainment areas. BLM activities within the nonattainment area will be modified to conform to state and county air quality rules. Upon completion of the Resource Management Plan, a subsequent Air Quality Compliance Plan, which will constitute an implementation level plan and environmental analysis, will be conducted to determine the alternative and appropriate means to comply with those rules.

See also response one RR-28.

Public Comments (RR-30):

Comment: The DEIS states that in the Bradshaw-Harquahala planning area, the permitted recreation activity causing the most disturbance to soils are the 3 motorized competitive races/year (p. 451). The preferred alternative allows for an increase of motorized competitive races 8 per year. The disturbance from these activities includes: more visible depressions, holes, rills and deep ruts forming; larger gullies forming due to poor drainage in heavy rains; vehicles churning up soils on the routes; breaking soil crusts due to vehicle passing, accidents, and course cutting; and soil

berms created at curves leading to increased wind and water erosion. Once arid desert soil crusts are disturbed and barren soil is exposed, they can take a long time to recover (p. 451). Recommendation: We recommend reducing the amount of races in the preferred alternative to maintain the current level of 3/year to protect soil and water resources, especially in previously undisturbed areas. If the demand for more motorized competitive races in the future forces consideration for an increase, this could be evaluated at that time in a subsequent NEPA document. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2179, letter #396)

Comment: The southern half off Hieroglyphic Mountains Special Recreation Management Area (SRMA) lies in an area designated as nonattainment for the National Ambient Air Quality Standard (NAAQS) for particular matter less than 10 microns (PM10)(Map 2-26, 3-3). The DEIS states that designating this area as an SRMA could concentrate off-highway vehicle (OHV) use, and generate fugitive dust. Alternative D's approach that would phase out motorized uses in the generate southern half of the Castle Hot Springs Management Unit of this management unit is designated nonattainment for PM-10, reducing sources of fugitive dust in this area should be a priority. Recommendation: BLM should consider adopting the approach outlined in Alternative D that phases out motorized activity in the southern half of the Castle Hot Springs Management Unit. At a minimum, the following mitigation should be adopted to reduce OHV impacts to air quality in the PM10 non-attainment: (1) Motorized competitive races should not occur in the PM10 non-attainment area of Bradshaw-Harquahala on days the Arizona Department of Environmental Quality forecasts high pollution days in its dust forecasts. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2180, letter #396)

Public Concern (RR-31):

Several comments were received suggesting that if BLM is going to close routes and competitive events to motorized users, then these areas

should be closed to all types of competitive events.

Response (RR-31):

Competitive events will be considered on a case-by-case basis. Competitive use means any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and *either* of the following elements applies: 1. Participants register, enter, or complete an application for the event. 2. A predetermined course or area is designated. By definition, competitive events can exist where impacts can be minimal. For example, poker runs in vehicles, on horses, or on foot that aren't speed based and stay on the roads and trails is a competitive event; likewise, so are orienteering competitions.

Recreation niches have been identified for the various SRMAs throughout the Planning Area. This niche helps target recreational outcomes for these specific areas. For example, the Black Canyon SRMA, Black Canyon Trail RMZ establishes this area as a non-motorized recreation area; while an area such as the San Domingo Wash recognizes motorized recreation as a primary use and therefore allows competitive OHV races. The Black Canyon SRMA acknowledges there is OHV use, but it is not the primary focus of the area, and therefore, prohibits motorized competitive races. OHV competitive racing opportunities are available in areas that acknowledge OHV use as the primary recreation niche. BLM understands OHV users are not out to pillage public lands, but are there to appreciate them. There are public land users that prefer their recreation to be separated from OHV recreational use for numerous reasons.

Public Comments (RR-31):

Comment: 2.6.1.5 Recreation Resources Alternative E Under Front Country RMZ Under Prohibit competitive motorized or mechanized races....This is one of the few areas the OHV public believes should be closed to Competitive events....ALL competitive events. The reasons for banning competitive motorized or mechanized races should also preclude ANY Competitive events. We request NO type of

Competitive events be allowed. Where is the data that supports non motorized have no impact on DFC” (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1627, letter #261)

Comment: Throughout this plan it appears that competitive events are listed as impact. We want you to recognize that this is true recreation because it is what we do. When we are not racing, we like to go out a see our public lands. That does not mean we want and go out and rape and pillage our public lands, it means we want to go out and see them. (Whiplash Motorsports, Phoenix, AZ - Comment: #2032, letter #216)

Public Concern (RR-32):

Commenters are concerned about the economic impacts of reducing competitive events and opportunities for motorized recreation.

Response (RR-32):

OHV use has a substantial economic impact in Arizona due to the large numbers of users and vehicles. On the other hand, sanctioned motorized competitive events cannot be construed to be a large part of this equation due to the small numbers of citizens involved with these permitted activities. Assuredly, there are beneficial economic impacts from the purchase of supplies, fuel, food, and lodging in nearby communities, but this can not be quantified to any measurable degree with current information. The economic benefits would probably be greater and be more noticeable in smaller communities as opposed to the large cities within the Phoenix metropolitan area.

The overall economic importance of OHV, which includes driving on back roads, sightseeing, hiking/walking, picnicking, and camping, indicated in a 2002 study, “The Economic Importance of Off-Highway Vehicle Recreation” by Jonathan Silberman, PhD, Arizona State University West; “that there was a total of 12,224,707 OHV user days in Arizona. In Maricopa County, there were over 2 million OHV days resulting in over 13,000 full and part-time jobs, OHV expenditures of \$1,358.1 million, salaries and wages of \$428.9 million

and state tax revenues of \$78.5 million. In Yavapai County there were almost 1,200,000 OHV days resulting in over 2,000 full and part-time jobs, OHV expenditures of \$183.0 million, salaries and wages of \$43.9 million, and state tax revenues of \$9.2 million. In La Paz County there were 344,550 OHV days resulting in 459 full and part-time jobs, OHV expenditures of \$44.1 million, salaries and wages of \$8.3 million, and state tax revenues of \$1.9 million. BLM in conjunction with other land jurisdictions contributes greatly to these statistics, but there have not been any studies on economic impacts resulting from single OHV type events, in particular race event that include from 75 to 200 participants, where most participants travel from distant locations, camp on site, and bring most of their supplies (food, vehicle parts, etc.) with them.

Public Comments (RR-32):

Comment: The OHV industry is growing by leaps and bounds, the need for MORE land is obvious. If the BLM is successful in adopting Alternative E of this draft it will negatively effect ALL MOTORIZED COMPETITIVE AND NON-COMPETITIVE EVENTS. The adoption of Alternative E the way it is now written, will in fact cause the demise of this sport and its promoters, subsequently causing these individuals to loose their lively hood., not to mention the financial impact in the neighboring communities such as hotels, restaurants, auto parts, service stations, convenience stores and the list goes on. We cannot survive without the use of public lands. We cannot be pigeon holed on 10-acre parcels to provide quality events. Further more we are NOT Buffalo and we refuse to be ELIMINATED. (Whiplash Motorsports, Phoenix, AZ - Comment: #1710, letter #389)

Comment: We had requested information on the economic loss to the Counties and Communities in the 2003 draft, along with the decline in tourism from eliminating Motorized Competitive events but we do not see any data addressing this impact. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1697, letter #261).

Public Concern (RR-33):

Respondents believe that non-motorized recreation should be confined to designated trails as opposed to allowing cross country non-motorized travel in order to prevent possible resource damage and to create “equal treatment” with motorized users.

Response (RR-33):

Cross-country non motorized travel by foot, horse or mountain bike can lead to the creation of permanent trails, sometimes called “social” or “user” trails that braid across the landscape. Most social trailing is a result of intense public use near residential properties, trailheads, target shooting areas, dispersed campsites, and motorized staging areas. Ribbons of trails may develop from users choosing different trails to walk.

These user-created and non-engineered trails are subject to hardening or erosion and may cross and impact sensitive plant and wildlife habitats or cultural areas. Cryptogamic (black crusty soil) desert soils and desert pavement are fragile and easily damaged. These soils show signs of footprints or hoof prints for a long time. Erosion can lead to more fugitive dust conditions and loss of plant life from soil erosion. Erosion and linear trail cutting could impact the scenic views for other users in the immediate area.

Making vehicle allocations of “open,” “closed,” or “limited,” are required RMP decisions, no such requirement exists for non-motorized recreation. The determination of need to develop non-motorized trails can be done as a part of transportation and recreation planning, which in an implementation action. Non-motorized trail planning is underway in the vicinity of Wickenburg and Black Canyon City and other areas may be evaluated as time and funding allow.

The Soils Resources, Cultural Resources, Biological Resources, Visual Resource and Air Quality Environmental Consequences Analysis in Chapter Four have been modified to address the above information.

Public Comments (RR-33):

Comment: Another issue in this Document that is not supported by data is banning cross-country travel to motorized users only. The OHV community agrees that cross-country travel should be banned (except in designated open OHV areas) for OHV travel. We also believe that cross-country travel should be banned for ALL users. BLM officials tell us that the reason non-motorized are allowed to go cross country is they do not cause resource damage, but upon further probing on the issue, non motorized cross country travel becomes an issue when use goes from very light use to moderate use at which time new trails are created&&- so as long as the use is light - they have no issues with the non-motorized travel&&- what is good for one group should be good for all groups - OHV does not ask for special treatment , we only ask for equal treatment. (Whiplash Motorsports, Phoenix, AZ - Comment: #1782, letter #389)

Comment: 2.6.1.9 Travel Management Management Actions Cross Country Motorized Travel Is Prohibited..... Again you have singled out one user group (OHV) as causing damage and all other users as causing no damage from Cross Country Travel. We request all users be restricted to existing designated trails and NO cross Country Travel be allowed by Any user Group....Motorized or Non motorized. Cross Country Travel creates new trail no matter who it is. Data is required to show no impact from non motorized. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1630, letter #261)

Public Concern (RR-34):

Several comments were received supporting opportunities for more non-motorized recreation, including the development of non-motorized trails, especially in the monument.

Response (RR-34):

Non-motorized trails, just like any other authorized activity, will only be developed where there is an identified need and where they will not adversely impact sensitive areas or monument resources. For example, some species, such as pronghorn, are often more

disturbed by human foot or equestrian traffic than by motorized traffic. If use of a trail might disturb pronghorn behavior and restrict or fragment habitat, it would not be constructed. On the other hand, a trail could enhance a sensitive resource by diverting people away from it. Some closed motorized routes may be considered for conversion to non-motorized trails

Public Comments:

Comment: I'm a hiker mostly. It would be good to see some actual trails as well. (Individual, New River, AZ - Comment: #119, letter #72)

Comment: As has been previously described, BLM's priority for management is preservation of Monument Objects. Also as previously described, one of the most significant threats to these resources is high-intensity recreation. Therefore, we recommend that the BLM emphasize low-impact recreation opportunities and manage as much of the Monument as possible for backcountry use. In addition, all recreation resources should be designed to protect Monument objects, reduce the footprint and visual impact of development, use low and alternative energy sources, and use minimal water. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2274, letter #343)

Public Concern (RR-35):

Respondents want clarification in the document that non-motorized and non-mechanical only pertains to human conveyances (excluding wheelchairs and specifically state that wheeled game carriers will be allowed.

Response (RR-35):

The document has been changed to reflect that non-motorized and mechanized conveyances like mountain bikes would be acceptable on designated trails within areas managed to maintain wilderness characteristics. Wheeled game carriers can be used to travel cross-country to retrieve game in lands allocated to maintain wilderness characteristics.

Public Comments (RR-35):

Comment: Concerning Section 2.7.1.6 Page 223, column 2 1st paragraph, commenter stated "Through non-motorized and non-mechanical means....Non-motorized conveyances.... Comment This needs to be clarified that non-motorized and non-mechanical only pertains to human conveyances (excluding wheelchairs). Also need to specifically state that wheeled game carriers will be allowed. This would be consistent with language on page 261." (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1381, letter #401)

Public Concern (RR-36):

Respondents view primitive and semi-primitive non-motorized as potential threats to "... wildlife conservation activities and responsive wildlife dependent recreation." They are requesting an accurate analysis of impacts of TMAs and Recreation Management Zones on wildlife water developments.

Response (RR-36):

We have revised the document to include Standards for recreation settings in document Section 2.7.1.11 and have included a brief description of how these settings would be addressed in implementation of recreation settings. Primitive and Semi-Primitive Non-Motorized recreation settings would maintain the non-roaded character of areas that currently are non-roaded. Wildlife conservation activities and responsive wildlife dependent recreation activities would continue to be conducted generally in the same type and manor as they now are. A landscape level analysis of RMZs and allocations to maintain wilderness characteristics on wildlife water developments or other wildlife management activities is presented in Sections 4.11.7, 4.11.14, 4.14.4, 4.14.14, and 4.21.4.

A specific impact analysis of the affects of various allocations, desired future conditions, and management actions on development of wildlife waters in the absence of a specific proposal would ignore the variability of project design, site conditions, and other factors that would affect approval of such a proposal. It is

inappropriate to attempt such an analysis in a landscape level document and in the absence of a specific proposal. Such an analysis would be conducted in an Environmental Analysis at the time of a specific proposal. The landscape level analysis in this EIS could not discern any impacts to management of wildlife water developments from Recreation management Zones (RMZs.)

Public Comments (RR-36):

Comment: Based on our (ADBSS) limited understanding of the various settings and classifications we would favor the classifications of rural-natural and semi-primitive, motorized as these settings appear to be the best fit towards leaving things as they presently are. We see no compelling reason to advance more primitive or semi-primitive, non-motorized recreation and we view these settings as potential threats to wildlife conservation activities and responsive wildlife dependent recreation. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2146, letter #342)

Comment: Section 2.6.2.2.4.6 Page 203, column 1, 3rd paragraph Statement ...semi-primitive non-motorized Comment We are concerned about the lack of guidance on this and the potential impact it could have on wildlife management and wildlife-dependent recreation. (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1374, letter #401)

Public Concern (RR-37):

Respondents are concerned that there is too much Front Country allocated and that the BLM should reduce the acreage of this allocation to better protect natural resources and decrease the likelihood of developed recreational amenities, especially in the monument.

Response (RR-37):

We have reconsidered the Front/Back Country Zones in the Proposed Plan and the new sizes and boundaries can be found in document Section 2.6.1.5. Approximately 400 acres along the Agua Fria River have been changed from Front Country to Back Country status.

Facilities designed to augment public recreation would generally be constructed in the Front Country Zone. However, no proposal suggests "... intense infrastructure..." In any case, whatever development would be proposed, site-specific analysis would be conducted to assure compliance with the Proclamation for protection of monument resources.

Public Comments (RR-37):

Comment: 2.Alternate E Page 159, 2.6.1.5 Recreation Resources, We prefer Alternative D - page 125 (2.5.1.5). We feel that BLM resources are insufficient to protect scientific, cultural, and biological values from intense and/or increased recreational use. Alternative D designates a larger Back Country RMZ (68,380 vs. 57,200 acres) which safeguards more sensitive areas and better protects the Monument's values. (Black Canyon Trail Coalition, In, Black Canyon City, AZ - Comment: #1262, letter #280)

Comment: In addition, the BLM should decrease the amount of land designated as Front Country to reduce the development of recreational amenities. (Comment: #921, form #4)

Public Concern (RR-38):

Several commenters believed that the passage zone through the national monument should be eliminated in the interior of the monument, specifically along roads that access Perry and Black Mesas, to reduce the likelihood of new developments and reduce impacts to monument resources. By designating High Use SCRMA, Passage RMZ, and front country RMZ, BLM may be increasing the likelihood of facilities.

Response (RR-38):

Facility development for the Agua Fria National Monument is projected to be minimal and would focus on areas near Interstate 17, such as Badger Springs Wash. The Front Country Zone also extends along Bloody Basin Road, which is the main road leading into and through the monument. In the Front Country Zone permanent or temporary amenities may exist to

protect the monument's objects and to provide for health and safety. For example, the front country zone includes access to Pueblo la Plata on Perry Mesa, which is proposed for interpretation, low-profile development, and continued public visitation. As a general rule, the BLM will continue to encourage neighboring communities to provide needed services.

The amenities listed as acceptable for the passage zone include those that we believe will redirect, educate, or provide for health and safety issues as they may emerge. It is not the goal of the BLM to develop the monument by placing toilets in the passage zone, mainly because these will be difficult to service; but if there emerges a health and safety issue associated with human waste and all other non-intrusive options fail, then it gives BLM the flexibility to address the problem. A parking area can redirect vehicles into one area thereby concentrating use so spread onto the resources doesn't occur. This also, would only be initiated if there was a problem and all other non-intrusive options fail to produce the desired outcome, to protect the monument's objects.

Public Comments (RR-38):

Comment: Please recall that Planning Criteria #8 states that "due to the desire to maintain the existing natural and cultural landscapes of the Agua Fria National Monument, any visitor facilities will be located near the Monument boundary or in neighboring communities. Facilities may be located within the Monument, but they will be placed in an unobtrusive location near the Monument boundary" (page 716). Alternative E appears to disregard this criteria by its designation of High Use SCRMA, Passage RMZ and Frontcountry RMZ in the interior of the monument. Each of these designations may allow for visitor facilities such as restrooms. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1845, letter #340)

Comment: The Passage Resource Management Zone should be eliminated from roads that access Perry and Black Mesas. These areas do not require new developments such as

parking/staging areas and toilets, as these will have negative impacts on monument resources. (Individual, Tucson, AZ - Comment: #927, letter #298)

Public Concern (RR-39):

Commenters referencing Section 2.7.3.7 feel that this text on recreational shooting is more of a safety manual and should be replaced with a management action that ensures BLM will actively pursue partnerships to provide safe shooting areas.

Response: (RR-39):

The section on recreational shooting does contain a significant safety component. It is designed to be clear on the character of sites that constitute safe shooting areas. With that information we can generate educational material for recreational shooters using public lands. In addition, it provides the basis for selecting safe shooting areas for future designation, or for selecting unsafe areas to close to that use as appropriate. It is also our intent to provide sufficient information, including appropriate legal references for law enforcement officers to issue citations as needed.

We are working with partner organizations to educate the public on safe shooting practices and to clean up trash associated with target shooting activities. We will review any proposals for new or expanded shooting facilities on a case-by-case basis for conformance with the land use plan.

Public Comments (RR-39):

Comment: 2.7.3.7. (pp. 256-258). The section on recreational target shooting seems to be a safety manual for any person that may choose to partake in this activity on the open desert, rather than a strategy for how BLM will manage this form of "wildcat" recreation. WORC suggests that BLM delete this discussion, and replace it with a management action that states BLM will actively seek partnerships with non-profit and government organizations and agencies to provide a safe area for recreational target shooting. Currently the Wickenburg Sportsmens Club (WSC) is operating on lands secured through an R&PP acquisition that may

eventually be crowded by other nearby recreational uses that are not compatible with recreational shooting. Since WSC recently partnered with the Arizona Game and Fish Department to implement a youth program, the opportunity for this group to obtain a safer shooting area or to buffer the current site should be presented more specifically in this RMP. In addition, "desert shooting" probably will negatively influence the multiple use of the proposed SRMA as presented in the plan. (Wickenburg Outdoor Recreation Committee (WORC, Wickenburg, AZ - Comment: #1912, letter #398)

Public Concern (RR-40):

Commenters support the Preferred Alternative's ban on recreational shooting in the monument, which should also include specific language to ban paintball shooting. Additionally, there should be limits on recreational shooting throughout the Planning Areas to better protect natural and cultural resources, as well as provide for public safety.

Response (RR-40):

The prohibition of recreational target shooting within the national monument has been carried forward to the Proposed Alternative. Paintball activities are prohibited in the monument in management common to all alternatives (document section 2.7.2.7) in the Draft RMPs/EIS and it has been carried forward to the Proposed RMPs/EIS.

Public Comments (RR-40):

Comment: We recommend the BLM retain this prohibition on recreational target shooting throughout the Monument, which should also include specific language to ban paintball shooting. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2276, letter #343)

Comment: Another big concern is the out-of-control target shooting around Table Mesa Road. On weekends, there are people shooting their weapons all around you from almost every canyon. You can stand in one place and hear gunfire coming from every direction. It's only a

matter of time before someone is killed by "legal" target practice. I would like to see the Table Mesa area become a "No Shooting Zone" Too congested with other users to neglect this safety issue. (AZ Rockrats, New River, AZ - Comment: #513, letter #257)

5.4.9 WILDERNESS CHARACTERISTICS

Public Concern (WC-1):

Respondents feel a clear definition of "manage for wilderness characteristics" is needed and have assigned the acronym "MWC."

Response (WC-1):

See Appendix I – Consideration of Wilderness Characteristics.

Public Comments (WC-1):

Comment: At this point we (ADBSS) must apologize for assigning the acronym "MWC" to the land use allocation that proposes to maintain wilderness characteristics. Despite questionable direction to the contrary an acronym and a clear definitive term for this very controversial land use allocation is needed. Perhaps if it were more clearly described, more widely understood and easier to identify it would be less controversial. We trust that the current generalized references are not by design and that there should be no issue with assigning an appropriate term and acronym to this land use allocation. Everything else in the world of federal government has an acronym and is extremely suspect that one has yet to be assigned here. We therefore have taken that liberty to be clearer in our comments by giving it the acronym "MWC". (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2125, letter #342)

Public Concern (WC-2):

Respondent feels The Desired Future Condition (as described in Section 2.6.2.2.2.6) which makes reference to a natural landscape being retained between the Hells Canyon Wilderness area and Lake Pleasant could affect private property rights in the future.

Response (WC-2):

The subject lands are no longer under consideration as lands to be allocated to maintain wilderness characteristics. There is no impact from management of wilderness character on Morgan City Wash or other routes and travel corridors in the area. The plan proposes to retain a natural landscape between the Hells Canyon Wilderness and Lake Pleasant Regional Park. This proposed Baldy Mountain RMZ complements the landscape and recreation opportunities in the area. The RMZ will provide high-quality non-motorized recreation and open space in a region otherwise mostly allocated to motorized and intensely managed recreation.

New rights-of-ways to access private property will be evaluated on a case-by-case basis and sited/designed to limit adverse effects on natural and scenic resource values. BLM can not prohibit access to private lands, but does have the management prerogative as the land manager to stipulate that the most environmentally preferred route be selected, and where and how the right-of-way and supporting infrastructure is sited, designed, installed, or constructed.

Public Comments (WC-2):

Comment: Section 2.6.2.2.2.6, page185 "Desired Future Condition" makes reference to a natural landscape being retained between the Lake and the Wilderness area. That could mean the loss of our private [in Spring Valley located between the Hell's Canyon Wilderness Area and the Lake Pleasant Park]property or the ability for our family to decide how the property will be used in the future. (Individual - Comment: #1490, letter #308)

Public Concern (WC-3):

Respondents agree with the allocation to maintain wilderness characteristics that exists in Alternative E, but believe it is important that BLM explains the latitude to support multiple use objectives while managing for wilderness characteristics so as not to imply "de facto wilderness."

Response (WC-3):

The information contained in Appendix I make it clear BLM has the authority to inventory and manage for the resource conditions described as "wilderness characteristics." The allocations to maintain wilderness characteristics in Alternative E represent those with the most outstanding characteristics with the least management conflict. We have tried to make the desired future conditions and management actions clear so the difference in managing allocations to maintain wilderness characteristics and designated wilderness is also clear.

Public Comments (WC-3):

Comment: Since the concept of managing areas for wilderness characteristics creates a perception that these lands will be de facto wilderness, the RAC believes it is important that BLM be able to explain to the public the latitude it has to support multiple use objectives while managing for wilderness characteristics. (Individual, Phoenix, AZ - Comment: #476, letter #204)

Comment: I believe that the BLM can protect wilderness characteristics, while still allowing for a wide variety of uses. In the management of wilderness characteristics, the BLM proposes to consider the use of motorized and mechanical vehicles and designation of motorized routes as a possibility within areas located to maintain or enhance wilderness characteristics. (Individual, Prescott, AZ - Comment: #375, letter #111)

Public Concern (WC-4):

Several commenters feel the range of alternatives for lands managed to maintain wilderness characteristics is questionable.

Response (WC-4):

The allocation to maintain wilderness characteristics was developed late in our planning effort. Since the Preferred Alternative was analyzed as a part of our range of alternatives in the Draft RMP/Draft EIS, it is acceptable (though perhaps not ideal) to include the allocation only in the Preferred Alternative. The decision was made to include the allocation in only that alternative.

The current management or No Action Alternative (Alternative A) is also considered one of the analyzed alternatives, meaning that there is an alternative without allocations to maintain wilderness characteristics. The Preferred Alternative (Alternative E) can select a mix of allocations that best meet management objectives including selecting from provisions described in the No Action Alternative.

Public Comments (WC-4):

Comment: We were also surprised that no alternative, other than the No Action Alternative, contained zero (0) MWC areas. We therefore must question whether the range of alternatives presented in the DRMP/DEIS is appropriate. One would have expected that one of the alternatives would have promoted a more conservation related land ethic and that the full range of alternatives would be less of an incremental movement towards preservation and the management of solitude, naturalness and primitive recreation. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2127, letter #342)

Comment: BLM retains the ability to value wilderness character and protect it. Instruction Memoranda (IMs) Nos. 2003-274 and 2003-275, which formalize BLM's policies concerning wilderness study and consideration of wilderness characteristics, contemplate that BLM can continue to inventory for and protect land "with wilderness characteristics," and also specifically reference ACEC designation as one options for doing so. In this guidance, wilderness characteristics are identified as naturalness, providing opportunities for solitude or providing opportunities for primitive or unconfined recreation. The IMs further provide for management that emphasizes "the protection of some or all of the wilderness characteristics as a priority," even if this means prioritizing wilderness over other multiple uses. (emphasis added). This guidance does not limit its application to lands suitable for designation of WSAs. For instance, the guidance does not include a requirement for the lands at issue to generally comprise 5000-acre parcels or a requirement that the lands have all of the

potential wilderness characteristics in order to merit protection. Further, the guidance specifically contemplates management to protect "some or all" of the wilderness characteristics, so, for instance, the guidance would support managing an area to protect its naturalness as a priority over other multiple uses. Commitment to using this national guidance was reiterated in a February 12, 2004, letter to William Meadows, President of The Wilderness Society, from Assistant Secretaries of the Interior Rebecca Watson and Lynn Scarlett (copy attached for your reference), stating: "Wilderness characteristics can be protected by imposing a variety of designations and management prescriptions that are available to BLM as part of its resource management planning process." The guidance issued by BLM's Arizona State Office serves to elaborate upon this guidance by providing for identification of lands with wilderness characteristics and development of management prescriptions to protect and enhance these values (See IM No. AZ-2005-007). We are pleased to see that the Draft RMP includes land use allocations for lands with wilderness characteristics in the preferred alternative, however we are concerned that none of the other alternatives contain this allocation. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2258, letter #343)

Public Concern (WC-5):

In the Management Common to All Areas allocated for wilderness characteristics, respondents recommend that BLM place emphasis on enhancing wilderness characteristics by working to close/restore motorized routes in these areas, instead of creating management guidelines that leave routes open. Additionally, they would like BLM to follow the State Director's Guidance and close these areas to mechanized use.

Response (WC-5):

The allocation to maintain wilderness characteristics is not a wilderness designation or creation of Wilderness Study Areas. As such, management decisions within the allocations to maintain wilderness characteristics can be designed to maintain the current situation, even

for limited motorized access or for other uses that may be denied in designated wilderness or Wilderness Study Areas. For example, use of bicycles, wheeled game carriers, or hang gliders could be allowed if it is not in conflict with maintaining the desired future condition.

Public Comments (WC-5):

Comment: In addition, we recommend that section 2.7.1.6. follow the BLM's State Director guidance in recognizing that the solitude and primitive/unconfined recreation definition provided for wilderness characteristics indicates that these activities are non-motorized and non-mechanical, which would prohibit the use of mountain bikes. At the minimum, BLM should create desired future conditions that do not develop mountain biking opportunities in areas of wilderness characteristics where they did not occur previously. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2265, letter #343)

Comment: Remember, in the management common to all areas allocated for wilderness characteristics emphasis should be placed on enhancing wilderness characteristics by working to close and/or restore motorized routes in these areas instead of creating management guidelines that make leaving routes open in these areas. (Individual - Comment: #41, letter #52)

Public Concern (WC-6):

Commenters objected to having areas managed for wilderness characteristics because it further limits public access especially for those with physical limitations. Respondents believe this to be an ambitious proposal to convert lands that are roaded and attract motorized recreation and that BLM should re-evaluate this to make sure it is manageable. Additionally, the loss of public access for high clearance and 4X4 vehicles due to the recommendations for wilderness characteristics and other Special Area Designations is a serious impact to public land users and to the resources. Not only will back country access and enjoyment be diminished, but the impacts to undesignated areas will be intensified due to higher concentrations of displaced users.

Response (WC-6):

Allocations to maintain wilderness characteristics may contain some motorized access. There are several Recreation Management Zones where motorized recreation is the primary focus of management. In addition, dispersed motorized recreation on thousands of miles of designated route will still be available throughout the Planning Areas. There is no intent to concentrate motorized recreation in smaller areas, but rather to focus management for motorized recreation in some specific areas.

We did assessments of the field office area and determined that the characteristics of wilderness (as defined in the glossary) did exist in many places. The areas that are proposed for allocation to maintain wilderness characteristics have those characteristics in high quality, and we have determined that they are manageable under that allocation. These areas represent a small proportion of routes used for motorized access, and the impacts to motorized recreation would be small as described in document Sections 4-21.13.

Public Comments (WC-6):

Comment: Within the Castle Hot Springs management unit, 6,550 acres are proposed to be allocated to maintain or enhance wilderness characteristics. The draft RMP cites as a reason the need to "provide high-quality primitive recreation and solitude in a region otherwise allocated to motorized recreation" (see page 185). It appears to be an ambitious proposal to convert lands that are roaded and attract motorized recreation to be suddenly managed for wilderness. I believe BLM should re-evaluate this proposal and make sure it is manageable. Portions of this proposal with rugged terrain and no roads may be a better choice. Also, it is not clear if the Morgan City Wash Road would be affected by this proposal. This route provides critical access and should remain open. (Individual, Sierra Vista, AZ - Comment: #1138, letter #286)

Comment: The loss of public access especially for high clearance and 4X4 vehicles due to the recommendations for Wilderness and other Special Area Designations is a serious impact to public land users and to the resources. Not only will back country access and enjoyment by many be diminished, but the impacts to undesignated areas will be intensified due to higher concentrations of users due to displacement. (Individual, Cornville, AZ - Comment: #1081, letter #160)

Public Concern (WC-7):

Respondents are concerned about the potential conflict between the management actions for wilderness characteristics and the public access allowed in Morgan City Wash.

Response (WC-7):

The subject lands are no longer under consideration for as lands to be allocated to maintain wilderness characteristics. In fact, no allocation to maintain wilderness characteristics is proposed under Alternative E for public lands within the Castle Hot Springs Management Unit. There is no impact from management of wilderness character on Morgan City Wash or other routes and travel corridors in the area. We believe that potential access restrictions to this area will eventually lie more with the hands of private land owners curtailing use, than to management actions by BLM, the AGFD or the City of Peoria.

As indicated in the Common to All section of Travel Management, routes and areas would be developed as needed for various purposes such as: protecting resources, ensuring visitor safety, satisfying local community needs, and improving recreation experiences, or increasing recreation opportunities.

Public Comments (WC-7):

Comment: Concerning Section 2.6-2.2.2.2 Page 180, commenter stated “The Morgan City Wash route (Map 2-90) has the potential to become an issue as it relates to the adjacent Hells Canyon Wilderness Characteristic designation. Although the EIS states on pg. 180, 3rd

paragraph under Utility & Transportation Corridors, that BLM will pursue public access, the language under Management Actions for Wilderness Characteristics could prevent resolution. This particular road provides the only access for a significant area that is highly recreated by Department constituents. The area wildlife manager has raised concerns with this particular situation and the potential conflicts down the road. An additional review of this particular issue may be worth recommendations.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1365, letter #401)

Public Concern (WC-8):

Respondent feels that designating much of the AFNM as “possible wilderness” will go a long way in protecting archeological resources in the monument and will fulfill the Monument Proclamation.

Response (WC-8):

Only Congress can establish a Federal wilderness area. BLM is proposing a variety of land use allocations to ensure the long-term preservation or conservation of monument objects and resources. Citizens and organizations can offer wilderness area proposals to Congress for lands where they believe wilderness designation is appropriate. BLM does not have the authority to address, propose or bring forward wilderness area proposals or designation for monument lands.

Public Comments (WC-8):

Comment: It goes without saying that proposal and the eventual designation of as much of the Monument as possible as wilderness will go a long way in protecting the archeological resource in the Monument and at the same time fulfill the Monument proclamation. (Individual - Comment: #774, letter #46)

Public Concern (WC-9):

Respondents feel adding the following statement to the document would reinforce a mutual commitment to cooperate and collaborate in the management of fish and wildlife and their habitats, for all management prescriptions, and

for all land designations and allocations: “Land use allocations such as those to manage for wilderness characteristics or primitive recreation will not adversely impact the Arizona Game and Fish Department’s ability to meet their Trust Responsibilities for managing wildlife, nor prohibit current or future proposed wildlife management activities on lands administered by BLM in Arizona. This RMP will reflect and support the spirit and intent of the Statewide Memorandum of Understanding between BLM and AG&FD.”

Response(WC-9):

Clarification of the AGFD/BLM relationship and roles and responsibilities was added to the Interrelationships section of Chapter 2 in the Proposed Plan/FEIS. This Chapter 2 addition should satisfy comment concerns about the RMP supporting the spirit and intent of the Statewide MOU.

With regard to comment concerns that allocations and management prescriptions do not adversely impact AGFD’s wildlife management activities, the suggested statement mixes AGFD roles and responsibilities with standard NEPA requirements for evaluation of site-specific proposals in light of plan conformance and other legal requirements. The Desired Future Conditions for allocations to maintain wilderness characteristics include language that conveys the importance of wildlife and wildlife management as a component of managing areas to maintain wilderness characteristics. Because wildlife and wildlife management are considered important components of naturalness, AGFD actions to achieve those related DFCs could be implemented. However, site-specific NEPA analysis may identify mitigations required to ensure conformance with the rest of the land use plan and other laws and regulations. No guarantee can be made at the land use plan level that implementation-level projects can be carried out entirely as proposed. Therefore, while AGFD’s *responsibility* “to meet their Trust Responsibilities for managing wildlife” is not usurped, their *ability* to meet their Trust Responsibilities for managing wildlife” would continue to undergo standard NEPA process with any necessary mitigation. The NEPA

process is not considered the equivalent of “adversely impacting ... AGFD’s ability to meet their...responsibilities ...” The inclusion of the statements in the Interrelationships section and the DFCs already address the comment concerns.

Public Comments (WC-9):

Comment: Also on a statewide level, the Department [AZGFD] is concerned about the unavoidable complexity of an RMP that must meet objectives to manage for multiple resources and uses within the field office planning area for up to 20 years. Although the plan should ensure the resolution of any conflict within the preferred alternative, the complex nature of managing multiple resources in concert can create perceived or real conflicts between Desired Future Conditions or management prescriptions for different uses, resources, or user groups. The Department is concerned several resources and/or uses may inherently conflict, and the proactive and timely management of fish and wildlife could suffer as a consequence. The Department and the BLM Arizona State office have decided to address this issue through the revision of the Department's and BLM's master statewide Memorandum of Understanding (MOU). This MOU, when finalized, will provide context to better enable our respective agencies to work in partnership and to make decisions in a consistent manner statewide. Additionally, the MOU will provide direction on the management of fish and wildlife, and associated habitats, based on the resource decisions housed within the RMP. However, we expect it may take time to finalize revisions and obtain necessary signatures; therefore, we request language be added to the RMP that reinforces our mutual commitment to cooperate and collaborate in the proactive management of fish and wildlife and their habitats, for all management prescriptions, and for all land designations/allocations. We believe this language should read: "Activities conducted by the Arizona Game and Fish Department to meet Trust Responsibilities to manage wildlife are recognized by BLM as consistent with decisions proposed in this RMP. The Arizona Game and Fish Department's ability to manage wildlife on lands administered by BLM in

Arizona will not be diminished or precluded during the life of the plan, based solely on singular or overlapping allocations, designations, and/or management prescriptions (such as those to manage for wilderness characteristics, visual resources, or primitive recreation). All implementation level plans and site-specific projects will continue to be evaluated through appropriate partnerships and through federal and state regulations. This RMP will reflect and support the spirit and intent of the statewide Memorandum of Understanding between BLM and AGFD." (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1356, letter #401)

Comment: The YVRGC respectfully request the following language be in the RMP to clarify AGFD's role and responsibility for managing wildlife and BLM's intent to support AGFD in accomplishing their mission and goals: "Land Use allocations and management prescriptions such as those to manage for wilderness characteristics or primitive recreation will not adversely impact the Arizona Game and Fish Department's ability to meet their Trust Responsibilities for managing wildlife, nor prohibit current or future proposed wildlife management activities on lands administered by BLM in Arizona. This RMP will reflect and support the spirit and intent of the Statewide Memorandum of Understanding between BLM and AGFD." (Yuma Valley Rod and Gun Club, Inc, Yuma, AZ - Comment: #1069, letter #163)

Public Concern (WC-10):

Respondents, including the Arizona Game and Fish Department, cannot support the large areas proposed for non-motorized primitive recreation and solitude. They ask what is meant by ensuring solitude, how is this defined, and how will it be implemented.

Response (WC-10):

In areas managed to maintain wilderness character, there will be a management emphasis to maintain or conserve current scenic attributes and natural conditions, and to maintain opportunities for solitude and primitive and unconfined recreation. Maintenance of solitude

and primitive recreation opportunities would not be paramount or above all other land uses. Impacts on solitude and primitive recreation opportunities from proposed land-use activities would be carefully considered and, wherever possible, avoided or mitigated. BLM can deny, modify or mitigate any proposed land use that impacts important resources, whether those subject resources are range, recreation, water, wildlife habitat, scenery, cultural resources, or travel management. Primitive recreation experiences have the same standing as any other resource. The management emphasis for areas managed for wilderness character would be to maintain such characteristics.

At this juncture there is no emphasis to place severe recreation and use restrictions on wildlife management activities.

The subject wilderness character areas already have solitude per the definition of an area where "the sights, sounds and evidence of other people are rare and infrequent". There is no indication that user or visitor numbers to the wilderness areas would be restricted. This has never happened, even in designated Phoenix District wilderness areas.

Solitude can be maintained by not building trails, by not maintaining routes, by offering visitors alternative areas to recreate, or by dispersing recreation attractions. And solitude does not have to be maintained all the time in all areas and in all landscapes. Solitude waxes and wanes depending on the landscape, the sensitivity of the visitor, the time of day and year, and many other factors.

We anticipate few other management prescriptions would be required to maintain solitude. This finding is based on managing wilderness in the Phoenix District for 16 years. Solitude levels remain good to outstanding throughout our designated Wilderness areas with few to no management actions by BLM. In fact, we have never implemented a recreation use restriction in this office due to solitude conditions being degraded or adversely affected. We believe these circumstances will probably be repeated in areas managed to maintain

wilderness characteristics. If management conditions changed on the ground and wilderness values were harmed or lost, then site-specific planning would be implemented to resolve the issue.

BLM considers wildlife management and wildlife-related recreation activities and opportunities will continue much as they are today, but only if habitat is effectively managed and maintained. Quality hunting and wildlife viewing opportunities will be conserved if BLM, the AGFD, and citizen volunteers are successful land use and recreation managers. Successful management will ensure that a semblance of functioning and unfragmented habitat for game and non-game animals be conserved and sustained in light of Arizona's unprecedented urban and rural growth, and associated recreation demands, in the Phoenix District's public lands.

Public Comments (WC-10):

Comment: Concerning Section 2.6.2.2.4.6 Page 202, column 2 last paragraph, commenter states, "Ensure...solitude. What is meant by ensuring solitude" How is this defined and how will it be implemented" This could put severe recreational restrictions on large areas of public lands. The Department believes the document should state there will be opportunities for solitude and primitive recreation in these areas. (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1372, letter #401)

Comment: AGFD-We believe that choosing to manage for Wilderness Characteristics and recreation management prescriptions that place an emphasis or priority on managing for solitude, primitive non-motorized, or semi-primitive non-motorized recreation will place unnecessary restrictions on wildlife management, hunting, motorized access, and wildlife-related recreation. It is extremely important to our organization that wildlife management and wildlife-related recreation continue essentially as it does today. (Yuma Valley Rod and Gun Club, Inc, Yuma, AZ - Comment: #1068, letter #163)

Public Concern (WC-11):

Respondents want the RMP to clearly identify "... the full compliment of wildlife management and conservation activities as being a priority and allowable use for any MWC (sic) allocation or ROS/VRM setting." They believe that this intent needs to be written in explicit language to avert future conflict because past experience has shown that wilderness preservation and the preservation mindset it manifests has become a tool to impede or delay necessary and beneficial wildlife management and conservation activities.

Response (WC-11):

The RMPs contains language that emphasizes wildlife management as a priority in areas allocated to maintain wilderness characteristics as well as other allocations. Due to the potential for site-specific conflicts that cannot be analyzed in a document of this scale, future proposals, including wildlife management and conservation activities, would need site-specific analysis and appropriate mitigation before they could be approved.

Public Comments (WC-11):

Comment: At a minimum we (ADBSS) would require that the RMP clearly identifies the full compliment of wildlife management and conservation activities as being a priority and allowable use for any MWC allocation or ROS/VRM setting. Based on our past experience this intent needs to be written in crystal clear language to avert future conflict and controversy within the RMP and we will be looking for it to be contained in the final RMP document. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2123, letter #342)

Comment: Our organization (ADBSS) has decades of experience with wilderness and the full compliment of widely varied wilderness management practices. This experience has shown that wilderness has done more harm than good to Arizona's wildlife populations and the associated restrictions (perceived and real) have become an unbearable obstacle to active wildlife management and conservation activities; activities that have been widely successful during the previous century and produced the

abundant wildlife resources that we enjoy today. Current wilderness preservation in any form and the preservation mind set it manifests has unfortunately become a tool, used by obstructionists, to impede, delay, obstruct and otherwise compromise necessary and beneficial wildlife management and conservation activities throughout this state to advance a contrary and passive management ideal. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2121, letter #342)

Public Concern (WC-12):

Respondents are concerned about the allocations for wilderness characteristics, and especially that “public perception would limit resource utilization by BLM.”

Response (WC-12):

Public perception concerning any BLM management has the potential to impact the timeliness of BLM actions. Allocations for wilderness characteristics might limit resource utilization that is incompatible with meeting our Desired Future Conditions. It is BLM’s opinion that the limitations would not result in major economic or environmental impacts. If changing conditions in the future require we reconsider our decisions, we can do so in a plan amendment process.

Public Comments (WC-12):

Comment: It appears that Alternative E provides for both public use and natural resource development opportunities in specific Management Areas; however, while ARPA agrees with your intentions to maintain the wilderness characteristics that currently exist in the Preferred Alternative E, we are concerned public perception would limit resource utilization by BLM. How will this issue be addressed. (Arizona Rock Products Association, Phoenix, AZ - Comment: #1472, letter #355)

Public Concern (WC-13):

Respondents feel BLM should add more explanation of how the process described in Section 3.9 was applied. BLM should also describe the results of this process for specific

areas, including all areas managed to maintain wilderness characteristics. In particular, an area should be considered as possessing wilderness character if it includes one, two, or all three of the criteria of naturalness, solitude, and primitive and unconfined recreation.

Response (WC-13):

The detailed inventory information is in the Administrative Record and available for public review. The Affected Environment Section of the document needs to contain enough information for the public to make their assessment of impacts. The details of the inventory do not supplement that information and would be superfluous in the Affected Environment chapter of the document. The process we used to make decisions concerning allocating areas with wilderness characteristics was essentially the same as the process we use for any RMP decision. The steps we followed were:

1. Conduct field assessments of wilderness characteristics, focusing on areas inventoried in the past and on areas identified by the public as having those characteristics.
2. Produce maps of areas with wilderness character.
3. Compare areas with wilderness characteristics with maps of other resource values and objectives.
4. Assess the manageability of wilderness characteristic in each area in the context of other resource demands and objectives and outside pressures.
5. Publish draft plan with 5 alternatives.
6. Review public comment and make adjustments accordingly.

Public Comments (WC-13):

Comment: The general process is consistent with FLPMA's direction that BLM inventory for the many values of the public lands and consider ways to protect them (i.e., not all uses are appropriate in all places) in the RMP. 43 U.S.C. 1711, 1712. In addition, it is consistent with the applicable BLM guidance in providing for inventory and protection of wilderness characteristics, and considering the lands

included in the wilderness proposals submitted by the Arizona Wilderness Coalition (consideration of citizen wilderness proposals is specifically mentioned in the national guidance, as well). We also appreciate the consideration of all of the following as wilderness characteristics: Naturalness, Solitude, and Primitive and unconfined recreation. However, the Draft RMP does not provide adequate detail on how the BLM applied the wilderness characteristics discussion in section 3.9. Draft RMP at 408. It is confusing to try to determine which citizen-proposed areas were validated by BLM in their process of following Instruction Memorandum Nos. 2003-274, 2003-275, and AZ-2005-007. It does appear that all of the areas in the Bradshaw-Harquahala region proposed by citizens were at a minimum displayed on Map 3-12, but no areas were displayed for the Agua Fria National Monument. BLM staff have indicated that this was an oversight and will be corrected in the Final RMP/EIS. Section 3.9 also makes no mention of the AWC proposal for the Agua Fria NM submitted during the scoping process and identified on the BLM website as scoping comments received. In addition, the BLM states that the Round Mountain unit was found to possess wilderness characteristics, but did not receive any protection in the preferred alternative and no rationale was provided for dropping this unit. The same is true for the Harquahala Mountains units. Recommendation: The BLM should add more explanation of how the process described in Section 3.9 was applied. BLM should also describe the results of this process for specific areas, including all of the AWC-proposed areas. In particular, in accordance with the guidance cited above, an area should be considered as possessing wilderness character if it includes one, two, or all three of the criteria of naturalness, solitude, and primitive and unconfined recreation. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2259, letter #343)

Public Concern (WC-14):

Several comments suggested no wilderness prescriptions be applied outside designated Wilderness Areas and that no areas, except around the Harquahala Mountains, be allocated

to maintain wilderness characteristics (as proposed in Alternative B).

Response (WC-14):

Many actions taken within designated wilderness areas are designed to manage resources and resource conditions that exist outside designated wilderness. That is especially true of management actions designed to maintain particular recreation settings. The Federal Land Policy and Management Act (FLPMA) allows BLM to manage recreation on its lands without limiting what modes of recreation might be acceptable. Where BLM determines management to maintain or enhance recreation experiences that are somewhat similar to those within a designated wilderness, some prescriptions may also be similar. The Federal Land Policy and Management Act sections 102 (8), 103 (c), 202 (c) all give BLM the authority to plan for and manage public lands, including modes of recreation on those lands. Nothing in FLPMA limits or exempts any kind, form, or mode of recreation from our management responsibility.

Public Comments (WC-14):

Comment: As we have expressed in other ongoing statewide BLM planning efforts and want to reiterate here, the ADBSS is fundamentally opposed to the new land allocation that prescribes management to Maintain Wilderness Characteristics (MWC). This implied designation is akin to establishing a wilderness minded management mentality for lands that have not been formally identified by Congress as worthy of wilderness designation or study. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2120, letter #342)

Comment: Alternative E is the preferable alternative with the exception of the Wilderness designations. For this resource management option, Alternative B should be the preferred alternative. (Individual, Cornville, AZ - Comment: #1086, letter #160)

Public Concern (WC-15):

Commenters noted that areas allocated to maintain wilderness characteristics overlap

areas analyzed and addressed in two BLM reports from 1980, which found that these areas did not contain sufficient wilderness values or did not meet the standards for inclusion as Wilderness Study Areas. In Section 2.7.1.6, the Desired Future Condition of these areas emphasizes the naturalness and outstanding opportunities for solitude and primitive unconfined recreation. Respondents want to know how these conditions are present now when they were not present in 1980.

Response (WC-15):

When examining public lands for the presence of wilderness characteristics, BLM conducts ground assessments and reviews existing land use and wilderness inventory data. BLM examined the 1980 wilderness inventory findings for units 2-107 (Belmont Hills North), 2-108 (Belmont Hills), 2-118 (Baldy Mountain), 2-103 (Black Butte), and 2-85 (Williams Mesa).

The summaries provided by the various respondent's comments, accurately reflect the 1979 initial or 1980 intensive wilderness inventory reports or findings for units 2-107, 2-108 and 2-118, 2-103 and 2-85. These inventories and associated reports were conducted under Section 603 of FLPMA.

BLM may consider new information on wilderness characteristics when preparing land use plans. Publicly submitted wilderness character proposals represent a land use planning allocation BLM needs to examine. The BLM must determine if our existing wilderness inventories are still valid and if public wilderness proposals contain new information or indicate changed circumstances on the ground.

BLM takes any new information provided by the public, along with the original inventory findings, and conducts a ground assessment of the subject landscape. BLM must determine if wilderness characteristics are reasonably present and of sufficient value (condition, uniqueness, relevance, importance), need (trend, risk) and are practical to manage. These procedures are fully described in Instruction Memorandum No.

2003-275 – Change 1 and Appendix I: Consideration of Wilderness Characteristics.

Two questions are asked during the ground assessment:

1. Is the current wilderness inventory valid?
2. If not valid, does this new information suggest substantive changes to the landscape and in resource conditions since the wilderness inventory was completed in 1980?

Belmont Hills North Unit 2-107 and Belmont Hills Unit 2-108: These units were re-examined in 2002 and 2003. In 1980, BLM proposed these “units be dropped from further wilderness consideration because of the unnatural effects of man and the lack of outstanding opportunities for solitude or primitive recreation.”

The Central Arizona Project (CAP) Canal was under construction during the 1979-1980 wilderness inventories. The initial CAP construction activities presented a formidable impact on the area's— and the regions— natural conditions, natural quiet, scenery, solitude and primitive recreation opportunities. The CAP construction effort was described in the subject inventory reports as a major off-site impact and influenced the inventory crew's opinion as to the quality of the two area's wilderness values.

In 2002 and 2003, the field review determined that the once-predominate construction and visual scars of the CAP were now healed. Furthermore, the CAP now “blends in” with the rest of the off-site infrastructure (roads, houses, nuclear plant, powerlines, subdivisions) east and south of the Belmont Mountains. The CAP is no longer the adjacent and significant “sights and sounds” of human influence it was in 1980, due to the aforementioned reclamation of the scars and the additional and newer off-site human impacts now south and east of the canal area.

The CAP had other long-term impacts on the Belmont Mountains too, some beneficial to natural, scenic, and wilderness characteristics. The CAP cut off many vehicle travel routes that previously entered the 2-107 and 2-108 units from the south. Motorized travel has little

impacted, and perhaps has even less impact on the area than documented in 1980, due to the lack of route crossings over the CAP. The canal had a “moat-like” effect and restricted access.

Mining documented in 1980 has not been active, especially in the south part of unit 2-108, and north of the CAP. Access roads have not been maintained or used, grazing facilities have not been maintained or were cut or eliminated by the CAP. Other ground disturbances have been minimal to none. Natural reclamation has restored or overgrown the evidence of many mining and development scars.

The area appears more natural today than it did in 1980 due to these factors. These circumstances and factors described above have been confirmed by on-the-ground field inspections and assessments.

Natural reclamation has restored or overgrown the evidence of the mining, vehicle travel and development scars. The improvement in Units 2-107 and 2-108 natural condition and the restoration and reclamation of impacts over 27 years all have contributed to the area’s more natural and remote condition. The area appears more natural today than it did in 1980 due to these factors. Solitude and primitive recreation opportunities are now considered good to outstanding due to less evidence of people and the associated influence of human activities. These opportunities are outstanding when considered in a regional context.

Accordingly, we determined that wilderness characteristics are reasonably present and are of sufficient value and need. The characteristics are unique due to their closeness to Buckeye and large master planned communities with up to a million new residents over the next 23 years. The area’s natural character is critical to open-space maintenance and the lands are valuable for sustaining desert big horn sheep and desert tortoise habitat. The described wilderness characteristic values and associated scenery, habitat, and plant life would be at risk if not protected from intense levels of motorized and non-motorized land use and inappropriate land use or authorizations.

Finally, the lands are manageable and practical to administer under an allocation to manage for the maintenance of wilderness character. The trend and risk of intensive motorized use, adjoining large scale developments, and urbanization point towards a wilderness characteristic allocation as the best land use allocation for this area; one that will maintain important resource and associated open space and recreation values.

Maintenance of the area’s natural conditions will be facilitated by the CAP canal and vehicles limited to existing— and eventually designated— OHV route networks.

Unit 2-118 Baldy Mountain: We have reviewed our findings for Unit 2-118 Baldy Mountain. We have determined that the original wilderness inventory findings are essentially correct and will drop the area from consideration in Alternative E for management to maintain wilderness characteristics. The area is more natural than documented in 1980, but other wilderness opportunities are only marginal.

Unit 2-103 (Black Butte): We have also reviewed submitted and new field information on Unit 2-103 (Black Butte). Black Butte was determined to be natural in 1980, and that condition persists to this day. In fact some of the vehicle routes documented in 1980 have reclaimed due to weathering and plant over-growth. The core land areas surrounding Black Butte proper are highly natural with little evidence of human activity.

Our field assessments in 2003 determined that the 1980 inventory crew was overly stringent in their inventory findings that outstanding solitude and primitive recreation opportunities did not exist in sufficient quality and quantity to be considered outstanding. Perhaps the 1980 field inventory documented more human activity with better motorized access routes, active mining projects, and ongoing intensive range management and grazing operations; thus their initial 1979/1980 conclusions were conceivably justified.

The area, we believe, now has some wilderness character, especially when considering the area's enhanced natural condition, its remoteness, the difficulty of access from the west, north and northeastern areas, its abundant levels of natural quiet, unencumbered scenic vistas, and Black Butte's proximity (30-45 minutes to planned urban populations and communities). There are outstanding opportunities for cultural and geologic sightseeing, cross-country hiking, and non-technical climbing.

Unit 2-85 Williams Mesa: This area was dropped from wilderness study consideration in 1979 since no area larger than 5,000 acres was determined to be roadless or natural in condition. Most of unit 2-85 consisted of Williams Mesa and lands to the west and south. Since 1980, BLM acquired substantial land ownership around the Slate Creek area in the northeast part of Unit 2-85. This new public land was natural and added to natural lands already present surrounding Slate Creek. The original and acquired public lands around Slate Creek were determined to have wilderness character based on changed land ownership patterns and circumstances. Taken together, this assemblage of public lands possess naturalness along with solitude and primitive recreation opportunities.

Public Comments (WC-15):

Comment: Having been involved in wilderness review for decades the ADBSS additionally recalls that the statewide Wilderness Review and Intensive Inventory performed by BLM in 1980 previously studied most of the areas now proposed for an MWC allocation and found that they should be "dropped from further wilderness consideration" because "a natural area could not be delineated" or that due to the "unnatural character of the unit it could not be considered outstanding" or that the "opportunities for primitive and unconfined recreation were not outstanding". We (ADBSS) therefore must ask that the final RMP specifically address these discrepancies from the 1980 inventory and in particular those which exist in previous Units 2-100, 2-107 and 2-108 (Hummingbird Springs

and Belmont Hills) in the new Harquahala management area, Unit 2-118 (Cedar Basin) in the new Castle Hot Springs area and Unit 2-85 in the Black Canyon management area. From our perspective these areas were previously reviewed for wilderness qualities and subsequently released when none were found. The DRMP does not adequately present what new information is now available in regards to these areas nor does it explain how these areas have become, over time, more natural and primitive. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2129, letter #342)

Comment: The following are specific comments to AFNMBH RMP. The main issue I will discuss is in regards to Managing for Wilderness Characteristics (MWC) Areas. In 1980, BLM published two reports... 1 - Wilderness Review, Intensive Inventory of Public Lands Administered by Bureau of Land Management, Proposal Report (May 1980) 2 - Wilderness Review, Intensive Inventory of Public Lands Administered by Bureau of Land Management, Decision Report (Nov 1980) These two documents clearly inventoried lands within Arizona for the following characteristics. 1 - Naturalness 2 - Outstanding opportunities for solitude 3 - Opportunities for primitive or unconfined types of recreation. The following are direct quotes from the Decision Report published in 1980 regarding areas that were inventoried in the AFNMBH Management Area and the new proposed MWC areas in the draft RMP. The areas from the report overlap the areas proposed for MWC by BLM. I urge BLM managers to research my findings and check to ensure that all of the statements provided are in fact valid. The issue must be addressed by BLM to avoid future possible lawsuits and ensure that there is consistency between published reports, inventories, etc on behalf of the BLM managers of today, yesterday and tomorrow. Harquahala Management Unit Decision Report #2-107 BLM Findings "We propose that the unit be dropped from further wilderness consideration because of the unnatural effects of man and the lack of outstanding opportunities for solitude or primitive recreation." Decision Report #2-108 BLM Findings "We propose that the unit be

dropped from further wilderness consideration because there are no outstanding opportunities for solitude or primitive or unconfined recreation." BLM response when challenged "After careful review we determined that the unit did not provide outstanding opportunities for solitude or a primitive and unconfined type of recreation." AFNMBH RMP 2.6.2.2.4.6 - Desired Future Conditions "...Retain natural landscapes. Ensure high-quality natural landscapes, solitude and outstanding primitive recreation opportunities in a remote setting..." Obviously in 1980 if BLM found that the areas were unnatural, without outstanding opportunities for solitude or primitive recreation, then these conditions would not exist today. BLM must prove that the land was improved in some way so as to now have substantial qualities for wilderness characteristics were previously they were not. Castle Hot Springs Management Unit Decision Report #2-118 BLM Findings "We propose that this unit be eliminated from further wilderness consideration. Several opportunities exist for primitive recreation, but these activities are hindered by the unnatural character of the unit to the point where they cannot be considered outstanding." AFNMBH RMP 2.6.2.2.2.6 - Desired Future Conditions "A natural landscape retained between..." Again, how can there be unnatural character in 1980, but today BLM wants to retain the natural landscape. How did this area get to be natural again, when previously it was not of substantial value. Common to Both Units AGNMBH RMP 2.7.1.6 - Desired Future Conditions "Lands allocated to manage or enhance wilderness characteristic contain few human intrusions with primitive and natural landscape settings, providing self-reliant and self-directed visitor experiences..." "Lands and resources within these areas exhibit a high degree of naturalness. These areas are affected mainly by the forces of nature, and the imprint of human activity is substantially unnoticeable..." "Outstanding opportunities for solitude or primitive unconfined recreation may be present..." Again, the conditions common to all MWC areas refer to the naturalness and outstanding opportunities for solitude or primitive unconfined recreation. How can these characteristics be present when BLM managers who inventoried the land in

1980 found them not to be. BLM cannot publish reports, inventories, plans, etc. that contradict each-other. BLM cannot have it BOTH WAYS, choosing which way they want to characterize land when it works to serve the end goal the BLM is interested in with whatever document or plan that is being produced at that period in time. (Individual, Yuma, Arizona - Comment: #1143, letter #382)

Public Concern (WC-16):

Commenters disagree with the analysis that the areas in the Castle Hot Springs and Black Canyon MUs have wilderness characteristics, given that many of these areas currently have roads. They are specifically opposed to the allocation to maintain wilderness characteristics west of Lake Pleasant and around Hummingbird Springs and Bighorn Mountains Wilderness Area because this allocation may prohibit uses, such as mineral development.

Response (WC-16):

Areas allocated to maintain wilderness characteristics would be closed to mineral sales if they preclude achieving the Desired Future Conditions, although the allocation to maintain wilderness characteristics doesn't preclude prospecting or development of locatable or leasable minerals. Reclamation in these areas may be designed to better mimic the natural landscape than in other places. The "roads" and bulldozer scrapes described were done in the 1950s and the majority of them are reclaimed and unusable for motorized travel.

The potential of the area as a source for perlite did not come up during planning, though data has since been received by BLM from ADMMR showing an area of perlite located in T6N, R1W and T7N, R1W. Should further investigation determine a quality and quantity of perlite suitable for development, it would be available for extraction under the provisions of the 3809 Regulations. Because of the landscape character within the allocation, BLM may establish reclamation standards that would leave a substantially natural looking site when the mineral is mined out and/or when mining activity ceases.

The wilderness character areas in the Castle Hot Springs and Black Canyon area were carefully examined. The Black Canyon Corridor parcels clearly have wilderness characteristics.

We have reviewed our findings for the Baldy Mountain area in the Castle Hot Springs Management Unit. Our reassessment of the 1980 inventory found the area has changed and now contains wilderness characteristics. Upon further reviewing the area since the public comment period, we have determined the characteristics are of marginal quality and poor manageability, potentially conflicting with other resource objectives such as trail development, wild burro herd management and rights-of-way for community growth. Therefore, we have dropped the area from an allocation to maintain wilderness characteristics and have reallocated it as the Baldy Mountain Recreation Management Zone (RMZ).

The Baldy Mountain RMZ will still emphasize non-motorized recreation opportunities, but the allocation is less restrictive to motorized uses and resource utilization than an allocation to maintain wilderness characteristics.

See document Section 2.6.2.2.5 for a description of the management decisions for this RMZ.

Public Comments (WC-16):

Comment: I am against the creation of Wilderness Characteristic' areas surrounding the Hummingbird Springs and Big Horn Mountains Wilderness in Alternative E (Map 2-89) or new ACECs in this area. As can be seen in Bradshaw-Harquahala DRMP/DEIS maps, this area is highly mineralized (Maps 3-15 and 3-19) and contains abundant roads (Map 3-24). (Individual, Apache Junction, AZ - Comment: #1890, letter #391)

Comment: The alleged characteristics that were inventoried to make these new proposed areas eligible is very questionable and is far reaching at best. Most of these areas do not effectively meet the criteria for designation, especially those areas in the Hells Canyon-Lake Pleasant area

(2.6.2.2.2.6) and those in the Black Canyon City area (2.6.2.2.1.6). Wilderness is something very special and these designations only amount to extension of ones' imagination and wishful thinking. They do not possess the outstanding characteristics that are required by law. Additionally, those areas that have multiple cherry stems and have existing roads that must be closed for the purpose of at some time making it eligible for Wilderness is only stretching an interpretation of what wilderness characteristics really are. The basic requirements for Wilderness do not exist in these areas. (Verde Valley 4 Wheelers, Cottonwood, AZ - Comment: #1952, letter #400)

Public Concern (WC-17):

Respondents take exception to use of the word "enhance" in the description of the allocation to maintain wilderness characteristics because they feel it embellishes an already troubling land allocation and that future wildlife conservation activities will suffer. Additionally, the word "enhance" is not contained in the federal guidance provided in the Instructional Memorandum 2003-275, Change 1 and this should be the sole guidance for the consideration of wilderness characteristics. They challenge the embellished guidance as it is not consistent with BLM policy and has not undergone public review.

Response (WC-17):

The Federal Land Policy and Management Act allows "enhancement" of any resource conditions managed by the agency. It is common and accepted practice that BLM enhance resources we manage. We contribute to construction of range improvements to enhance range forage and livestock management. We build trails, trailheads, parking areas, staging areas, and provide other amenities to enhance recreational opportunities and experiences. We participate in construction of wildlife waters, modify livestock fences, and control competing uses to enhance wildlife habitat. If we are managing an area for wilderness characteristics and it is appropriate and not in conflict with other management priorities, it is legal and consistent with normal management practices to

enhance those characteristics. However, due to the concern regarding the word “enhance” the Proposed Resource Management Plan/Final Environmental Impact Statement refers to the allocation as simply an allocation to maintain wilderness characteristics.

Public Comments (WC-17):

Comment: We (ADBSS) noted throughout the document that the verb "enhance" has been added to the descriptive title for the MWC land allocation. It now reads Manage to Maintain and Enhance Wilderness Characteristics. Errantly embellishing this already troubling land allocation by adding the word "enhance" fuels our concern that this management prescription will be used to advance a wilderness management regime to these lands and that future wildlife conservation activities will suffer. It is one thing to protect wilderness characteristics but quite another to enhance these characteristics. We point out that the word "enhance" is not contained in the federal guidance provided in the Instructional Memorandum 2003-275, Change 1 document located in Appendix I and note that this document should be the sole guidance for the consideration of wilderness characteristics in the land use planning process. We respectfully must challenge the embellished guidance provided by the state director as it is not consistent with federal BLM policy and has not undergone public review. We therefore suggest that the word "enhance" be removed from the MWC descriptive title and not used in the final RMP document. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2130, letter #342)

Comment: BLM should be managing for wilderness characteristics, not enhancing. Several times throughout the RMP BLM makes references to enhancing. Clarification is needed. (Individual, Yuma, Arizona - Comment: #1144, letter #382)

Public Concern (WC-18):

Respondents suggest removing any reference to “wilderness” in the land use allocation to

maintain wilderness characteristics. Instead, such areas could be called “wonderful areas.”

Response (WC-18):

Policy guidance provided in Arizona Instruction Memorandum AZ-2004-021 and the attachment thereto suggests naming allocations for wilderness characteristics “... such as lands with wilderness characteristics or areas having wilderness characteristics...” This memo was developed to provide some consistency to the way those allocations were named and applied. Though your suggestion has merit, we must follow state policy.

Public Comments (WC-18):

Comment: If BLM believes that any lands within the Agua Fria and Bradshaw Harquahala planning areas contain natural resources worthy of protection we (ADBSS) would suggest that you instead identify them as "wonderful areas" and provide the desired level of protection by utilizing the existing palette of management tools and prescriptions currently at your disposal. We especially want to remove any reference to "wilderness" in the land use allocation description. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2124, letter #342)

Public Concern (WC-19):

Respondents indicated there is an inconsistent approach to management actions for lands managed to maintain wilderness characteristics compared to other plans published in Arizona.

Response (WC-19):

The management actions proposed in the Alternatives are within the framework described by National and State policy and guidance. Differences in management actions as “compared to other plans published in Arizona” may be due to differences in resource conditions, management objectives, or local needs.

Public Comments (WC-19):

Comment: We (ADBSS) must also note an obvious anomaly in the prescription of MWC management actions between this planning

process and others we are reviewing from other Arizona BLM Field Offices. With this RMP we are now reading a third variation of MWC allocations presented over three months from three different Field Offices. One would expect more consistency in the application and implementation prescriptions for identical land allocations regardless of the planning area or the BLM author. There is already too much variation in existing management practices and these planning processes should strive to provide more clear and direction. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2135, letter #342)

Public Concern (WC-20):

Comments were received addressing the manageability of areas allocated to maintain wilderness characteristics. The specific areas (areas in the Hells Canyon-Lake Pleasant and Black Canyon City areas) not only lack the characteristics for “wilderness,” but present serious manageability issues because of their specific geographical location. Respondents feel that the multiple-use values and the current and potential uses of these areas would have to be eliminated or seriously restricted if these areas were allocated to maintain wilderness characteristics.

Response (WC-20):

Meeting the management objectives for every allocation and designation in the Proposed RMP will be a challenge. The manageability of allocations for wilderness characteristics will be as much a challenge as the wildlife habitat area for bighorn sheep or the Recreation Management Zone around the Wickenburg community. Adequate funds and citizen participation will be required for the success of all allocations or designations. BLM is moving forward with a strategy to successfully implement the RMP, but only time will determine our success.

Public Comments (WC-20):

Comment: The specific areas (areas in the Hells Canyon-Lake Pleasant area (2.6.2.2.2.6) and those in the Black Canyon City area (2.6.2.2.1.6)) not only lack the characteristics for

Wilderness, but there are also serious manageability issues because of their specific geographical location. The multiple use values and the current and potential uses of these areas would have to be eliminated or seriously restricted if designation were to be made. There would be significant adverse impacts to the users of the public lands. Population demands and use can better be managed in a multiple use concept. Wilderness designation is excessively restrictive and ineffective to try to manage and maintain the demands of the future for the public. Classic examples of this can be seen in the Red Rock areas around Sedona. Wilderness designation seriously impacts the ability to provide facilities to manage the users in what amounts to nothing more than a urban park. (Verde Valley 4 Wheelers, Cottonwood, AZ - Comment: #1953, letter #400)

Public Concern (WC-21):

Numerous commenters believe too much land was allocated to wilderness characteristics based on scoping interest. They want proof that there is a need for another 96,000 acres to be managed for wilderness qualities over and above the 96,000 acres of designated Wilderness. Also, they feel with ACEC, “MWC,” TMA and RMZ, too much emphasis is being placed on solitude or non-mechanized recreation. They request an analysis of the cumulative effects of managing more areas for solitude, naturalness, and primitive recreation and want an explanation of where and how FLPMA allows a planning focus on these topics.

Response (WC-21):

During scoping, much interest was expressed for maintaining open space and natural landscapes. With the emphasis placed on more intensive recreation uses in other parts of the Planning Areas, the intent of allocations to maintain wilderness characteristics is to retain large landscapes in relatively natural condition and to attempt to maintain them in their current undeveloped, primitive state.

The RMP/EIS analyzed several different levels and amounts of protection for areas with wilderness characteristics. Nearly 1,500

comments were received articulating a desire by a large segment of the public for more areas allocated for this purpose. In addition, the impact analysis conducted indicates management for wilderness characteristics will; protect large natural landscapes that favor wildlife, especially large species such as deer, pronghorn, javelina, and bighorn sheep; preserve areas for more solitude dependent recreation such as hunting, bird watching, nature photography, hiking and horseback riding; will maintain the natural appearing vistas generally considered the primary contribution of public lands to regional open space; and, since it is not wilderness and managed with strict wilderness management requirements, can provide some limited motorized and mechanized access to “back country” areas that is not allowed in a designated wilderness. It is BLM’s opinion that the Preferred Alternative provides the best balance of this type of recreation experience. As the region becomes more urbanized and areas closer to urban boundaries become more intensively managed for recreation uses, the areas allocated to maintain wilderness characteristics will remain the “back country” available for the activities mentioned above.

More than anything, the focus of this planning effort is a comprehensive management of all recreation resources. Motorized recreation is as much the focus of the planning effort as solitude, naturalness, and opportunities for primitive recreation. FLPMA allows planning to address issues discovered through public participation. Outdoor recreation is defined in section 103 (1) as one of the “principal or major uses” of BLM-managed land. It is entirely within the framework of FLPMA to develop a management focus on outdoor recreation, including those resources described as “wilderness characteristics.”

Public Comments (WC-21):

Comment: BLM is obligated to provide a 'balance' of land use allocations, as per FLPMA. There is currently 96,000 acres of Wilderness. BLM proposes an additional 96,000 acres of MWC. Where is the need? Prove it. Currently there is sufficient areas to experience wilderness qualities. Understanding that Wilderness and

MWC are not "the same", however throughout the RMP there is very specific wording used for MWC that is exactly like the wording, including definitions of conditions and characteristics, used to describe Wilderness. (Individual, Yuma, Arizona - Comment: #1147, letter #382)

Comment: It was also noted that the MWC allocation in the preferred alternative represents a doubling of the lands already designated as wilderness. In our (ADBSS) opinion this MWC land allocation has been over employed especially when compared to the interest provided during public scoping. For the Agua Fria, wilderness issues represented 15% of the public comments while the total acreage proposed for an MWC allocation (20,900 acres) is 29.5% of the total acreage of the monument (75,520 acres). Similarly, with the four units comprising the Bradshaw-Harquahala planning area, wilderness support was a mere 2.2% of the total public scoping comments while the preferred alternative proposes an MWC allocation nearly four times greater at 8.4% of the total area (75,520 acres of MWC within a total of 895,910 acres). We would hope that the final RMP would better reconcile these public comment numbers and its respective MWC allocations. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2128, letter #342)

Public Concern (WC-22):

Respondents want all areas inventoried as having wilderness characteristics (as portrayed on Map 3-12) allocated to that, including areas in the monument, in the Harquahala Mountains, the Belmont Mountains, the Bighorn Mountains, and around Black Butte. They believe that BLM has full authority to manage for wilderness characteristics and should use wilderness characteristics to overlap other management areas to help protect the natural and cultural landscape of public lands. To that end, BLM should prepare a new alternative for public consideration that includes full protection for lands the Arizona Wilderness Coalition has identified as having wilderness characteristics.

Response (WC-22):

The extent of allocation for wilderness characteristics chosen in the Proposed RMP represents the outcome of our efforts to best balance all demands on public lands within the Planning Areas. The area in the Proposed Plan allocated to maintain wilderness characteristics has both the most significant wilderness characteristics and is the most manageable for that allocation. Demand for motorized recreation, building materials, utility rights-of-way, and other resources not necessarily compatible with allocations for wilderness characteristics, are increasing and are expected to increase into the future. To meet the multiple use mandate of FLPMA, and to follow the policy statement found in FLPMA section 102 (12), which says: the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining and Minerals Policy Act of 1970 (84 Stat. 1876, 30 U.S.C. 21a) as it pertains to the public lands; allocations for wilderness characteristics have been made where those characteristics are most exemplary and where they are manageable.

Even on the Agua Fria National Monument, areas identified as having wilderness characteristics north of Bloody Basin road present a less manageable situation than those south of Bloody Basin Road. The need for future cultural resources inventory and research, as well as other uses of the area that may not be compatible with maintenance of wilderness characteristics prompted us to choose not to allocate it as such. BLM believes the Back Country Recreation Zone allocation will protect the most outstanding characteristics of the area while allowing scientific, educational, and other activities that may not be considered compatible with wilderness characteristics.

Public Comments (WC-22):

Comment: We would like to see BLM prepare a new alternative for public consideration that includes full protection for lands the Arizona

Wilderness Coalition has identified as having wilderness characteristics. This should be subjected to public comment as the present draft has been. (Individual, Baltimore, MD - Comment: #1022, letter #381)

Comment: It is our opinion that managing for "Wilderness Characteristics" is the best tool the BLM has at their disposal to protect Monument values like the archeological sites, pronghorn habitat, and riparian areas while also providing for solitude and primitive recreational opportunities. Also, because of declining federal budgets and the resources needed to effectively enforce and manage activity on public lands, we feel it is better for the BLM to be conservative in their management decisions regarding those areas where we still have wilderness characteristics, in order to preserve them for future generations. (Individual, New River, AZ - Comment: #974, letter #360)

Public Concern (WC-23):

Respondents feel that Map 2-74 ignores a high voltage power line that bisects an area managed to maintain wilderness characteristics. They believe that areas with wilderness characteristics should have boundaries that go right up to the right-of-way for any particular non-conforming use, but not include that use. They are concerned that this particular allocation appears to be trying to set a precedent, rather than using an existing one.

Response (WC-23):

After considerable deliberation, the identified wilderness characteristics mapped in the plan are believed to be sound.

The allocation to maintain wilderness characteristics is not a wilderness designation or creation of Wilderness Study Areas. As such, definition of boundaries is not dependent on the same criteria. Creating two units bounded by the power line or having one area with the power line as an accepted use within it are managerially the same and the second choice is functionally simpler. We have retained the allocation as one "unit" with the powerline

running through it in our Proposed Plan. Our decision is based on the following:

- We are unsure what would constitute the boundary, the powerline itself or the powerline right-of-way. Would wherever the powerline is visible be excluded? If the reason to exclude the powerline is to remove the impact of it from the allocation, the last option would be the preferred, but very little would remain of the allocated area.
- There are many cases of high tension powerlines running through congressionally designated Wilderness Areas. This allocation has neither the legal nor theoretical standard of a designated Wilderness Area and we are not setting any precedence with the decision.
- Current guidelines for allocations to maintain wilderness characteristics do not use the former Wilderness Handbook, which has been determined to be legally obsolete. We cannot develop management guidelines based on the prospect of its potential legal reinstatement.
- We considered the allocation both ways and see no management advantage in splitting the area along the powerline.

Public Comments (WC-23):

Comment: There is no true precedent that can be used for having a 500 KV power line splitting an "area with wilderness characteristics" down the middle. This appears more in the nature of trying to set a precedent than using an existing precedent. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2096, letter #339)

Comment: We would like to first note that there are, as near as we can tell, two maps that one can use to determine which areas in the AFNM have wilderness characteristics. These are map 2-74 and map 3-12. While map 2-74 has much better detail, it is flawed in a number of ways. Basically, the standards used to determine boundaries appear to be "double standard" in nature. Map 2-74 ignores a high voltage power line that approximately bisects the area in question. It is our opinion that you cannot ignore this power line, even if we are only talking about areas with wilderness characteristics. The "areas with wilderness characteristics" boundaries may go up to the power line right of way in the same

way that a boundary can go up to the right of way for a backcountry road or a limited access interstate highway. All three of these things represent negative visual impacts to an area that has wilderness characteristics, but do not preclude these areas from being areas that have wilderness characteristics. Nor is it necessary to have "buffer zones" to visually distance these non-conforming uses from areas that have wilderness characteristics. While power lines and roads may be visually unattractive to human beings, it makes no difference to objects in the Monument that are listed for protection in the Monument proclamation. All boundaries for areas having wilderness characteristics shall go right up to the right of way for that particular non-conforming use. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1850, letter #340)

5.4.10 VISUAL RESOURCES

Public Concern (VM-1):

Respondents suggest that management prescription should err on the side of being conservative and that all non-wilderness areas be given a VRM Class III designation unless it is within a certain distance of some outstanding vistas or natural visual resources. Additionally, respondents feel it was very difficult to ascertain the boundaries of the VRM classifications and would like a clearer presentation and explanation of the contrast rating process in the final document, including a more detailed listing of allowable and restricted conservation activities (i.e., wildlife water developments).

Response (VM-1):

Visual Resource Management (VRM) management classes are standards applied in RMPs intended to meet visual objectives. It was determined that the VRM Classes allocated in the Preferred Alternative were the least restrictive classes needed to meet those objectives. It is not the intent of BLM or the VRM process to curtail activities, but rather to initiate negotiations on design criteria that meet the visual standards as implemented through the Contrast Rating System described in BLM

Handbook H-8431-1, Visual Resource Contrast Rating which can be found at <http://www.blm.gov/nstc/VRM/8431.html>.

Public Comments (VM-1):

Comment: We (ADBSS) are very fearful that VRM allocations will become a future tool to curtail or obstruct beneficial wildlife conservation activities. We would therefore suggest that in the infancy of this new RMP that management prescriptions should error on the side of being conservative and that all non-wilderness areas be given a VRM class 3 designation unless it is within a certain distance of some outstanding vistas or natural visual resources. Caution needs to be exercised to not create "buffer" areas around existing wilderness areas as this clearly violates Congressional intent. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2139, letter #342)

Comment: We (ADBSS) would also hope that the final RMP would more clearly define the "VRM contrast rating process" in prescribing allowable projects and activities and the mitigation measures required. Clearer direction is needed in this regard to more accurately assess the associated impacts to wildlife conservation activities and programs brought upon by these VRM classifications. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2137, letter #342)

Public Concern (VM-2):

Respondents feel Alternative D in the Bradshaw-Harquahala Planning region should be chosen for Visible Resource Management goals to protect the last remaining vistas. Additionally, respondents prefer the VRM class sizes shown on Map 2-59 would better preserve the wild and scenic character of the monument backcountry. All attempts to limit light pollution in the monument should be made.

Response (VM-2):

BLM believes the proposed Alternative E VRM classes for the Bradshaw-Harquahala Planning Area and the Agua Fria National Monument will protect scenic vistas. The proposed visual standards in the AFNM will protect current

visual and scenic conditions, while potentially allowing Front Country infrastructure needed for resource protection, visitor safety, or protection of monument objects.

Outside of the AFNM, the proposed VRM standards should little impact the construction of new and well-designed motorized and non-motorized use trails on BLM-administered lands. New trail construction will need to be designed and sited to satisfy visual standards presented in the land use plan. Proposed visual management classes should not greatly impact or curtail the potential linking of the currently disconnected trail segments along the motorized portions of the Black Canyon Trail, nor proposed new alignments for the non-motorized BCT.

BLM will attempt to limit the impact of fugitive light on the monument's dark skies. However, most light pollution comes from nearby and encroaching developed areas and communities, including the Phoenix metropolitan area. The metro area has tremendous light pollution extending into all parts of the planning area. Management of those light sources and light pollution is not within BLM's jurisdiction. BLM, however, will support local communities and citizen initiatives implementing dark skies and light pollution efforts.

Public Comments (VM-2):

Comment: Alternative D in the Bradshaw-Harquahala Planning region should be chosen for Visible Resource Management goals to protect the last remaining vistas. (Individual, Prescott, AZ - Comment: #1014, letter #183)

Comment: Visual Resources 2.6.1.7 and 2.7.2.8 The preferred alternative should allocate more land to VRM class II; only visually impacted areas located in designated front country areas should be designated as VRM class III. For instance, the preferred alternative classifies too much land as front country, and as a result, the proposed VRM class III acreage shown on Map 2-75 is too large. We prefer the VRM class sizes shown on Map 2-59 which better preserve the wild and scenic character of the monument

backcountry. All attempts to limit light pollution in the monument should be made. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2097, letter #339)

Public Concern (VM-3):

Respondents want BLM to prioritize the limitation of light pollution in the monument, but others request an exception to the prescription to minimize night sky impacts of lighting "...where those standards may not be compatible with public transportation facilities."

Response (VM-3):

The Desired Future Condition is "As much as possible, keep night skies free of light pollution." New lighting technology may allow us to work together to find mutually acceptable alternatives to achieve the Desired Future Condition. Transportation facilities in the vicinity of observatories have found ways to minimize night sky light pollution, yet meet transportation facility needs. However, considering issues of human safety, it may not be possible to achieve this Desired Future Condition in every case.

Public Comments (VM-3):

Comment: The nearby BLM lands in the Bradshaw-Harquahala planning area should be managed to preserve a natural vista from, and into, the Monument. In addition, the visual resources seen from the monument should not be degraded, and should prioritize the preservation of a dark night sky, free of light pollution. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2098, letter #339)

Comment: Section 2.6.1.72.6.1.7 Visual Resources, Page 165: The sentence "Cooperate with surrounding communities and national, State, regional, and local entities to minimize the impacts of lighting. Include clear nights from lights standards in new permit/authorizations and in renewing permits/authorizations with all the view-sheds affecting the monument." should be modified to allow exceptions where those standards may not be compatible with public transportation facilities. ADOT is concerned this

stipulation may negatively affect future lighting plans at Sunset Rest Area, the proposed Sunrise Rest Area, and traffic interchanges. (Arizona Department of Transportation, Phoenix, AZ - Comment: #1436, letter #397)

Public Concern (VM-4):

Respondents feel VRM "restrictions are onerous and subjective" and that that mining operations will be severely limited which is not a "realistic approach to managing resource development."

Response (VM-4):

The Visual Resource Management (VRM) process, which was developed by BLM in 1978, was specifically designed to create a process that was as objective as possible and achievable by non-landscape architect professionals. A full description of BLM's VRM system can be found online at www.blm.gov.

The VRM system is implemented by using the contrast rating process. The contrast rating process (Manual Section 8431) is used as a visual design tool in project design and as a project assessment tool during environmental review. It is not intended as a means to eliminate activities, but rather to design them to meet VRM objectives, as defined in section 2.7.1.8 of the Draft RMPs/Draft EIS. It has proven over the last 28 years to be both a valid and very realistic approach to managing resources and maintaining the visual integrity of the landscapes on BLM-managed lands. Discussion in document Section 4.17.8 describes the anticipated impacts on mineral development from Visual Resource Management. Additionally, mining activity will continue wherever it is allowed within the Planning Area in conformance with applicable laws and regulations.

Public Comments (VM-4):

Comment: The Visual Resource Management (VRM) restrictions are also quite severe. The various Alternatives permit only Classes I, II and occasionally III. These imply that there cannot be any significant amount of mining. The amount of dust that is produced can be kept down by means of water sprays, but there will

some disturbance of the landscape during the mining process. (Department of Mines and Mineral Resources, Phoenix, AZ - Comment: #166, letter #61)

Comment: Visual Resource Management restrictions are onerous and subjective and clearly implications that mining activities will be severely limited. Further, these restrictions do not represent a realistic approach to managing resource development. Recent state legislation has addressed reclamation concerns (i.e. Aggregate Mined Land Reclamation Act of 2005) and current practices have proven that disturbed land can be restored to a useable and often more beneficial condition. (Arizona Rock Products Association, Phoenix, AZ - Comment: #1473, letter #355)

Public Concern (VM-5):

Commenter wants protection of the scenic areas in the Bradshaw-Harquahala Planning Area.

Response (VM-5):

BLM believes proposed VRM classes for the Bradshaw-Harquahala Planning Area will protect scenic vistas and maintain landscapes that currently appear natural, or afford good vistas. Numerous areas contain Class II Management Areas, while Wilderness Areas contain Class I. This is an overall improvement from the No Action Alternative where most of these lands were lumped primarily into Class III areas. Increased public concern for the preservation of scenery, scenic vistas, and open space reflect public concern for the preservation of scenery, scenic vistas, and open space while still providing for multiple uses in this document.

Public Comments (VM-5):

Comment: Also I am hoping they protect the scenic areas in the Bradshaw-Harquahala planning region. (Individual, Prescott, AZ - Comment: #786, letter #228)

Public Concern (VM-6):

Respondents would like an exception to the proposed VRM Class II and the Black Canyon SRMA to allow proposed semi-primitive

motorized route connecting links that will join disconnected segments of the Black Canyon Trail motorized route, as it does not currently appear to allow for construction. This would allow users of the semi-primitive motorized route of the Black Canyon Trail System to have the opportunity for a back-country trail experience similar to the non-motorized route.

Response (VM-6):

The proposed Class II VRM standards should have little impact on the construction of new, well-sited and well-designed motorized trails on BLM-administered lands in the Black Canyon Corridor. New trail construction for the motorized parts of the Black Canyon Trail route system will need to be designed and sited to satisfy visual standards presented in the land use plan. Proposed visual management classes should not greatly impact or curtail the potential linking of the currently disconnected trail segments along the motorized portions of the Black Canyon Trail.

Public Comments (VM-6):

Comment: 2.Alternative E - pg 177, section 2.6.2.2.1.7 Visual Resources, Land Use Allocations: Add an exception to the proposed Visual Resource Management (VRM) Class II and the Black Canyon SRMA to allow proposed semi-primitive motorized route connecting links that will join currently disconnected segments of the Black Canyon Trail motorized route. VRM Class II does not appear to allow construction of motorized segments that will be proposed to join these disconnected segments. Users of the semi-primitive motorized route of the Black Canyon Trail System will then have the opportunity for a back-country trail experience similar to the non-motorized route. (Black Canyon Trail Coalition, In, Black Canyon City, AZ - Comment: #1259, letter #280)

5.4.11 RANGELAND MANAGEMENT

Public Concern (GM-1):

Commenters want BLM to recognize grazing conflicts with other multiple uses and provide a mechanism for retiring grazing allotments, including voluntary relinquishments.

Response (GM-1):

The impact analysis recognizes and attempts to describe the conflicts between grazing and other multiple uses. In the Management Common to Both Planning areas, in Section 2.7.1.9 – Rangeland Management, we say:

Retiring livestock grazing from an allotment would be considered when those lands are devoted to a public purpose that precludes continued livestock grazing. This provides us with a mechanism for retiring grazing where it is necessary.

Public Comments (GM-1):

Comment: The National Public Lands Grazing Campaign (NPLGC) urges Phoenix Field Office planners to develop a resource management plan that (I) recognizes livestock grazing conflicts with other multiple uses of federal public land (National Public Lands Grazing Campaign, Chandler, AZ - Comment: #1051, letter #185)

Comment: Given the conditions of many of the allotments within the planning area and on the Agua Fria NM, and given the inappropriateness of grazing in the desert biome in which they occur, and given the lack of economic viability of many of the current livestock operations, we support the inclusion of language in the final RMP that would allow voluntary permit relinquishment and compensation to livestock operators for permanent allotment retirement. (Center for Biological Diversity, Tucson, AZ - Comment: #1585, letter #338)

Public Concern (GM-2):

Commenters feel the Draft RMP fails to address the role livestock play in changing fire regimes.

There is a need to discuss elimination of grazing and the "...subsequent introduction and spread of non-native plants..." as a fire management tool. Livestock grazing should not be allowed in areas that have burned for a minimum of two to three years. An analysis should be done to determine conditions have recovered sufficiently to allow grazing to occur.

Response (GM-2):

When soil, vegetation, or other resources on the public lands require immediate protection because of drought, fire, flood, and insect infestation, federal grazing regulations permit the authorized officer to close allotments or portions of allotments to grazing or modify authorized grazing use.

The use of livestock after a fire is one of many tools available to accomplish vegetative objectives for the area. In order to reduce invasive species such as prickly pear or cholla from a treated area livestock use may be authorized for a short period of time after a burn to further reduce the amount of these species. The ecological sites found within both planning areas are dependant on rainfall. Grazing is not authorized in these areas until such time as the grass species have recovered from the burn. The period of rest may take several years in the absence of rainfall. It is impractical to have a set period of time for recovery after a burn. Monitoring of the area will establish the appropriate time for livestock to be reauthorized.

Public Comments (GM-2):

Comment: Livestock grazing should not be allowed in areas that have burned through either wildfire or prescription for a period of years. A site-specific analysis should be done prior to initiating grazing, but at a minimum, two to three years rest and recovery after the fire to determine the actual condition of the vegetation and soil resources, since some vegetation communities may not reach their compositional peak until the second or third year (Guo 2001). Post-fire livestock grazing can delay recovery of burned areas, and should not be permitted in burned areas until vegetation recovery has occurred (Beschta et al. 2004). (Center for

Biological Diversity, Tucson, AZ - Comment: #1599, letter #338)

Comment: Site-specific analyses of grazing impacts should be conducted before livestock grazing permits are reissued, and the elimination of livestock grazing and the subsequent introduction and spread of non-native plants should be addresses as a potential fire management tool. (Center for Biological Diversity, Tucson, AZ - Comment: #1598, letter #338)

Public Concern (GM-3):

Respondent supports the inclusion of language that stipulates certified weed free feed, mulch, and seed should be used in all Planning Areas, especially permitted livestock operations.

Response (GM-3):

BLM lacks the regulatory authority to enforce quality control of forage fed to grazing animals on private land. The Phoenix District does not approve feeding of contaminated forage on public land.

Public Comments (GM-3):

Comment: We support the inclusion of language that stipulates only certified weed-free feed, mulch, and seed can be used in all planning areas. However, the BLM needs to go one step further and require that all livestock should be fed certified weed- and seed- free hay for a period of days prior to their release on the public lands, since the slow digestion of ruminants can also spread non-native species through delayed defecation. This would ideally apply to recreational stock as well, but should absolutely apply to the livestock operators leasing our public lands. (Center for Biological Diversity, Tucson, AZ - Comment: #1593, letter #338)

Public Concern (GM-4):

Respondents believe the BLM should select the alternative that most proactively manages for non-native species in the Planning Area. Additionally, since respondents believe issues of non-native species can be closely linked with livestock related disturbance, they object to the use of biological controls that involve livestock.

Response (GM-4):

Livestock grazing has been demonstrated to be a practical and acceptable alternative to herbicide application for invasive species control and wildfire fuel reduction. However, prior to employing a new grazing treatment on public land, a need for the treatment must be identified through the Standards and Guidelines Allotment Evaluation Process or other planning documents. Then, the proposal must be analyzed under the provisions of the National Environmental Policy Act and approved by the authorized officer.

Public Comments (GM-4):

Comment: Because the issues of non-native species can be closely linked with livestock-related disturbance, we object to the use of biological controls that involve livestock, as proposed on page 268 of the draft RMP. We do not believe these treatments should be used in the planning area, unless strict regulation and site-specific EAs are developed. We also do not believe that livestock should ever be used to manage weed infestations in riparian areas, since livestock will ultimately do more harm than good when they are introduced in these fragile ecosystems. (Center for Biological Diversity, Tucson, AZ - Comment: #1595, letter #338)

Comment: The BLM should select the alternative that most proactively manages for non-native species in the planning area. The removal of livestock meets this objective, and alternative D is therefore the most meaningful of the proposed alternatives. (Center for Biological Diversity, Tucson, AZ - Comment: #1596, letter #338)

Public Concern (GM-5):

Respondents believe the BLM should prohibit grazing in the AFNM to protect the Agua Fria River and other monument objects, especially cultural sites and pronghorn. They feel grazing perpetuates serious conflicts with the proclamation.

Response (GM-5):

Livestock grazing is a legitimate multiple use of public land authorized by the Taylor Grazing

Act of 1934 and the Federal Land Policy and Management Act (FLPMA) of 1976. Continued grazing management on the national monument was recognized in the Proclamation with the statement “Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the monument.” It is BLM’s intent to meet the requirement to protect the resources of the monument while also administering grazing on the monument. By following established regulations, policies and procedures, the Phoenix District will ensure that AFNM is managed consistent with the Resource Management Plan, the presidential Proclamation, the multiple use and sustained yield principles of FLPMA, and other environmental values and objectives. The impact analysis indicates the Proposed Plan does this. Factors that may prevent the attainment of land health standards or land use plan objectives will be identified by Rangeland Health Allotment Evaluations and the NEPA analysis. Appropriate management changes will be made or new management practices implemented by the authorized officer to reduce current or potential impacts to the vegetative, soil, and cultural resources.

Public Comments (GM-5):

Comment: The BLM should continue to manage the Agua Fria River and its tributaries for its unique values and important habitat that have already been formally recognized. Aesthetic, recreational, and ecological values are important factors that are adversely impacted by livestock grazing. The BLM should choose Alternative D for the management of livestock in the Agua Fria National Monument and for the health of the Agua Fria River. (Center for Biological Diversity, Tucson, AZ - Comment: #1559, letter #338)

Comment: To Maricopa Audubon members grazing in this monument is having a severely detrimental effect on monument objects, from the trampling of cultural resources to the over consumption of grasses that pronghorn need as well as birds and other wildlife. This is a severe impact upon the riparian areas. The Preferred

Alternative attempts to mitigate these effects through the use of seasonal and riparian area restrictions, but this simply creates a host of other problems. In addition, it continues to perpetuate the conflicts between allowing desert grazing and protecting the objects of the monument. Maricopa Audubon members most surely believe that grazing should be prohibited within the monument to comply with the monument proclamation. (Maricopa Audubon Society, Phoenix, AZ - Comment: #1254, letter #321)

Public Concern (GM-6):

Respondents feel choosing any riparian grazing alternative would compromise the habitat of federally listed and sensitive wildlife species, such as the Gila mountain sucker, the Gila chub, the speckled dace, the longfin dace, the desert pupfish, and the Gila topminnow. This is a violation of BLM mandates to protect and recover special status species. Threatened and endangered aquatic species lack adequate protection and the Preferred Alternative fails to adhere to the spirit and letter of the Endangered Species Act.

Response (GM-6):

By applying approved BLM methods and protocol, the Phoenix District will formulate and implement grazing management changes when rangeland health guidelines are not being met, under current management, in riparian systems and upland communities. The construction of fences and alternative water sources along with a winter-grazing-only season of use will result in achievement of proper functioning condition (PFC). To date, the Phoenix District has had great success on three AFNM allotments when management changes were implemented.

Proven grazing management strategies endorsed by USDI and USDA have been, or will be, implemented to protect the Agua Fria River and its tributaries. Growing season rest and utilization limits have, or will be, prescribed to address upland health issues, which could impact riparian areas.

Implementing the recommendations of allotment evaluations will protect wildlife habitat, including habitat of native fishes found in the Agua Fria River and its tributaries. For example, BLM requested a conference opinion from the USFWS on the possible effects to the proposed endangered Gila chub and its proposed critical habitat resulting from implementation of the Phoenix Resource Management Plan (RMP) and associated activities in the Agua Fria National Monument. The USFWS in their conservation measures specifically stated (at p. 19 of the conference opinion dated July 20, 2004), "Implementation of these restrictions is expected to improve Gila chub habitat by helping to increase the recruitment and survival of cottonwood tree seedlings ..."

In summary, by following established regulations, policies and procedures, the Phoenix will ensure that AFNM is managed consistent with the Resource Management Plan, the presidential Proclamation, the multiple-use and sustained-yield principles of FLPMA, and other environmental values and objectives. Factors that may prevent the attainment of land health standards or land use plan objectives will be identified by Rangeland Health Allotment Evaluations and the NEPA analysis. Appropriate management changes will be made or new management practices implemented by the authorized officer to reduce current or potential impacts to the vegetative, soil, and cultural resources.

Public Comments (GM-6):

Comment: Choosing any riparian grazing alternative then would compromise the habitat of federally listed and sensitive wildlife species, the Gila mountain sucker, the Gila chub, the speckled dace, and the longfin dace. This is a violation of BLM mandates to protect and recover special status species. (Center for Biological Diversity, Tucson, AZ - Comment: #1562, letter #338)

Comment: Threatened and endangered aquatic species lack adequate protection. Preferred Alternative (Alternative E) fails to adhere to the spirit and letter of the Endangered Species Act

by lacking protection of critical habitat for the desert pupfish, the Gila topminnow, and the Gila chub. The Endangered Species Act states that "agencies must insure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species, unless the agency has been granted an exemption." Both the desert pupfish and the Gila topminnow are federally listed endangered species; the Gila chub was proposed for listing as endangered in 2002 with an additional critical habitat designation. Because these species prefer upland areas and areas near terrestrial riparian, both grazing in riparian areas and high levels of recreation in adjacent uplands can degrade the habitat of these species. (Individual, Champaign, IL - Comment: #1892, letter #201)

Public Concern (GM-7):

Respondents suggest the BLM should contribute to the survival and recovery of the desert tortoise by eliminating uses, such as grazing, that conflict with this goal.

Response (GM-7):

Wildlife habitat values are an important consideration during S&G allotment analysis. The Phoenix District and the AG&F work, cooperatively, to identify and mitigate conflicts between livestock management practices, rangeland improvements and wildlife habitat requirements.

Public Comments (GM-7):

Comment: The desert tortoise is specifically identified in the Monument Proclamation as an "object" to be protected. The population of desert tortoise in the planning area is protected by Arizona state law. Desert tortoise are threatened throughout their range by loss of habitat, and in the planning area of the draft RMP, this means by motorized vehicles, lack of forage, and degraded habitat caused by soil compaction. It is worth noting that livestock operations directly and indirectly cause all these adverse effects. Livestock trample and crush tortoise burrows and kill juvenile tortoise. Livestock spread invasive species and thereby

indirectly diminish the native plant species that would otherwise provide forage for the species. Livestock also directly consume forage that would otherwise supply tortoise populations, and in a drought year, livestock operations can literally starve the desert tortoise. Livestock compact soils and accelerate erosion, which diminishes the quality of the soil strata that tortoise use to burrow and lay eggs. The BLM should contribute to the survival and recovery of the charismatic desert tortoise in the planning area by eliminating uses that conflict with this goal. The tortoise should not have to compete with livestock operations on the Agua Fria NM for viable habitat, since the tortoise is protected by the Monument Proclamation, but livestock are not. (Center for Biological Diversity, Tucson, AZ - Comment: #1582, letter #338)

Public Concern (GM-8):

Respondents feel grazing of sheep and goats should not be allowed anywhere near bighorn sheep areas and that the Harquahala Mountains ACEC should be closed to livestock grazing during bighorn sheep lambing season.

Response (GM-8):

The BLM believes that the livestock grazing management actions for desert bighorn sheep habitat areas adequately protects the species from livestock conflicts.

Public Comments (GM-8):

Comment: *Grazing of sheep and goats* should not be allowed ANYWHERE near bighorn sheep areas. Nine miles may not even be far enough in light of the eyeworm fiasco in Southern AZ a year or two ago. It might also be good to prohibit the use of pack goats in these areas, in case any hikers are using them, just for safety. The price of a mistake is just too great. (Individual, Black Canyon City, AZ - Comment: #1933, letter #353)

Comment: EPA recommends the following changes to the preferred alternative for the protection of wildlife: Close Harquahala Mountains ONA ACEC to livestock grazing during Big Horn Sheep lambing season, as identified under Alternative C. This would

increase wildlife forage quality and availability and eliminate forage competition between Big Horn Sheep and livestock during the critical lambing season (p. 498). (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2195, letter #396)

Public Concern (GM-9):

Several comments were received addressing removal of livestock and fences from pronghorn habitat. Commenters feel the many miles of fence on the ten allotments interfere with pronghorn and deer movement, that keeping the cattle out of the sensitive riparian areas is problematic, and that this requires significant resources for fencing and facilities.

Response (GM-9):

Wildlife habitat values are an important consideration during S&G allotment analysis. The Phoenix District and the AG&F work, cooperatively, to identify and mitigate conflicts between livestock management practices, rangeland improvements, and wildlife habitat requirements. Fencing would be required to follow BLM fencing recommendations that account for wildlife needs. Modification of existing fences is ongoing as funds are available to make existing fences conform to wildlife friendly, and especially pronghorn friendly standards. We will utilize partnerships to accomplish fence modifications. Any modifications would need to maintain the integrity of pastures and rotation schedules required by livestock grazing permits.

Public Comments (GM-9):

Comment: The management actions for the PA appears little different than the current management regime. In fact, some of the proposed actions to manage livestock will result in harm to monument objects. For example, the placement of fencing around the Badger Springs Wash area will result in an additional wildlife barrier in the critically narrow pronghorn corridor that leads up to their fawning habitat on Black Mesa. There are many miles of fence on the 10 allotments that interfere with pronghorn and deer movement. Keeping the cattle out of the sensitive riparian areas is problematic and

also requires significant resources for fencing and facilities, both of which demand constant vigilance to maintain. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2101, letter #339)

Comment: In addition, the BLM should ensure that all fencing used on the monument is "animal-friendly" and does not interfere with the movement of protected wildlife species such as pronghorn. Organizations such as the Sierra Club could assist in fence removal and conversion. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1828, letter #340)

Public Concern (GM-10):

Respondent wants BLM to give some attention to damaged fences in the monument.

Response (GM-10):

Site-specific management actions are addressed in individual planning efforts. As a general grazing management practice maintenance of individual range improvements is the responsibility of the authorized grazing permittee/lessee.

Public Comments (GM-10):

Comment: My family holds the BLM grazing lease in this area - we can't use it due to all of the fences being down - thanks for your attention (Individual - Comment: #117, letter #64)

Public Concern (GM-11):

Respondent states that the Inner Basin improvements facilities are privately owned under Section 4 permits #A2-4-333 and #A2-4-345 and are very important to their Ranching operation, and must be maintained.

Response (GM-11):

Thank you for the comment; we believe the discussion on range improvements provides opportunity for maintenance of these improvements if they are helping to achieve the Desired Future Condition of the area in question. Any impacts to authorized permittees/lessees of range improvements under either section 4

permits or cooperative agreements will be in accordance with the grazing regulations that the BLM administers.

Public Comments (GM-11):

Comment: Inner Basin improvements facilities are privately owned under Section 4 permits #A2-4-333 and #A2-4-345. They are very important to our Ranching operation, and must be maintained. (Individual, Kingman, AZ - Comment: #1177, letter #352)

Public Concern (GM-12):

Respondents express that any takings, modifications, or alterations to the Aguila Ranch or the Loma Linda Ranch grazing systems without the "three C's" (Consultation, Cooperation, and Coordination) would be protested. Other commenters state that they found proposed actions which would greatly affect their ranching operations by restricting grazing, watering facilities, and water usage in some areas and note that stock tanks also attract wildlife such as birds.

Response (GM-12):

Collaboration with the public in the development of this plan was actively sought by the BLM in the development of the RMPs. The document provides for a full range of alternatives that may have some specific management actions that may impact grazing operations depending on the alternative. These alternatives and resultant actions were developed in public process, and the BLM understands that individual grazing permittees/lessees would oppose such actions if they impacted the individuals operation. However, such the alternatives must still be considered and analyzed, and addressed issues that were raised during the public participation processed. Site-specific planning, and evaluation will address individual grazing allotment management.

Public Comments (GM-12):

Comment: Any takings, modifications, or alterations to the Aguila Ranch or the Loma Linda Ranch grazing systems as to watering facilities, limits to grazing or restrictions to improvements to the Browns Canyon, Inner

Basin or Humming Bird Springs or any other facilities without the 3 C's (Consultation, Cooperation, and Coordination means interaction for the purpose of obtaining advice, or exchanging opinions on issues, plans, or management actions.) would be protested. (Individual, Kingman, AZ - Comment: #1175, letter #352)

Comment: A common theme through this land use plan, and all land use plans involving cattle, is to control (fence) or otherwise restrict cattle around riparian areas, streams, wetlands, etc. This, of course, requires stock tanks away from these areas. Not all stock tanks are undesirable even though they attract cow birds and invasive plant species as a result of disturbed soil. On Perry Mesa and other upland mesas we have found water pipits, sandpipers, ducks other grass land birds using stock tanks. Some stock tanks have high retention walls to create the basins. Pronghorns, requiring safety sight distances, avoid tanks with that structure. One tank with a windmill south of Bloody Basin road has good sight distances and has horned larks, savanna sparrows, and other grassland birds using the water. The pumping was inactive but the mill was rotating; e.g., presumably dry well. (Sonoran Audubon Society - Comment: #1244, letter #287)

Public Concern (GM-13):

Respondents support complete closure of pastures with riparian habitat. The respondent also states that there is evidence demonstrating the adverse influence of livestock in riparian areas, and the lack of evidence that winter grazing makes a positive difference. They feel the BLM cannot legally or ethically choose to imperil these important riparian areas (for which, in part, the monument was designated) by failing to select rangeland management Alternative D. Others noted that the restriction on grazing in riparian habitat should extend beyond just the monument.

Response (GM-13):

Forage allocation decisions have been made in a previous EIS including the Lower Gila North and Eastern Arizona Grazing EIS. These

documents have been incorporated by reference, and fully considered a range of alternatives. Processes to adjust grazing preference are established and implemented through existing laws, regulations and policy. It is an implementation level decision and adjustments to forage allocation are incorporated through individual allotment decisions.

Public Comments (GM-13):

Comment: Riparian areas can recover and begin to move towards proper functioning condition if livestock are removed. So many of the riparian areas in the Monument are functioning at risk, and it would behoove the agency to consider removing livestock as a temporary or permanent tool for riparian recovery. Trout recovered significantly in Pacific Northwest streams closed to livestock (Bowers, et al. 1979); and riparian canopy-dependent bird species increased 20-fold along the San Pedro River after cattle were removed in 1986 (Krueper 1993). Livestock-grazing adversely impacts on 17 of 43 neotropical migratory bird species in southeastern Arizona (Bock et al. 1992). Given the overwhelming evidence demonstrating the adverse influence of livestock in riparian areas, and the lack of evidence that winter grazing would make a positive difference on these impacts, we believe the BLM is in error for its preference of Alternative E. The BLM cannot legally or ethically choose to imperil these important riparian areas (for which, in part, the Monument was designated) by failing to select rangeland management alternative D. (Center for Biological Diversity, Tucson, AZ - Comment: #1564, letter #338)

Comment: Livestock should be fenced out of all springs and riparian areas year round, and provided alternative water sources away from these areas. (Individual, Tucson, AZ - Comment: #836, letter #319)

Public Concern (GM-14):

Commenters support the withdrawal of livestock from the upland allotments where livestock use compacts soils, accelerates erosion, and has adverse downstream impacts. Others suggest language be added about the season of use and

longevity of exposure to livestock in order to move each particular area toward its described Desired Future Condition, which would provide BLM with maximum flexibility.

Response (GM-14):

We believe that Alternative E adequately addresses the issue of livestock grazing and provides the best management for the administration of livestock grazing within the Planning Area.

Public Comments (GM-14):

Comment: We support the withdrawal of livestock from the upland allotments where livestock use compacts soils, accelerates erosion, and has adverse downstream impacts. (Center for Biological Diversity, Tucson, AZ - Comment: #1573, letter #338)

Comment: Alternative E Section 2.6.1.8 Rangeland Management - Management Actions: "Limit Livestock grazing in riparian areas to winter season (November 1 to March 1)" Such a broad generalized management guideline as quoted above, unnecessarily hinders or limits management options and ignores site specific goals, conditions or management needs. Additionally this statement, speaks to only one part of the 3 components listed in the "Desired Future Conditions" section just above it in the document and additionally it is only one of numerous possible management actions. By listing this one 'action' it appears to weaken the box of tools available for management and support some old 'dogmas' about how to manage and maybe even reflect the agenda of some public. Healthy riparian areas need healthy uplands (watersheds) and eliminating summer use in riparian areas could make it more difficult to best manage upland, the degree of difficulty will be affected by existing fences and availability of other water resources. The length of time livestock graze riparian areas is as important if not more important than the season of use. This becomes significantly important when infrastructure is not highly developed such as few or no cross-riparian fences and little upland watering facilities exist. Season long or any winter grazing can be harmful if it

substantially reduces vegetation which could catch silt and absorb energy from high spring flows. Growing season long grazing is obviously detrimental to riparian areas, as it is to the uplands. Short grazing periods in riparian areas during the growing season that allow for re-growth are not harmful and can be beneficial. In addition, by not grazing during the growing season, the beneficial attributes of livestock activities such as dunging and urinating and breaking of the soil surface do not take place at the time of the years, when with moisture, there is good insect and microbial activity both above and below the soil surface. In rangeland management actions, maximum flexibility must be maintained to be creative and responsive in order to manage towards the goal of the desired future condition without the hindrance of such an unnecessarily broad and hindering statement as "limit livestock grazing winter season...". Could I suggest the language be: "Utilize the option of planning the season of use and longevity of exposure to livestock in order to move each particular upland and/or its accompanying riparian area toward its described 'desired future condition'. (Individual, Mayer, AZ - Comment: #114, letter #59)

Public Concern (GM-15):

Respondents wanted to know why the BLM is not proposing a maximum average annual forage use rate of 35 percent or less for the entire Planning Area.

Response (GM-15):

Site-specific planning, evaluation, and implementation of potential management actions are beyond the scope of this RMP and are addressed through the use of individual, site-specific plans. The literature citation is narrow in scope and the BLM suggests the commenter may want to read Principles of Obtaining and Interpreting Utilization Data on Southwest Rangelands available from the University of Arizona Cooperative Extension for more information on utilization.

Public Comments (GM-15):

Comment: Your proposal would see that conditions on all grazing allotments in the

planning area would comply with the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. They're supposed to do that anyway. I've already mentioned the deficiency in your livestock management strategy for riparian areas. In regards to the uplands, research has shown that average annual forage utilization rates in excess of 35% lead to resource degradation. (Holcheck 1999) Why aren't you proposing a maximum average annual forage use rate of 35% or less for the entire planning area" Literature Cited Holecheck, J.L., H. Gomez, F. Molinar, and D. Galt. 1999. Grazing Studies: What We Have Learned. Rangelands 21(2):12-16. (Individual, Phoenix, AZ - Comment: #1180, letter #23)

Public Concern (GM-16):

Respondents feel grazing should be intensively managed in semi-desert grassland areas (like Perry Mesa) for forage dependent species like the pronghorn.

Response (GM-16):

The RMPs adequately address management of livestock grazing in areas of pronghorn antelope. The area in question is intensively managed in a cooperative manner with the grazing lessee, cooperative agencies, and interested publics. We are working in partnership with the Arizona Game & Fish Department, Tonto National Forest and other partners to develop management practices that sustain pronghorn habitat and populations in the semi-desert grasslands.

Public Comments (GM-16):

Comment: Livestock grazing harms the pronghorn by reducing forage species, reducing cover for young, and indirectly restricting movement across the landscape through fencing. Pronghorn populations are supported by the semi-desert grasslands of Perry Mesa and other areas of the Monument, and livestock grazing should be intensively managed in these rapidly-disappearing landscapes. (Center for Biological Diversity, Tucson, AZ - Comment: #1578, letter #338)

Public Concern (GM-17):

Respondents suggest acknowledging the Anderson Mesa Landscape Scale Assessment completed by the Forest Service in north central Arizona as best available science for interaction of livestock and pronghorn to guide livestock management.

Response (GM-17):

We are aware of the Anderson Mesa Landscape Scale Assessment and are working closely with the Arizona Game and Fish Department to jointly manage the pronghorn in the national monument to optimize conditions for that herd.

Public Comments (GM-17):

Comment: The Anderson Mesa Landscape Scale Assessment that was completed by the Forest Service in November of 2004 deals with the interaction of livestock and pronghorn in north-central Arizona. Protocols for improving pronghorn survival and recovery include maintaining adequate hiding cover for pronghorn during fawning. "We cannot state strongly enough the importance of hiding cover! Future management actions must allow adequate residual cover to remain on the ground through the fall and winter months and remain there, through the spring fawning season. The desired amount of cover is 10". That cover should be taken out of livestock production and dedicated towards healthy wildlife populations." (USDA 2004) We expect the BLM to argue that it is not mandated to follow the regulations of the Forest Service and we agree. However, if this is the Department of Interiors Best Available Science for the same species, the draft RMP should have at least mentioned the inclusion of these management parameters. (Center for Biological Diversity, Tucson, AZ - Comment: #1579, letter #338)

Public Concern (GM-18):

Commenters suggest implementing the grazing decision matrix developed by the Prineville District. Also, they support inclusion of the decision matrix used in the Upper Deschutes RMP and language from that RMP that allows for voluntary buy-out.

Response (GM-18):

There is no statutory or agency requirement to construct a decision matrix. Livestock grazing is a legitimate multiple use of public land authorized by the Taylor Grazing Act of 1934 and the Federal Land Policy and Management Act (FLPMA) of 1976 and is recognized as such by the Presidential Proclamation which created the national monument. By following established regulations, policies and procedures, the BLM will ensure that AFNM is managed consistent with the Resource Management Plan, the Presidential Proclamation, the multiple-use and sustained-yield principles of FLPMA, and other environmental values and objectives. Factors that may prevent the attainment of land health standards or land use plan objectives will be identified by Rangeland Health Allotment Evaluations and the NEPA analysis. Appropriate management changes will be made or new management practices implemented by the authorized officer to reduce current or potential impacts to the vegetative, soil and cultural resources.

Public Comments (GM-18):

Comment: The Bureau of Land Management - Prineville District recently developed a grazing decision "matrix" in its Proposed Upper Deschutes Resource Management Plan and Final Environmental Impact Statement (2005) to guide managers in making grazing decisions on the Upper Deschutes Resource Area. While grazing remains a primary use of public lands under the plan, the matrix also provides a mechanism for managers to retire grazing allotments where livestock grazing conflicts with other public values are determined to be so severe that grazing is no longer manageable under present conditions. The Upper Deschutes matrix was approved by Secretary Gale Norton, who found it compatible with her Four C's of conservation - Conservation through Cooperation, Communication, and Consultation. NPLGC contends that a similar matrix would be appropriate for the Bradshaw-Harquahala planning area, and especially the Agua Fria National Monument, where conservation goals are prioritized over other multiple uses in the

monument. (National Public Lands Grazing Campaign, Chandler, AZ - Comment: #1053, letter #185)

Comment: Opportunities for public lands buy-out was not included in any of the alternatives. We direct the agency to the recently completed RMP for the Upper Deschutes BLM Planning Area in Oregon that uses an approved matrix for determining the potential viability of voluntary buy-out. By incorporating this kind of language in the Agua Fria/ Bradshaw Harquahala RMP, the BLM would be appropriately anticipating forthcoming legislation that would work towards conflict resolution. (Center for Biological Diversity, Tucson, AZ - Comment: #1586, letter #338)

Public Concern (GM-19):

Respondents feel allotments that meet the conditions of the Special Ephemeral Rule should be permanently retired. BLM should define the conditions (level of forage production, precipitation, and climatic conditions) that would prompt ephemeral use and discuss the environmental effects of ephemeral grazing.

Response (GM-19):

Ephemeral grazing use may be authorized under the Arizona Standards Guidelines when the following conditions are met:

- Ephemeral vegetation is present in draws, washes and under shrubs and has grown to useable levels at the time grazing begins;
- sufficient surface and subsurface soil moisture exists for continued plant growth;
- serviceable waters are capable of providing for proper grazing distribution;
- sufficient annual vegetation will remain on site to satisfy other resource concerns (i.e. watershed, wildlife, wild horses and burros); and
- monitoring is conducted during grazing to determine if objectives are being met.

Public Comments (GM-19):

Comment: The BLM should reconsider ephemeral use permits and instead remove livestock from allotments within the Bradshaw-

Harquahala planning area within the hot desert biome, at elevations of less than 3500 feet, with less than 8 inches of annual precipitation, less than 25 pounds per acre of forage, less than 5 percent composition of desirable plants, and lacks improvement potential with rangeland management. (Center for Biological Diversity, Tucson, AZ - Comment: #1584, letter #338)

Comment: Livestock grazing is an authorized use on these lands, and your recent evaluations of yearlong grazing allotments conclude that most of them are meeting the BLM's Arizona Standards for Rangeland Health. However, the Public Lands Foundation has long been concerned about yearlong livestock grazing operations on desert public lands. In 1968, the BLM issued a special rule that provided for ephemeral grazing on BLM lands in desert areas below 3200 feet in elevation and which receive less than 8 inches of rainfall. Some of the lands in the Bradshaw and Harquahala Areas meet this criteria, and if the grazing allotments have not yet been converted to ephemeral use, they should be. Most of the grazing allotments in these areas are not economic ranch operations. The "social" values of desert vegetation and wildlife habitat are far more important than the economic values of livestock production on these lands. At best, we believe that these low desert ranges should be used only for ephemeral grazing during the Spring months in years when there is abundant annual vegetation. If livestock grazing is to continue on lands in the higher elevations, the Arizona Standards for Rangeland Health must be met. (Public Lands Foundation, Arlington, Virginia - Comment: #1169, letter #403)

Public Concern (GM-20):

Commenters feel there is no evidence presented in the Draft RMPs that winter grazing in riparian areas is better for the morphological or hydrologic conditions of riparian areas, or that this type of grazing will reverse the trend of degrading conditions. Others suggest that monitoring be used, rather than restrictions, to assess the health of riparian zones.

Response (GM-20):

Riparian management, consistent with Arizona Standards for Rangeland Health, would reduce the potential for damage to cultural resources and wildlife habitat, as well as the incidence of livestock trails and trampling that could reduce scenic values. Proven grazing management strategies have been and will continue to be implemented to protect the Agua Fria River and its tributaries. Growing season rest and utilization may be prescribed to address upland health issues, which could impact riparian areas.

The USDI Technical Reference TR-1737-14, *Grazing Management for Riparian-Wetland Areas*, gives several examples of grazing management strategies that can result in improved riparian conditions. According to T.R.1737-14, the winter-only grazing treatment has been shown to both improve riparian conditions where improvement is needed and to maintain stable, proper-functioning riparian conditions where they exist. As a part of the Standard and Guideline process to achieve/maintain rangeland health, the BLM has successfully implemented a winter season-of-use grazing treatment in riparian pastures on several AFNM allotments.

Public Comments (GM-20):

Comment: Sixty-one percent of the riparian areas on the Agua Fria National Monument are functioning at risk, with half of these either trending downward or without an "apparent trend." On the Bradshaw-Harquahala planning area, fifty-nine percent are functioning at risk, or worse. Despite years of monitoring showing "functioning at risk" and "degrading channels" in the riparian areas of the planning area, the agency has thus far failed to take action to protect these federal lands and resources, has thus far failed to restrict or prohibit grazing on the allotments, and instead advocates in the draft RMP an alternative that will allow grazing degradation to continue, albeit seasonally. There is no evidence presented in the draft RMP that winter-grazing in riparian areas is in fact any better for the morphological or hydrologic conditions of riparian areas, or that this type of grazing will reverse the trend of degrading

conditions. The idea that winter grazing will be better for the resource is unsupported. (Center for Biological Diversity, Tucson, AZ - Comment: #1560, letter #338)

Comment: The proposal to allow continued November-February grazing in riparian areas is not scientifically justified in this semi-desert ecosystem.(Footnote 1,2) Cattle will graze in desert riparian areas during the so-called "non growing season" because the riparian areas contain valuable vegetative cover (Footnote 3). While there, the cattle interfere with a protected object of the Monument. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2103, letter #339)

Public Concern (GM-21):

Comments were received addressing the need for inventory of resources to adequately determine the impacts of grazing. FLPMA requires that BLM prepare and maintain a current inventory of all public lands and their resources. Therefore, the BLM should inventory and monitor all of the ecological resources on the monument and within the broader Planning Area before selecting alternatives that could degrade these resources.

Response (GM-21):

We believe the RMP has met both the spirit and intent of FLPMA and has met the legal, and regulatory obligations for a land use plan.

Public Comments (GM-21):

Comment: FLPMA also requires that BLM prepare and maintain a current inventory of all public lands and their resources. 43 U.S.C. 1711(a). BLM has failed to keep current inventory data on many resources of these public lands including, for example, the springs and riparian areas in each of these allotments, as evidenced by the scant treatment of these resources in the draft EIS. The BLM should inventory and monitor all of the ecological resources on the Monument and within the broader planning area before selecting alternatives that could degrade these resources. The draft RMP admits that the BLM has incomplete information regarding the health of

these lands including, but not limited to, the status of soils, special status species, water resources, riparian vegetation, and springs and wetlands. Without a clear understanding of the current status of these public lands BLM cannot make a rational decision about continued grazing in these allotments. BLM's failure to maintain a current inventory of these resources violates both the spirit and letter of FLPMA. (Center for Biological Diversity, Tucson, AZ - Comment: #1554, letter #338)

Public Concern (GM-22):

Commenters feel the issue of grazing management was identified as a significant scoping issue, but it is not reflected in Table E-1. In addition, no summary of grazing management, monitoring, current conditions and trends, levels of grazing, recent actual use, or suitability and capability analysis were included in the document.

Response (GM-22):

Collaboration with the public in the development of this plan was actively sought by the BLM in the development of the RMP. The document provides for a full range of Alternatives that may have some specific management actions that may impact grazing operations depending on the alternative. These Alternatives and resultant actions were developed in public process, and take into consideration that individual grazing permittees/lessees would oppose such actions if they impacted the individuals operation. However, such the Alternatives must still be considered and analyzed, and addressed issues that were raised during the public participation processed. Site-specific planning and evaluation will address individual grazing allotment management.

Public Comments (GM-22):

Comment: As a preliminary matter, we note that Table 3 in Appendix B of the draft RMP (p. 704-706) shows that the issue of grazing on these lands was of significant concern to the commenting public. Despite this, rangeland management was not highlighted in Table E-1 as a key component. For both planning areas,

numerous comments requested that the impacts of grazing be evaluated. In spite of this, no summary of grazing management, monitoring, current conditions and trends on the allotments, levels of grazing, recent actual use data, nor suitability and capability analysis were included in the draft RMP. A more thorough explanation of current conditions and future projections would have better met the request for evaluating grazing impacts, as well as met the disclosure requirements of the National Environmental Policy Act. The BLM should include this level of analysis in the final EIS, in order to adequately inform the decision-maker and the public. (Center for Biological Diversity, Tucson, AZ - Comment: #1549, letter #338)

Public Concern (GM-23):

Respondents feel Standards and Guides assessments are too few and too subjective to be of value in properly managing grazing or achieving ecological improvement as these assessments do not require long-term, on-the-ground, quantifiable monitoring data. BLM should provide information concerning how many assessments have been done and how often they are reviewed because without consistent monitoring and scientifically validated studies, BLM can not determine the impacts of grazing. The Draft RMPs should also include management actions in cases of non-compliance, specifying the time-line for compliance and the penalties (including livestock removal) that may result.

Response (GM-23):

The BLM conducts Standards and Guidelines (S&G) assessments in the regular course of business. BLM intends to complete all S&G evaluations on allotments by 2009. Monitoring is conducted in accordance with methods and protocol outlined in the Interagency Monitoring handbook endorsed by USDI and USDA. Federal grazing regulations provide administrative remedies for unauthorized livestock use, and failure to meet Standards for Rangeland Health. S&G evaluations, as well as any other Phoenix District grazing data are available, upon request, for public review in the

Public Room, Phoenix District, 21605 N. 7th Avenue, Phoenix AZ, 85383.

Public Comments (GM-23):

Comment: This draft RMP repeatedly mentions the Land Health Standards, but these assessments do not require long-term on-the-ground quantifiable monitoring data. Indeed, the assessment can be done solely on the basis of ocular monitoring. There are no mandatory comparison data that shows composition, cover, and trend within grazing exclosures and on utilized plots that would indicate whether or not livestock grazing is adversely affecting resources. Without consistently monitored, scientifically valid studies, the BLM cannot determine the impacts of grazing. Further, the standards for rangeland health are minimum standards that every grazing allotment should meet and should trigger corrective actions when they are violated. These Land Health Assessments define the minimum ecological condition, but do not necessarily indicate that grazing is no having a detrimental impact on the allotment. These standards do not consider the impacts of livestock grazing on the archeological record, the visual and scenic resources, the impacts to recreation, the impacts on wildlife, or the adverse impacts to wilderness values. We object that the RMP relies so heavily on the minimal evidence that these assessments provide, and we believe this over-reliance fails the FLPMA and BLM rules. In places where vegetation communities differ from target ranges for indicator species, solutions should be proposed, and these solutions should invariably include the utter cessation of livestock grazing. The BLM surely has the information it needs to understand that livestock have long-term detrimental impacts in upland and riparian areas. The BLM should certainly seek to obtain on-the-ground, quantifiable information to prove or disprove this, and the complete absence of mandatory monitoring in the plan is just one of its many shortcomings. (Center for Biological Diversity, Tucson, AZ - Comment: #1567, letter #338)

Comment: Objective, quantifiable monitoring is essential for effective management (Christensen et al. 1996). Monitoring must be done frequently

and properly, and in the absence of consistent monitoring, livestock should be excluded. Permittee monitoring should be allowed only where there is a system of objective checks in place and a strong history of permittee compliance. Monitoring should be conducted every year before, during, and after the monitoring season. Resources including soils, plant communities, TES and rare species, water quality, and management compliance should all be regularly and consistently checked by the Forests. All results should be publicly available, and reports summarizing those results should be prepared. The draft RMP should also include management actions in cases of non-compliance, specifying the time-line for compliance and the penalties- including livestock removal-that may result. (Center for Biological Diversity, Tucson, AZ - Comment: #1566, letter #338)

5.4.12 MINERAL RESOURCE MANAGEMENT

Public Concern (MI-1):

Commenters urge no increase in restrictions to exploration and production of mineral resource, including casual mining. They feel the DRMPs/DEIS greatly underestimates the mineral potential of the area and downplays the importance of salable minerals for use in construction industry. Others oppose opening areas that are currently withdrawn from mineral entry or favor more restrictions on current mining activities.

Response (MI-1):

As central Arizona urbanizes, the value of public lands for recreation and open space increases exponentially. The Proposed Alternative attempts to balance the needed production of commodities from public lands (primarily minerals and livestock) with the requirements to protect sensitive plant and wildlife resources, cultural resources, and opportunities for diverse recreation experiences. To find this balance, some limitations will be proposed to almost all users. It is BLM's opinion that the Proposed Alternative offers the greatest diversity in opportunities for recreational experience while

maintaining sufficient production of commodities to meet demand, while also protecting the sensitive resources we are required to protect.

The mineral potential data came from our files and Arizona Geological Society, and was compiled in a resource assessment done by Ninyo and Moore, who were subcontractors to the original planning consultant we hired.

We understand the importance of saleable minerals to the construction industry, and in the case of production of sand and gravel, State and private land are closer to the market and have as much or more potential for production as BLM-managed land, especially within the life of our plan. We recognize also that BLM supplies over 60 percent of the crushed stone to the Phoenix Metro area. The impact analysis conducted in document Section 4.17 reflects the value of these commodities and assesses the potential affects of our management decisions on their production.

The Proposed Alternative has few new restrictions to mining over what is currently in place. The designated ACECs and allocations for wilderness characteristics would be available for prospecting and development of both locatable and leasable minerals. Though they would be closed to mineral material disposal, (salable minerals) most of these areas are distant to markets and development of mineral materials would be an economical risk.

Public Comments (MI-1):

Comment: Arizona State mineral rights also exists in the Baldy Mountain Area and I question the group that proposed the BLM right to take valuable Arizona State mineral royalties away with very little research completed. Please, do the research, before you propose the taking. If you do not know, mineral royalties will be paid to the Arizona State children attending schools in the northern Phoenix Area. (Southwest Cinders LLC, Gilbert, AZ - Comment: #1059, letter #345)

Comment: There should be more closures to mining, as in Alternative D. For example, the

headwaters of the Hassayampa River, around the existing wilderness areas (Harquahala, Hummingbird Springs, Big Horn) should be protected from future mining activities. These areas contain important Bighorn Sheep habitat, and should be given the Special Area Designations shown in Alternative D (Map 2-68). (Individual, Tucson, AZ - Comment: #830, letter #319)

Public Concern (MI-2):

Commenters would like BLM-managed land along New River in Maricopa County to be closed to any mineral development, especially material sales. If BLM does authorize this use, the community would like stipulations.

Response (MI-2):

The subject parcel is not a “reconveyed” parcel, so that particular management prescription would not apply. However, compliance to Land Health Standard #2 for maintaining riparian in proper functioning condition would apply. Also, any proposal to develop the parcel for mineral materials would require an Environmental Analysis, which would include analysis of dust, traffic, noise, and other social and environmental factors. Though we could not treat the action as if it were in a non-attainment area if it is not, dust and other air quality impacts would need to be addressed through the required NEPA document.

Public Comments (MI-2):

Comment: Alternative E - Page 169 2.6.2.1.3 Mineral Resources Management Leasable, Saleable & Locatable Minerals -BLM parcels in the New River Area EAST of I-17 are open for salable, locatable, and leasable minerals. We recommend closure of the BLM lands along New River in Maricopa County to salable, locatable, and leasable minerals. We particularly object to salable minerals such as sand and gravel because: -The dust and traffic associated with such activity is hazardous to the health of people living near by and even more so to the children attending the New River Elementary School. -If this activity is allowed in spite of overwhelming community objection, we ask that the BLM work with ADEQ and Maricopa

County Environmental Services Department to install and operate air pollution monitors near by. -Also, if this activity is allowed, we ask that the BLM work with Maricopa County on traffic controls or routing to protect children coming and going from school. -Although it is outside the PM-10 designated area, this area should be treated the same as a PM-10 area due to the population growth and school. -The disturbance would alter the pristine physical characteristics of this riparian area. (New River/Desert Hills Community Association, Phoenix, AZ - Comment: #1531, letter #393)

Comment: Note: Page 169 says “Open Lands that have been reconveyed to the Federal Government and managed by BLM to mineral material disposal under applicable laws, except on the floodplain of riparian areas.” It was unclear whether this includes the area referred to along the New River. (Individual, Black Canyon City, AZ - Comment: #1305, letter #281)

Public Concern (MI-3):

Commenters would like a map or some description of how allocations and designations would “restrict” mineral exploration and development because they feel the mineral potential maps were deficient. Additionally, they would like more information about how resource allocations restrict mineral exploration and development.

Response (MI-3):

Maps 2-10, 2-22, 2-23, 2-24, 2-43, 2-44, 2-45, 2-63, 2-64, 2-65, 2-80, 2-81, 2-82, and Tables 4-4 and 4-7 are all intended to provide information as to how allocations and designations would impact mining. Other allocations and designations (for actions such as Visual Resources Management, management for wilderness characteristics, and ACECs) may restrict some mineral activity and those impacts are discussed in Section 4.17. Site-specific impacts would vary due to the particular design of a mining operation and the particular site characteristics and those site-specific impacts would be analyzed at the time of the proposal. The Surface Resource Act of 1955 states: “Any such mining claim shall also be subject, prior to

issuance of patent therefore, to the right of the United States, its permittees, and licensees, to use so much of the surface thereof as may be necessary for such purposes or for access to adjacent land: Provided, however, that any use of the surface of any such mining claim by the United States, its permittees or licensees, shall be such as not to endanger or materially interfere with prospecting, mining or processing operations or uses reasonably incident thereto.”

Public Comments:

Comment: In addition, proper characterization of the location of these materials, their proximity to the market and accurate projections of what it would take to meet those demands is needed. It appears that many of the known deposits are not represented on the maps or have not been considered and the Department of Mines and Minerals, the Arizona State Geological Survey, United States Geological Survey and other affected industry parties should have been consulted. (Arizona Rock Products Association, Phoenix, AZ - Comment: #1477, letter #355)

Comment: It would be helpful to not only depict areas of high and moderate mineral resource potential (as shown on some of the maps) but also how the other resource allocations restrict exploration and development of the same. (Department of Mines and Mineral Resources, Phoenix, AZ - Comment: #162, letter #61)

Public Concern (MI-4):

Commenters are strongly opposed to Alternatives, especially C and D, which include their claim block area located within the Baldy Mountain Area of Critical Concern (ACEC). The ACEC would close the area to mining claim location and severely limit any mineral exploration and development. Further restrictions may impact 20 active mining lode claims, some of which contain substantial quantities of high-value, filter-aid perlite.

Response (MI-4):

All mining claims are valid until proven otherwise. The creation of an ACEC would not invalidate mining claims. A validity examination

may show that the claims are invalid but this is speculation, and BLM will not speculate on the validity of a mining claim. It is true that the land within an ACEC is withdrawn from mineral entry (no new mining claims may be located), however existing claims may be developed in accordance with regulations. For example all development greater than casual use would require a plan of operations. Wilderness characteristics do not prohibit mineral development on valid existing claims.

Public Comments (MI-4):

Comment: Southwest Cinders LLC controls 20 active mining lode claims in section 3 of T 6 N, R 1 W and within the area of the DRMP/DEIS. Recent studies and analytical data support the properly having substantial quantities of high value, filter-aid perlite. We strongly support Alternative A allowing the BLM lands to remain open for exploration and development. (Southwest Cinders LLC, Gilbert, AZ - Comment: #1061, letter #345)

Comment: We [Southwest Cinders LLC] are strongly opposed to the other alternatives, especially C and D, which include our claim block area located within the Baldy Mountain Area of Critical Concern (ACEC). The ACEC would close the area to mining claim location and severely effort any mineral exploration and development. Alternative E would include our claim block into a wilderness characteristic designation area prohibiting mineral development. (Southwest Cinders LLC, Scottsdale, AZ - Comment: #1494, letter #276)

Public Concern (MI-5):

Comments were received addressing areas with known locatable minerals and the need to open mining activities. It appears that most of the land north of Arizona Route 74 (Cave Creek Road) and around the Wickenburg area would be essentially closed to mining activities. Yet development is occurring in these areas, and nearby construction materials would be an asset.

Response (MI-5):

The areas mentioned would remain open to leasable, locatable, and saleable minerals. Allocations for Visual Resources Management, to maintain wilderness characteristics, or for other resource focus, may place some constraints on the way a mine operation would be conducted, especially in terms of site reclamation. However, mineral exploration and development would continue to be possible.

See also information on the The Surface Resource Act in MI-3.

Public Comments (MI-5):

Comment: It appears that most of the land north of Arizona Route 74 (Cave Creek Road) and around the Wickenburg area would be essentially closed to mining activities. Yet development is occurring in these areas, and nearby construction materials would be an asset. Already the State is feeling the shortage of mineral materials, and construction costs of projects currently underway are rising as a result. Besides, the Wickenburg area, as well as other sectors in the Bradshaw-Harquahala Planning Area have been known to have locatable minerals in the past, and since the prices of many minerals and metals has gone up in the last few years, the potential for further activity in the area has increased. However, under the proposed RMP it seems, mining in those areas would not be possible. (Department of Mines and Mineral Resources, Phoenix, AZ - Comment: #165, letter #61)

Public Concern (MI-6):

Commenters addressed the reference to two existing mining claims currently being used for events by "prospecting clubs." Respondents are concerned that with the increasing price of gold, these could well become commercially viable operations.

Response (MI-6):

BLM will not speculate on the validity of a mining claim. All mining claims are presumed valid until proven otherwise.

Public Comments (MI-6):

Comment: Reference is made in the Executive Summary to two existing mining claims, which are currently being used for "events" by "prospecting clubs." This is misleading since as recognized on page 413, volume 1, these are actually small-scale gold placer mining operations. With the price of gold today these could well become commercially viable. (Department of Mines and Mineral Resources, Phoenix, AZ - Comment: #163, letter #61)

Public Concern (MI-7):

Respondents express concerns in regards to the disposal proposed in Alternative E of the cyanide leach mine development found in T1.2 N., R3 W. Sec. 332. Respondent feels even though much correspondence has been exchanged, BLM has not been willing to discuss in person the many issues their management has allowed and therefore, issues presented in the plan would be resolved in a similarly poor manner.

Response (MI-7):

All mining claims are presumed valid until proven otherwise. The site is presently being reclaimed, and mining claimants must comply with 3809 Regulations.

Public Comments (MI-7):

Comment: My main interest, and concern is a cyanide leach mining development that is one-hundred fifty yards above my home of thirty years. The permitted claims are found in T1.2 N., R3 W. Sec. 32. Gold Crown Mill Site (B.L.M. AMC #69463) and Copper Crown Lode Claim (B L.M , AMC #270960). These illegal claims are in the BHMP area, and is on BLM land that is slated for sale in alternative "E", section 2.6.2.1.1, "Lands and Realty", page 168 of Volume #1, (map 2-78). With the history of regulation, or the lack there of, pertaining to the above referenced claims, it give me much concern that BLM would step out from under the very destructive situation, that they have allowed Mr. Porter and T-P ltd. to perpetrate. In my experience ,with BLM since 1989, their adherence to regulations and policy has failed not only to address the issues raised, but has

made no attempt to resolve the very basic concerns. Example water and aquifer protection: Even though much correspondence has been exchanged, no BLM ranger, nor official has been willing to discuss, in person the many issues their management has allowed. I have no atta-boys for BLM, and how they have handled the protection of public lands, and in turn endangered my family and property. Knowing how my situation has been handled, I must assume this is typical response, and that issues of BMHP would be resolved in a similar fashion, which is not a good thing. (Individual, Kirkland, AZ - Comment: #2049, letter #161)

Public Concern (MI-8):

Respondent would like mining in high quality scenic vistas, such as the Belmont Mountains to end.

Response (MI-8):

Existing claimants in the area have the legal right to develop these claims. The area is not closed to mineral entry and as such the claims may be staked and mineral development may proceed in accordance with Federal regulations and State laws.

Public Comments (MI-8):

Comment: Minerals Management: All mining within high quality scenic vistas like the Belmont Mountains should end. In all these categories, we support Alternative D for the HMMU. We feel the negative effects of mining on wildlife and on scenery make Alternative E inappropriate. (Tonopah Area Coalition, Tonopah, AZ - Comment: #1120, letter #347)

Public Concern (MI-9):

Respondents feel BLM did not adequately complete the report on metallic and industrial minerals in the DRMP/DEIS.

Response (MI-9):

The minerals section of the Affected Environment was based on information provided by the Arizona Geological Society and the recent (20 years) history of mineral activity within the Planning Areas.

Public Comments (MI-9):

Comment: I would also like to question the poor report completed by the BLM committee on metallic and industrial minerals in the DRMPs/DEIS. Metallic and Industrial Minerals are strategic part of the economic well being and defense of the United States of America. Also the prices of many of these strategic minerals and fuel materials such as oil and coal have increased in prices that are not reflected in the DRMP/DEIS. These strategic industrial minerals such as perlite, are imported in large amounts from Greece. I question the ability of governmental officials to find, locate and develop many of the minerals we use in everyday life. Ore deposits exists where they occur in the earth and not where the Sierra Club or Green Peace, conveniently wants them to be located. (Southwest Cinders LLC, Gilbert, AZ - Comment: #1060, letter #345)

Public Concern (MI-10):

Respondents feel the current Draft RMPs limit mine permitting and appears to shift the responsibility to meet market demand on State and private lands. Additionally, respondents note that according to the list of preparers, no mining organization was consulted or had input into the preparation of the RMP and EIS except one civil engineering firm.

Response (MI-10):

Mining was considered in every plan decision and alternative. We recognized the industry changes as mineral prices change and demand during the last 20 years may not have represented demand in the future. For this reason, we have avoided mineral closures as much as possible. In some allocations and designations that remain open to mining, good mine reclamation will be required to meet the Desired Future Conditions.

It is BLM's opinion that access to minerals is sufficiently maintained to meet projected future demand. Maps showing the location of materials and mineral potential were acquired from the Arizona Geological Survey and from BLM files. Though the intent is not to "shift the responsibility to meet market demand on State

and private lands”, those lands are closer to the market and may be better able to meet demand for the life of this plan. BLM only supplies small quantities of sand and gravel. This is in part due to the fact that the better deposits are not on BLM-administered lands and are found on State and private lands.

Public Comments (MI-10):

Comment: In looking through the list of preparers of the volumes, volume 2, pages 636 through 639, it is clear that no mining organization was consulted or had input into the preparation of the RMP and EIS. There is one civil engineering firm, but they were primarily contributors to the "geological and paleontological resources". Possible mining in the area received little consideration. (Department of Mines and Mineral Resources, Phoenix, AZ - Comment: #168, letter #61)

Comment: The DRMP/DEIS of the Bradshaw-Harquahala area greatly underestimates the mineral potential of the management area. The DRMP/DEIS of the Bradshaw-Harquahala area was initiated near the end of a 25 year downturn in the market of mineral commodities. Mineral commodity prices follow long-term trends and the commodity cycle has recently charged dramatically. Since 2002 to 2003, mineral commodity prices have sky-rocketed, and have in many cases doubled and even tripled. This trend has been projected to continue for at least the next 15 to 20 years. In addition, the draft report downplays the importance of salable minerals for use in the construction industry. (Individual, Apache Junction, AZ - Comment: #1885, letter #391)

Public Concern (MI-11):

Respondents want to know how it was determined that “8 to 10 million cubic yards of saleable mineral materials” was projected considering that approximately 40,000 acres would be available for disposal by sale or exchange.

Response (MI-11):

We reviewed the Reasonable Foreseeable Development Scenario for saleable minerals

presented in the beginning of document Section 4.17 and believe it to reflect, as best we can determine, the future of that commodity within the Planning Area within the life of the plan.

Public Comments (MI-11):

Comment: In Section 4.17 the Draft RMA proposal recognizes there are "many locations for saleable mineral resources" yet the report sets a seemingly arbitrary number of an "estimate 20 new saleable mineral pits or quarries." What would the breakdown be (i.e. sands and gravel vs. decorative or other non metallic minerals) and how was it determined that "8 to 10 million cubic yards of saleable mineral materials" was projected considering that approximately 40,000 acres would be available for disposal by sale or exchange. (Arizona Rock Products Association, Phoenix, AZ - Comment: #1475, letter #355)

Public Concern (MI-12):

Commenter states that the document does not show that consideration has been made for the timeliness and benefits of mining reclamation on the multiple use and sustain yield of the land..

Response (MI-12):

Mine reclamation was considered in the development of the Draft RMPs/EIS and plays an important role in helping BLM meet management objectives. In most cases, even in places where a mine operation might be incompatible with the goals for an allocation or designation, mining was left open because good reclamation during the mining process, and especially when mining ceases, can still achieve the Desired Future Conditions for an area.

Public Comments (MI-12):

Comment: It is not apparent from the document that consideration has been given to the fact that after the mining is complete, the affected areas are reclaimed. In fact, the reclamation work generally proceeds as the mining progresses. After reclamation is completed the restoration is often as good as before and sometimes even better. A good example of the type of reclamation being performed by reputable

mining companies these days is that of Peabody Western Coal Company. After reclamation the local shepherds are able to graze 20 times more sheep on the same land as they were able to do before mining. Similarly, ranchers can graze more cattle. (Department of Mines and Mineral Resources, Phoenix, AZ - Comment: #167, letter #61)

5.4.13 TRAVEL MANAGEMENT

Public Concern (TM-1):

An array of comments was received addressing the liberal legal and physical public access for motorized recreation, natural resource development, and the ability of the AGFD to maintain and implement water and habitat projects. Some respondents feel there is a need to protect our environment from additional access, while others feel more access is critical for recreation and natural resource activities. BLM needs to have the flexibility to make appropriate adjustments where needed.

Response (TM-1):

The management proposed in the plan addresses the need for adequate access, and at the same time attempts to meet BLM's mandate to manage for multiple use and sustained yield as defined in FLPMA. The route evaluation and designation process that implements motorized recreation and other forms of recreational transportation decisions, will ultimately determine the route network and how it meets motorized access needs for recreation.

Issues surrounding access across private lands are sensitive for the BLM to handle. As a manager of public lands, we must attempt to balance the desire of the public to access public land with the desires of adjoining land owners. BLM has little authority to gain access for the public across private land. Many times, interested publics will have more success gaining access for themselves (either as an individual or a group), rather than waiting for BLM to negotiate access for the general public. Negotiating and securing legal public access can

take years. Meanwhile, public demand for access continues to increase.

The location of routes for both motorized and non-motorized use is an issue that will be considered during the route evaluation/designation. BLM will plan to meet Land Health Standards and consider sensitive areas and habitats during the evaluation process, including riparian-wash areas. BLM will attempt to identify conflicts that are occurring or are likely to occur to a level that makes sense. Part of managing recreation is letting the public know what experiences may be available in a given location and providing for an array of different opportunities. Not all opportunities will be available in all places. We believe this plan addresses the many forms of recreation done on BLM-managed lands.

Public Comments (TM-1):

Comment: I do not want to see the BLM or other agencies open up as many miles of trails because they do not have the resources to manage their lands effectively. This seems to be the easy way out. (Individual - Comment: #1161, letter #331)

Comment: The Arizona RAC is currently working with BLM to develop Guidelines for Management of OHV Use that should help BLM manage OHV use. Access is critical for the many public recreation and natural resource activities that will take place on these lands, and BLM needs to have the flexibility to make appropriate adjustments where needed. (Individual, Phoenix, AZ - Comment: #473, letter #204)

Public Concern (TM-2):

Commenter feels that the statement in Section 2.7.1.6, "Maintain low interaction among users," needs to be clarified or defined. This could mean many different things and could result in severe restrictions on access.

Response (TM-2):

We believe that the statement taken in the full context of the discussion of wilderness characteristics adequately explains the intention

and provides management direction for the area in question. Route designation for the area will be addressed specifically in travel management plans, and every management unit identified in the RMP and will be a public process.

The phrase “low interaction of users” refers to goals set to maintain the Recreation Opportunity Spectrum (ROS) classification of semi-primitive non-motorized and semi-primitive motorized. In an area with ‘low interaction of users,’ one could expect to meet others occasionally and evidence of humans would be present. Table S defines group size and number of contacts to be expected.

Public Comments (TM-2):

Comment: Concerning Section 2.7.1.6 Page 223, column 2, last bullet, commenter states, “Maintain low interaction among users. Needs to be clarified/defined. This could mean many different things and could result in severe restrictions on access.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1383, letter #401)

Public Concern (TM-3):

Respondent states that access for all proposed uses including natural resource development is critical; therefore, they request that BLM take into consideration appropriate adjustments to the plan where needed to take into account current growth projections.

Response (TM-3):

Access for commercial resource development is guided by the lands and minerals sections of this plan. Specific mineral withdrawals can be found in Chapter 2 in the Section 2.6.2.1.3. All mineral material sites are discretionary and will be considered on a case-by-case basis.

Public Comments (TM-3):

Comment: As you know, access is also critical for all of the proposed uses in the RMA including natural resource development, ARPA, therefore; requests that BLM take into considerations how that would make appropriate adjustments to the plan where needed to take into account current growth projections.

(Arizona Rock Products Association, Phoenix, AZ - Comment: #1474, letter #355)

Public Concern (TM-4):

Commenters suggest additional text be added to the Castle Hot Springs Management Unit which clarifies that livestock grazing and OHV use are multiple uses and that there must be vehicular access to BLM-managed land by the grazing permittee or lessee. Further, BLM should close to motorized traffic the route between Hells Canyon Wilderness and the lands allocated to maintain or enhance wilderness characteristics. This route should be managed as a hiking and equestrian trail.

Response (TM-4):

The Castle Hot Springs Management Unit will be managed for multiple use including livestock grazing and OHV use. The Hieroglyphic Mountains area will continue to be accessible for OHV recreation. No closures to grazing are proposed within the Management Unit.

Access to range facilities is important and BLM intends to work with permittees to maintain access for range management. At the time of inventory, the route forming the south border of Hells Canyon Wilderness was in a reclaiming state. In BLM’s route inventory, reclaiming is defined as:

“Has not been used enough so that there is intact woody vegetation growing in it that would be damaged by the passage of a vehicle. Erosion and vegetation may block way, cause vehicle to get stuck and/or cause damage to vehicle.”

Based on your comments, we reviewed this route. Conditions have changed marginally since the inventory. We removed the statement to close this route as a management action from the plan. We will address this route during the route evaluation and further consider the condition and access limitations in context with the desired future conditions of this area.

Public Comments (TM-4):

Comment: The following text (in red italics) needs to be added, -M&J Bigler 2.7.3.1

Management Units GENERAL
MANAGEMENT OF MUs Castle Hot Springs
Desired Future Condition. The values of open space and scenic and visual quality are emphasized. Recreational, cultural, and biological assets are maintained. The lands within the MU are managed for multiple uses, including livestock grazing and OHV use. The MU's scenic and natural landscape settings are maintained while offering visitors a diverse array of recreation opportunities,... (Individual - Comment: #814, letter #288)

Comment: The following needs to be addressed. There must be full vehicular access to these portions of BLM land by the Grazing Permittee or Lessee! Changes to the text below, that would reflect this additional access, need to be included. 2.6.2.2.2.6 Wilderness Characteristics Within the Castle Hot Springs MU, 6,550 acres would be allocated to maintain or enhance wilderness characteristics as shown on Map 2-89. Desired Future Condition A natural landscape retained between the Hells Canyon Wilderness and Lake Pleasant Regional Park. This area complements the landscape and recreation opportunities in the regional park and the entire Castle Hot Springs SRMA. Provide high-quality primitive recreation and solitude in a region otherwise allocated to motorized recreation. Preserve desert tortoise habitat, sustain riparian areas, and maintain the area's value for use by a wild burro herd. Maintain semi-primitive motorized recreation setting along designated routes. Manage areas beyond ½ mile from a designated route for a semi-primitive non-motorized setting. Management Actions Limit motorized vehicle use to designated routes. Close to motorized traffic the route between Hells Canyon Wilderness and the lands allocated to maintain or enhance wilderness characteristics (the route along the wilderness boundary that is reclaiming). Manage this route as a hiking and equestrian trail. Develop up to five non-motorized trails and trailheads to link with the Hells Canyon trail system and ultimately to the Maricopa County trail system. Emphasize hiking and equestrian opportunities in recreation management planning. Allocations for Visual Resource

Management designed to achieve Desired Future Conditions are discussed in section 2.6.2.2.2.7. (Individual - Comment: #815, letter #288)

Public Concern (TM-5):

Respondent requested the language in the draft RMP should be changed to include the unstated but intended words "motor vehicle" whenever "access" refers to motor vehicle access.

Response (TM-5):

Within the document, access management includes both motorized and non-motorized travel routes. Even non-motorized recreationists get to the places they access using motor vehicles. We have tried to be clear if we have made decisions that distinguish between motorized and non-motorized access.

Public Comments (TM-5):

Comment: Throughout the draft RMP, the word "access" is almost always used to denote motor vehicle access. By not explicitly identifying that "access" refers to "motor vehicle" access, the draft RMP contributes to the false impression that human access to public lands in the Planning Area, and particularly in the Monument, is severely limited. The fact is that human access to the Monument is virtually unlimited. Hikers and horseback riders have unfettered access throughout the entire Monument, and many "closed" Monument roads will be adapted to support non-motorized users. Motor vehicles, although they have thousands of miles of routes available to them, do not have unlimited access to the Monument. Recommendation: The language in the draft RMP should be changed to include the unstated-but-intended words "motor vehicle" whenever "access" refers to motor vehicle access. Not being explicit about what kind of access is being discussed will continue to contribute to public confusion regarding public "access" to Monument lands. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2216, letter #343)

Public Concern (TM-6):

Respondent is concerned about how routes are identified and/or defined as reclaimed.

Response (TM-6):

The subject route would show no to little evidence of use, it could have bushes or trees growing in the center berm or in the tread, the route could be completely washed out, or the route could be covered with grass or ground cover. Field inventory crews conducting OHV route inventories carefully assessed each route on the ground. The reclaiming classification was only rarely applied (see also the definition of reclaiming in TM-5).

Public Comment (TM-6):

Comment: Concerning Section 2.6.2.2.2.9 Page 186, column 2, 2nd paragraph, "...Routes identified as reclaimed would be closed..." Commenter states, "How are roads identified/defined as reclaimed?" (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1366, letter #401)

Public Concern (TM-7):

Respondent is requesting all references to "routes" should be changed to "roads." BLM should use the definition for "road" as derived from the description of "roadless" in the legislative history of FLPMA and 43 CFR 19.2(e) which defines road as "An improved road that is suitable for public travel by means of four wheeled, motorized vehicles intended primarily for highway use."

Response (TM-7):

The terms road and route are both used consistently throughout the document and both are defined in the glossary. The definition you reference comes from the committee report on FLPMA and is specifically addressing the definition of a road in the context of wilderness inventory as conducted under section 601 of FLPMA. That section of FLPMA has been determined to have expired, and the wilderness inventory has been completed. The definition of a road you reference does not apply. The definition used for a road in the Glossary of our document comes from the BLM 9100 manual. It says that a road is "A linear route declared a road by the owner, managed for use by low-

clearance vehicles having four or more wheels, and maintained for regular and continuous use." In addition, BLM has recently created the following definition for a Primitive Road: "A linear route managed for use by four-wheel drive or high clearance vehicles. Primitive roads do not normally meet any BLM road design standards."

Public Comments (TM-7):

Comment: Any decision that allows motorized and mechanized vehicle use off of a "road," under a standard, legal, definition of what constitutes a "road" could be construed as arbitrary and capricious, and abuse of discretion, or otherwise not in accordance with the law under 5 U.S.C. 706(2)(A) of the Administrative Procedures Act of 1946. The legal definition of road for the BLM public lands is derived from the definition of "roadless" in the legislative history of FLPMA: The word "roadless" refers to the absence of roads which have been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road. (H.R. Rep. No. 94-1163 at 17 (1976)). In addition, the Code of Federal Regulations (43 C.F.R. 19.2(e)) establishes the following definition: An improved road that is suitable for public travel by means of four wheeled, motorized vehicles intended primarily for highway use. Thus, tracks created by the repeated passage of vehicles, people, wildlife, or anything else, standing alone, do not constitute a road; mechanical improvement, whether by hand tools or power machinery, is necessary. In other words, "use" or "nonuse" of a given route is inadequate information to determine what is or is not a "road." Single track trails or other trails also do not meet the definition of a road. Another definition for road is available from IM No. AZ-2004-021: Road: as used herein (a linear route), a transportation facility used primarily by vehicles having four or more wheels, documented as such by the owner, and maintained for regular and continuous use. It is curious that this definition was developed recently to achieve consistency in BLM planning across Arizona (partially in regards to transportation planning), and yet it is not

referenced anywhere in the draft RMP. We are aware that BLM has previously stated that it does not recognize the definitions of "road" that we cite under H.R. Rep. No. 94-1163 at 17 (1976) and 43 C.F.R. 19.2(e). However, it seems that the agency should at least use its own definition specifically authorized by the state director for the Arizona BLM.

Recommendation: We recommend that the agencies include a consistent definition of "route" and "road" throughout the draft RMP, and revise their alternatives to only include routes that meet the definition of "road" (based on the applicable law and guidance cited above) in the range of alternatives for the Monument. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2223, letter #343)

Comment: For all alternatives regarding the Monument, we recommend that all references to "routes" for travel by motorized or mechanized vehicles be amended to refer to "roads," not "routes" in order to comply with the Proclamation. This concern was originally brought forth in a letter submitted by the Arizona Wilderness Coalition and Sierra Club Grand Canyon Chapter submitted on July 9th, 2002 (incorporated by reference). The Proclamation articulates an unequivocal obligation to apply an accurate and precise definition of "road" in the Monument in order to meet the requirements of the statement: "For the purpose of protecting the objects identified above, the Secretary of the Interior shall prohibit all motorized and mechanized vehicle use off road, except for emergency or authorized administrative purposes." [emphasis added] (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2222, letter #343)

Public Concern (TM-8):

Numerous comments were received requesting power line utility corridors be opened to multi-use (including OHV) as an additional transportation route.

Response (TM-8):

Motorized use of access roads for utility rights-of-way is normally allowed unless there are concerns of public safety or a threat of

vandalism to the utility facilities. BLM does not normally issue rights-of-way with exclusive use to the permittee. However, in the case of special uses, such as might be authorized through Special Recreation Permits, it is common practice to coordinate with holders of rights-of-way to assure the event doesn't represent particular public safety issues, facility risk, or potential right-of-way holder liability beyond casual use. In some cases, use of utility right-of-way access roads may be denied for Special Recreation Permit events.

Public Comments (TM-8):

Comment: Request powerline utility corridors be open to multi-use (including OHV) as an additional transportation route (Comment: #198, form #2)

Comment: Using existing power line roads should be considered for motorized access also (Arizona Trail Riders, Prescott, AZ - Comment: #291, letter #268)

Public Concern (TM-9):

Commenters feel access to the Agua Fria River, by limiting it to only people who can hike on foot is unfair, it is improper, and it does not allow for multiple use because some people are physically unable to hike. Others feel that restricting access to some places would help preserve the beauty of the area and encourage people to be more physically active.

Response (TM-9):

Certain areas may remain accessible by motorized vehicle. However, to ensure the protection of cultural resources as prescribed by the Proclamation, most routes leading to cultural sites will be closed. In addition, cultural sites near routes will be monitored for vandalism or other human caused impacts. If necessary, routes can be mitigated, including closure, to protect cultural resources and other sensitive areas.

Public Comments (TM-9):

Comment: 2.6.1.4 Cultural Resources page 159 DFC Please allow for OHV trails to continue off main routes for those who can not hike, for

access to Cultural resources described in this section. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1624, letter #261)

Comment: Considering that so many Americans are overweight, I would think that a hike to view an attraction would be more beneficial than viewing the same attraction from the seat of their vehicle. I am not much of a hiker myself, but it would be worth it to me if it meant seeing a place without the ugliness of a blacktop road. (Individual, Eugene, Oregon - Comment: #804, letter #295)

Public Concern (TM-10):

Commenter would like to see all existing roads designated for multiple uses.

Response (TM-10):

Routes inventoried will be evaluated and designated according to the process outlined in Appendix D. We encourage you to give input when routes are evaluated.

Public Comments (TM-10):

Comment: I would like to see all of the existing roads, you know, for multiple use, whether its hiking, horseback riding, motorcycling, ATVs, Jeeps. I think they should all be multiple use. (Individual - Comment: #85, letter #105)

Public Concern (TM-11):

Commenters are concerned about proliferation of the existing paths and road networks to help maintain the natural character of the land and minimize future impacts.

Response (TM-11):

Routes are specifically being designated in the National Monument in this plan to prevent route proliferation. Routes signed on the ground and marked on official maps will be the only available routes for public use.

Routes in the Bradshaw-Harquahala Planning Area will be evaluated and designated within five years of the completion of this plan. Route designations will be subservient to the allocations in this plan. Route designation is

intended to manage vehicle use and associated impacts. For example, areas allocated for wilderness characteristics management may have fewer routes or none at all designated for motorized or non-motorized use. Conversely, Special Recreation Management Areas and Recreation Management Zones identify the recreation niche and market to be served which will guide route designation. These benefits-based recreation niches and markets can be found in Appendix S.

Public Comments (TM-11):

Comment: I spend a lot of time up in the Agua Fria National Monument, before it was a national monument actually. And the one concern that I suppose I have is proliferation of the existing paths and road networks, for a variety of reasons. Usually it's a, you know, off road vehicles and stuff like that. I like that as much as anybody but I've seen what's happened already in the Lake Pleasant area along the Agua Fria where its pretty much trashed because of people creating new roads so my comment would be to try and find a balance on the leaner side and I've only begun to see what road networks you've suggested but, I figure there going to be a certain percentage of proliferation no matter what because its so hard to control. So if you start on the smaller side, the proliferation will happen. If you start off with an extra hundreds of miles of roads, the proliferation I think will go there too. (Individual, New River, AZ - Comment: #118, letter #72)

Comment: The lands in

Dewey/Humboldt/Mayer, the BLM chose to retain them in the public ownership. Its going to take a lot of future planning and effort with those communities to make sure they can be managed to maintain the natural character that they already have. The same out here in the Harcuvar region. There's a lot of routes out here, if we don't try and maintain or try and limit new route development because it is a flat region, we're going to end up with problems in creating those natural lands as well. (Arizona Wilderness Coalition, Prescott, AZ - Comment: #1102, letter #76)

Public Concern (TM-12):

Respondent feels BLM should have a Park Ranger or a GIS specialist on-the-ground to conduct its survey of routes for OHV use.

Response (TM-12):

The route inventory was conducted on-the-ground by trained personnel using high-quality, state-of-the-art, global positioning systems. The data was submitted to a qualified GIS specialist to clean up and compile the data into a comprehensive inventory database.

Public Comments (TM-12):

Comment: I am also concerned that the BLM conducts a current survey of routes for OHV usage. Using ten and twenty year old data supplemented by satellite photos is not an effective method of surveying these routes. A Park Ranger/ GIS specialist needs to be on the ground with GIS technology to do this job accurately. Routes that were once commonly used have become abandoned and new routes appear from illegal riding. The costs of an accurate survey of routes may seem to expensive in the beginning although the Bureau will incur greater expenses in the long run when route signing and protection is implemented and enforceable. (Individual - Comment: #1162, letter #331)

Public Concern (TM-13):

Respondents feel designation of routes based on current inventory could miss a lot of routes in washes or canyon bottoms that are being used; therefore, they want inventory kept "open" and flexible for identification of further routes. For example, Old Harquahala Road should be inventoried as a motorized route.

Response (TM-13):

We recognize there may be some places that are currently being used that have been overlooked on the route inventory. Any route proposal, whether from the current inventory or from future requests, will be evaluated based on compatibility with natural and cultural resources and management objectives. In that way, future route proposals can be identified and analyzed

for consideration, regardless if it shows on the current inventory or not.

Public Comments (TM-13):

Comment: 2.6.2.2.4 Harquahala Management Unit Route request....See Map Old Harquahala Road was not inventoried. This trail would make an excellent trail opportunity allowing OHV use to bypass private property on existing loop and create a looped trail opportunity for Motorcycle and Mountain bike recreationists. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1686, letter #261)

Comment: The designation of routes in the 5-year future apparently will be based upon the data base of the current route inventory. I would advise the BLM that there are many routes that are used by 4-wheelers that may not have been acknowledged in this inventory as washes and rocky canyon bottoms are frequently used. Some that may not look used are used occasionally as they are important "challenges" for 4-wheelers. It is important that these "options" be acknowledged and be available as they can be utilized with minimal to no impact to the resources. It is recommended that this "route inventory" be kept "open" and flexible for further identification of routes during the process of designation. (Verde Valley 4 Wheelers, Cottonwood, AZ - Comment: #1957, letter #400)

Public Concern (TM-14):

Several route-specific comments were received addressing keeping the Lost Trail in Tule Springs open, designating a route in the Baldy Mountain and Castle Hot Springs areas, opening the short spur near Tiger Canyon for administrative use only, improving the trail from Cottonwood Gulch to four-wheel-drive clearance, and creating small portal areas at existing Wilderness entry points for non-motorized routes in Wilderness Areas.

Response (TM-14):

Your comments on specific routes will be retained for consideration during the route evaluation and designation process as part of travel management planning. In the Tule Creek

ACEC, the only routes identified for closure in this plan are those inside the fenced area. The jeep route inventoried, identified as Lost World Trail, has been inventoried to the water gap on Tule Creek and your use will be considered. The route suggested as a long distance connection between the Lake Pleasant and Bumble areas is acknowledged and will be considered during route evaluation. The suggested administrative use only route identified near Tiger canyon will be considered at that time as well.

Public Comments (TM-14):

Comment: Concerning Alternative E: KEEP OPEN THE LOST TRAIL IN TULE SPRINGS The Rock Rats in addition to the supported comments would ask that you consider removing the closure in Alternative E for the Tule spring area. It would close a trail that has been in our clubs history for some time. The Lost world trail just north of the Tule spring has been our initiation trail run for some time. The loss of this trail would impact our club. (AZ RockRats, Phoenix, AZ - Comment: #178, letter #265)

Comment: Route request Please see Castle Hot Springs/ Black Canyon City maps for requested OHV trail East side of Forest Service area. Long Distance Trail Connectivity to the Motorized trail systems in the Baldy Hill area and the Castle Hot Springs trail system require a designated route. This trail runs North from Cottonwood Gulch area (near Williams Mesa) Connecting existing trails into one that continues to Bumble Bee. Request it be at minimum an ATV /Motorcycle route, would request improved to high clearance 4wd. A OHV/ multiuse staging area would be created with information Kiosk and area map near Turkey Creek at Bumble Bee. The short spur near Tiger Canyon would be open for Administrative use only. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1641, letter #261)

Public Concern (TM-15):

Respondents want BLM to make provisions in the plan for identifying and constructing new motorized routes, specifically through the Tule

Creek ACEC. Additionally, BLM needs to take into consideration the affects of urban sprawl, lost access, and decreasing opportunities for motorized recreation when making management decisions. Others feel that no new roads should be created.

Response (TM-15):

Document Section 2.7.3.7 has been modified in this document to include the description of a procedure for addressing new route proposals.

Public Comments (TM-15):

Comment: I am hoping that the BLM will close dead-end routes and build no new routes or trails. (Individual, Prescott, AZ - Comment: #790, letter #228)

Comment: [I would support Alternative E with my amendments below:] Motorized OHV is growing at a very rapid rate. All the alternatives talk about how trails can be closed, we need to outlined how news trails can be established. I often hear that over use of a trail can cause excessive erosion, which down the line can cause trail closures. Our current trail system is not adequate, and with the growth at the rapid rate it is going at we will soon find adverse affects if we don't identify a process in which new trails can be identified, classified, added to inventory and put into use. I know I brought this up at the meeting I attended and was told that if we told you what we wanted it would be included, however I still do not see it in any of the Alternatives. Please add this to Alternative E. (Individual - Comment: #755, letter #293)

Public Concern (TM-16):

Respondents are requesting that BLM return the Black Canyon Hiking and Equestrian Trail to just hiking and equestrian use.

Response (TM-16):

The Black Canyon Hiking and Equestrian Trail RMZ (Alternative E) will be established within the Black Canyon Special Recreation Management Area The Black Canyon Trail (BCT) RMZ will provide high-quality, non-motorized hiking, riding and mountain biking opportunities. The BCT is a dedicated non-

motorized trail, but some trail segments still share alignments with roads, primitive roads and other roads. The BCT, upon establishment in 1969 and on-the-ground identification between 1969 and 1990, was for the most part situated on existing roads. Little new trail construction was attempted. Thus as we find today, the BCT is a “hodgepodge” of motorized and non-motorized segments.

BLM and the Black Canyon Trail Coalition (BCTC) are building new trail in areas where shared use is ongoing. This will move more and more of the trail to non-motorized status. We hope to have most of the trail non-motorized within 10-years of plan approval. The BLM and the BCTC are working diligently to fund, plan, survey, stake, construct, and maintain the BCT as a well-designed and sustainable non-motorized trail, extending from the Carefree Highway to the Prescott National Forest north of State Highway 69.

Public Comments (TM-16):

Comment: So my comments are going to be directed to the Black Canyon Management Unit and specifically the area that is going to be managed for wilderness characteristics. I would just ask that the BLM return the Black Canyon Hiking and Equestrian Trail to just hiking and equestrian use (Individual, Prescott, AZ - Comment: #26, letter #90)

Comment: This is a specific comment to the Black Canyon trail which is assigned as a pack trail and has been over taken by ORVs. I would like to see it returned to a pack trail as it gives a great opportunity for people on foot and horseback to see the monument. Again this is the Black Canyon Trail and is assigned as a pack trail and is currently being used as an ORV trail. (Individual, Prescott, AZ - Comment: #730, letter #231)

Public Concern (TM-17):

Respondent wants to know why so much time is spent with non-motorized uses in the Table Mesa area when it is dominated by OHV users. There are plenty state parks, national monuments, and current hiking areas devoted to non-OHV use

and therefore, OHV trails open at Table Mesa should be kept open.

Response (TM-17):

BLM attempts to manage lands for a variety of uses. The Black Canyon Trail, a 62-mile, multi-user trail system under development in the Bradshaw Mountain foothills of central Arizona has won national recognition. Many miles of existing trails are currently shared by motorized and non-motorized users. The non-motorized trail is being separated from the motorized double track trail, after which both the motorized and non-motorized trails will be managed as part of the overall trail system. This trail was designated in 1969 by the Secretary of the Interior, prior to the high level of OHV use in the area. This area is allocated as a Special Recreation Management Area in this plan. The market and niche are identified as motorized recreation with camping related OHV use in Appendix S.

All rockcrawling routes receiving significant and recognizable use at the time of route inventory were recorded. The designation of rock crawling routes will be done in a process separate from route evaluation/designation. Where appropriate, rockcrawling sites will be identified and managed as Recreation Sites. These sites will not be for use by stock four-wheel-drive vehicles, thus protecting resources, public safety and your desired experience.

The route inventory available at the time of draft printing is included in Chapter 3.

Public Comments (TM-17):

Comment: I see a host of verbiage devoted to non-motorized uses, yet in the last 23 years I have yet to see anyone hiking the areas or trails in the Table Mesa Road area. Why are we spending so much time with non-motorized uses of the area when this is dominated by OHV users? We have plenty of state parks, national monuments, and current hiking areas devoted to non-OHV use. This area is perfect for its current usage of OHV and should be the dominate use described. (Individual - Comment: #754, letter #293)

Comment: The Table Mesa Road area is a very popular recreation place for OHV users, and my family and friends enjoy rock crawling on the old mining roads and Terminator, Predator, Raw Deal and several others. I would hate to lose access to these popular trails. (AZ Rockrats, New River, AZ - Comment: #510, letter #257)

Public Concern (TM-18):

Respondent wants BLM to consider if a ROW through the Cross Y Ranch could be opened so people could have access to the canyons in that part of the monument.

Response (TM-18):

Acquiring access for the public through the Cross Y ranch was not considered. It was not an issue during scoping nor was it a management goal to provide improved access from the south. Maintaining the Wild and Scenic River suitability is a primary goal, and allowing vehicle access up the canyon would be inconsistent with this goal. There is a route accessible from Coldwater Canyon Road where you can park and walk into the canyon.

Public Comments (TM-18):

Comment: Also, the Cross-Y Ranch, inside the monument. Very few people can go through their to access the nice canyons in the monument, and I would like them also to see if they could entertain an idea to work out an agreement or a right-of-way or something for access for people to go through the ranch or create a road on the edge of the ranch bordering BLM land or something for people would be able to access to get into those great canyons, otherwise, you have to drive around, like on Bloody Basin Road and then you have to hike down the canyons to get into the area, because you cant get through the ranch. That's my comments an outside of that, I think plan E is the one I recommend. (Individual, Black Canyon City, AZ - Comment: #24, letter #91)

Public Concern (TM-19):

Commenter is concerned that the road off of Coldwater Canyon Road in Black Canyon City

is getting a lot of ATV traffic; therefore, it should be closed now.

Response (TM-19):

Actions related to implementation of the Resource Management Plans would be initiated after a decision document has been signed. However, if resource damage is occurring, please report it to the Agua Fria National Monument office at (623)580-5500.

Public Comments (TM-19):

Comment: There is currently access to the southern part of the monument in Black Canyon City off of coldwater canyon road. I hike this area several times a week and have been almost run over by atv's several times. Monument signs are posted within 1/8 mile of this old cattle gate and this area is getting high use by ohv and is a direct route into the southern area of the monument. Looking at the map this road would be closed but I feel signs should be posted now. No one I have talked to in Black Canyon City is even aware the monument exists and think all of the area is open and a free for all. The proximity of this access from Black Canyon City should be looked at now. (Individual - Comment: #310, letter #171)

Comment: The Access to the AFNM in Black Canyon City, off of Coldwater Rd. should be closed to all but hikers and horses. 4-wheelers, Quads, ATVs are destroying this already. Needs to be closed NOW! (Individual, Black Canyon City, AZ - Comment: #303, letter #182)

Public Concern (TM-20):

Comments were received requesting BLM close the road to Richinbar Mine to protect the public and to protect pronghorn habitat.

Response (TM-20):

Pronghorn Antelope and public safety are important issues and were considered during the route evaluations. Private property access was also a consideration during the route evaluation and designation process. The gate along I-17 is currently locked and will be designated as administrative use only for public safety. We believe the final route designation protects

monument objects and allows sufficient public access for a variety of purposes.

Public Comments (TM-20):

Comment: The road into the Rich-in-bar Mine needs to be closed. This private property is no longer used by the owners. By allowing access across public land to this mine the BLM is opening itself up to lawsuits. There are many hazards to the public at this old mine. The road leading to it needs to be obliterated and the access gate along I-17 returned to ungated barb wire fencing. (Individual - Comment: #781, letter #46)

Comment: As far as road closures go, I'd like to see the road closed to the Richinnbar Mine. The reason for doing so is that this road goes through pronghorn fawning habitat. The pronghorn are an object that is to be protected within the Monument, its part of the Proclamation. (Grand Canyon Chapter of Sierra Club, Phoenix, AZ - Comment: #706, letter #74)

Public Concern (TM-21):

Several comments were received requesting reevaluation of proposed route closures in the AFNM.

Response (TM-21):

The route evaluation process for the national monument addressed motorized use of routes in the context of the national monument Presidential Proclamation. Route closures in the monument were deemed necessary to meet our management mandate given in the proclamation while allowing adequate motorized access to meet agency and public access needs. Data regarding the evaluation and designation can be viewed by the public on request in the public room of the Phoenix District during regular business hours.

The route network in the Proposed Plan was chosen because:

- 1) based on the route evaluation, adequately protects the resources of the monument;

- 2) reduces the routes in the monument, thereby reducing maintenance requirements to BLM;
- 3) reduces access to sensitive locations, reducing law enforcement;
- 4) allows a reasonable level of public use and enjoyment of the national monument while protecting the monument resources.

Speed enforcement on the routes in the national monument will be achieved primarily by utilizing road maintenance techniques that keep roads in a condition that makes higher speeds very difficult and unpleasant to the motorist.

Public Comments (TM-21):

Comment: Transportation planning in this rugged backcountry poses many challenges for the BLM to manage the area's nationally-significant cultural resources, wildlife habitat, and scenic vistas. We are impressed that the BLM has recognized the damage that motorized recreation can pose to Monument resources, and has thus provided a limited route network in the preferred alternative. However, we urge the agency to reassess this alternative and do an even better job at providing a route network that will help the BLM protect the Monument's irreplaceable resources. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2213, letter #343)

Comment: The proposed closure of some of the identified routes in the AFNM area needs to be re-evaluated as many of these routes are important for public access especially for those people who may have limitations to their ability to hike in order to enjoy the resources with the AFNM. Resource conflicts and impacts can be mitigated if necessary with seasonal or weather related closures. The proposed Wilderness designation should not be implemented as this further limits public access especially for those with physical limitations. (Individual, Cornville, AZ - Comment: #1084, letter #160)

Public Concern (TM-22):

The respondent objects to closing the roads on Map 2-76 in the north of Agua Fria National

Monument because closure will impact private property access.

Response (TM-22):

These routes will be open to provide access between Todd/2Y Headquarters and other deeded lands. They are an important link between two of their private parcels. The route map presented in Alternative E has been modified to reflect this change.

Public Comment (TM-22):

Comment: I object to closing the roads on map 2-76 in the north part of the Agua Fria N. Mon. Sec. 4 T 2 N R3E between the Todd/24 Headquarters and the deeded 500A in Sec. 3 which has been established as the access to my private land for nearly 100 yrs. I Also object to closing the road in Sec. 5 to my private land in Sec. 6 for the same reasons. (Individual, Mayer, AZ - Comment: #1458, letter #379)

Public Concern (TM-23):

Respondents want BLM to keep all inventoried trails open to motorized use to reduce erosion of trails, maintain access, disperse users, and maintain historical use of public lands for competitive events. Others would like BLM to limit and concentrate vehicular access and close many existing routes to protect resources.

Response (TM-23):

To meet the policy mandates of FLPMA it may be necessary to mitigate, or close some routes or route segments that conflict with the multiple-use and sustained-yield guidance in that law. However, to the extent possible, we will work with the public and other agencies to provide adequate route opportunities to meet public demand, including long-distance and multi-agency routes that are sustainable and support sustainable natural and cultural resources.

Routes will be designated in accordance with the allocations set forth in this plan and in compliance with the Land Health Standards and other applicable laws/regulations. For example, areas allocated with an emphasis on vehicle recreation such as the Vulture Mine area will be more liberal in the number of routes designated

open. Conversely, areas allocated to maintain wilderness characteristics will have the number of routes within them limited or completely closed. Routes will be designated as described in Appendix D.

Concerns regarding capacity to provide sufficient mileage for a growing population of Off-Highway Vehicle users is a valid one. As the number of people seeking an OHV recreation experience increases, so does the need for available land and management of these additional people. BLM's budget to manage recreation is not increasing at the same rate as the demand. Current and future riding area demands can be accommodated through a variety of solutions including increased opportunities on private, State and County lands. Recreational routes, including parallel routes with recreational value, will be retained to the extent feasible with regard to erosion, conflict, maintenance cost and compliance with this plan. BLM is mandated to provide for a wide range of uses while maintaining important wildlife habitats and landscapes. Specifically, maintaining Desert Tortoise habitat for 'no-net-loss of quality and quantity' and soil/visual resources are increasingly difficult. Furthermore, BLM manages for compatibility with adjoining land ownership to the extent practical, looking forward for the duration of this plan. There are many competing uses of public land, one of which is access for OHV use. The public is encouraged to participate in the route evaluation/designation process which will determine the location and number of miles of route available for use.

Public Comments (TM-23):

Comment: Please limit and concentrate vehicular access in all areas covered by the plan... and while I approve of plans to limit traffic to existing roads, I would like to see many existing routes closed. (Individual, Laveen, AZ - Comment: #741, letter #304)

Comment: The volume of ATV and OHV users is growing daily. Any closures will simply increase the impact on those roads/trails left open. The more available trail systems the less impact each trail will receive. If the majority of

land is not left open for Public use, managing the open areas will be more difficult. As well as attempting to keep the public out of the closed areas will not be cost effective. (Arizona ATV Riders - Comment: #180, letter #262)

Public Concern (TM-24):

Commenters feel BLM will have to address the management conflict in the Slate Creek area to allow long distance trail continuity because OHV use in this area out-weighs non-motorized use and will only increase in the future.

Planning a designated long-distance, motorized trail route similar to the Black Canyon Trail will mitigate future conflicts between users and address resource issues. Additionally, BLM should keep long distance trails open to Tonto National Forest and other agency lands, working to make sure motorized access is not "boxed-in," which will help mitigate adverse effects, such as air pollution.

Response (TM-24):

Management of motorized recreation in the RMPs/EIS considered long-distance connectivity and dispersed use. There are certain Recreation Management Zones where the primary focus of recreation management will be motorized recreation. But almost every other area will contain motorized routes designated and maintained for dispersed, motorized recreation, and they may also have facilities such as parking and/or staging areas to facilitate recreation use and management. The intention of allocating some areas to motorized recreation was not to "box in" the activity, but rather to add focus in management of some areas to the overall dispersed motorized recreation use. In the monument, protection of monument resources to comply with the Proclamation is the first consideration in evaluating and designating routes. Long-distance connectivity is also a consideration in evaluating the overall network that will be designated.

The current BCT plan calls for either multi-use trail segments or parallel motorized and non-motorized trail segments. Over the long term, it is BLM's goal to have the BCT non-motorized. BLM will consider, along with our public and

agency partners, designation of long-distance motorized routes within the Black Canyon Corridor. These routes will provide long-distance riding opportunities for four-wheel drives and ATVs. The routes will also potentially connect to U.S. Forest Service routes and BLM-managed lands within the Lake Pleasant and Hieroglyphic Mountain areas.

The location, design, and construction of the Black Canyon Trail are being done in collaboration with the Black Canyon Trail Coalition. For more information on the trail and the Coalition, please see the website at <http://www.bctaz.com/index.html>.

Public Comments (TM-24):

Comment: You will have to address the management conflict in the Slate Creek area to allow long distance trail continuity for this designated long distance trail route. You need to plan for this transportation corridor. Today, OHV use in this area out weights non-motorized use and will only increase in the future. Planning a Designated long distance Motorized trail route similar to the BCT and promoting similar to the BCT will mitigate future conflicts between users and address resource issues. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1693, letter #261)

Comment: This plan doesn't offer long distance, connecting trails for motorized recreation. The trails need to be dispersed, not boxed in on small tracts of land. (Individual, Kearny, AZ - Comment: #230, letter #213)

Public Concern (TM-25):

An array of comments was received requesting that access be maintained for unlicensed OHV use, including a connecting trails system to other adjoining lands.

Response (TM-25):

A portion of routes in the Planning Area require licensing. It is the jurisdiction of the State of Arizona and local county or municipal governments to establish vehicle and driver licensing requirements. BLM cannot guarantee

long-term availability of routes for unlicensed OHV use.

Public Comments (TM-25):

Comment: We request that unlicensed OHV use have a connecting trails system to other adjoining Lands for long distance trail connectivity. (Whiplash Motorsports, Phoenix, AZ - Comment: #1725, letter #389)

Comment: Please keep access to trails open to non-licensed OHV use. (Individual, Prescott, AZ - Comment: #521, letter #238)

Public Concern (TM-26):

Numerous comments were received requesting the area just off of I-17 and Bloody Basin Road be restricted to street license use only.

Response (TM-26):

Bloody Basin Road on the both east and west sides of I-17 are Yavapai county maintained roads. In AFNM, Yavapai county maintenance ends about one-quarter mile east of Horseshoe Ranch. Vehicles must comply with County and State laws, including proper licensing while on the maintained portions of these roads. East of Horseshoe Ranch, BLM will offer OHV users to act responsibly and know the rules of the road; therefore, a licensing requirement may be unnecessary at this time. Signing, mapping, and placement of kiosks will provide the basic level of information necessary for the public to act appropriately.

Public Comments (TM-26):

Comment: Restrict to street licensed use only [just off I-17 and Bloody Basin road]. (Arizona Motorcycle Racing Association, Chandler, AZ - Comment: #565, letter #258)

Public Concern (TM-27):

The section on Public Access does not state if non-street-legal OHVs are allowed in AFNM and the respondents would like clarification.

Response (TM-27):

Vehicles that are not “street legal” are allowed on all routes designated as open to motor

vehicles in the AFNM final route designation. The exception is county maintained roads where licensing is required by Yavapai County.

Public Comments (TM-27):

Comment: This section does not state if non-street legal OHV's are allowed in AFNM, please clarify. (Whiplash Motorsports, Phoenix, AZ - Comment: #1724, letter #389)

Public Concern (TM-28):

Respondents support motorized travel in washes and request that travel in washes be considered no different than travel on any other route, unless the wash traverses areas that cannot be mitigated to protect. They ask that if a wash needs to be closed, a bypass be created to allow continued use of important transportation corridors for both competitive and non-competitive OHV use. Other respondents would like BLM to close all washes (except in some cases for short crossings of major routes) to motorized vehicle travel to help protect the washes from the spread of noxious weeds, prevent easy access to cultural sites, reduce disruption to sensitive wildlife, and protect the serenity of these areas.

Response (TM-28):

Motorized vehicle travel is occurring in washes in many places now. Washes (dry and wet) can have riparian values; provide food, shelter and thermal cover for wildlife; and act as wildlife travel corridors. OHV use in some washes can cause bank erosion and vegetation damage, while OHV travel in other washes may have little adverse effect.

We recognize that washes may be a necessary segment of some routes, they may provide the shortest and most practical route between some places, they produce less dust, have few erosion related problems, and require little or no maintenance. Washes are fun to ride by both equestrian and motorized methods, represent a major recreational asset, and some wash bottoms may contain little plant life.

All of these factors will be considered when evaluating the use of washes as OHV travel

routes. Where vehicle routes in washes constitute an important part of the transportation flow and they do not conflict with other resources or desired resource objectives, they can be retained as a designated part of the route network. In fact it is likely that many routes will be designated in washes. However, past experience has shown that unregulated OHV use degrades vegetation, soils and wildlife habitat, including the channels and banks of washes.

Public Comments (TM-28):

Comment: I hope you will limit the ORV use because it can cause a range of problems, such as spreading noxious weeds, allowing vandals too-easy access to cultural sites, disrupting sensitive wildlife and destroying the serenity that many of us go to these areas for. Please protect the springs, streams, and rivers by limiting motorized access. These riparian areas are relied upon by wildlife. (Individual - Comment: #1542, letter #300)

Comment: WASHES: At least in regard to the Vulture Mountain area, we feel there are absolutely no valid reasons to close washes. Most of them have very very little vegetation growing in them in the parts that are subject to being ridden on and what few plants that are growing there are duplicated on the banks or in the narrower unrideable parts of the washes. Nor does riding in them affect animals. We have seen more deer in the last 2 or 3 years than we had in the previous seven. As for cattle, our experience is uniform that they never run--just stand and stare at us. Any tire marks in washes are erased by the 1st good rain. In fact, riding in the washes causes the least permanent change in the environment of any riding off paved roads. We are thoroughly familiar with Box Wash, Mill Wash, Syndicate Wash, Jackrabbit Wash, Star Wash and Hartman Wash as well as most of the smaller ones, and can see no sign of permanent damage on any of them. (Individual, Prescott, AZ - Comment: #1967, letter #57)

Public Concern (TM-29):

Respondent thinks mitigation needs to be looked at very closely before route closure is considered.

Response (TM-29):

We agree with the comment regarding considering other options before closing routes. A discussion on mitigation can be found in section 4.25 and a route specific mitigation list in Appendix T.

Public Comments (TM-29):

Comment: A couple things on route designations, I think mitigation needs to be looked at very closely before closure is considered. There's a lot of ways to mitigate a route or re-route, and do that and that'll work a lot easier. (Individual, Phoenix, AZ - Comment: #66, letter #82)

Public Concern (TM-30):

Several comments were received requesting the highest protection for the Management Area by limiting off-road vehicle use to existing roads and trails and closing roads and trails in sensitive areas, such as pronghorn habitat.

Response (TM-30):

BLM agrees that OHV use on designated routes promises the optimum opportunity to maintain sustainable OHV recreation opportunities and minimize conflict between competing uses.

Public Comments (TM-30):

Comment: If roads are not greatly improved, and OHV's are restricted to current roads, I would think problems would be minor. (Individual, Black Canyon City, AZ - Comment: #1946, letter #353)

Comment: Please include in the final EIS the highest protection for the Agua Fria and Bradshaw-Harquahala management area. To me, high protection means limiting off-road vehicle use to existing roads and trails, and even closing quite a few roads and trails in sensitive areas, such as pronghorn habitat, for example. ATV's are really fun, but I far prefer the long-term benefits of protecting natural areas. (Individual, Prescott, AZ - Comment: #837, letter #310)

Public Concern (TM-31):

Respondents believe that throughout the document in the Bradshaw-Harquahala Planning Area, the word designated should be removed when references are made to limiting vehicles to “designated” routes and replaced with “inventoried.”

Response (TM-31):

The OHV allocation is “Limited To Designated Routes” even though we might “temporarily” designate all inventoried routes as open until the route evaluation and designation process can be completed. The allocation of “Limited to Designated Routes” in our Resource Management Plan does not mean that a route designation process be complete at the time of plan signature. Route designation is an implementation action that would be required in places with the “Limited to Designated Routes” allocation. Current BLM policy is to complete route designations within 5 years of plan signature.

Public Comments (TM-31):

Comment: An area of particular concern is within the discussions of route designations. Chapter 2 (common to all alternatives section 2.7.3.8 and corresponding Travel Management sections for each alternative) states specific routes will be designated as opened, closed or limited in a formal and public evaluation process (Travel and Transportation Management Plan) occurring within five years after the RMP is finalized. However, in the Travel Management section for each Management Unit in the Bradshaw-Harquahala Planning Area (BHPA), it states, "... Unit would be allocated as a limited use area, with motorized and mechanized vehicle uses limited to designated routes (Map 2-16)." Map 2-16 only shows areas designated as open, closed or limited, not inventoried routes. This implies there will be no routes designated as open. We believe this statement should read "... Unit would be allocated as a limited use area (Map 2-16) with motorized vehicle uses limited to inventoried routes (Map 3- 21 to Map 3-26 as appropriate)." We believe that throughout the document (within the BHPA) when references are made to limiting

vehicles to "designated" routes, the word designated should be removed and replaced with "inventoried". It is our understanding the route designation process will occur during the Travel and Transportation Management Plan, and at this time vehicles will only be limited to inventoried routes within the BHPA. (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1350, letter #401)

Public Concern (TM-32):

Section 2.7.1.6 of the RMP states: “Motorized vehicle routes within lands allocated to maintain or enhance wilderness characteristics would be designated in the RMP and shown on maps.” The process of designating routes in the RMP in and around areas with wilderness characteristics was not made public and the respondents feel this is inappropriate. All routes in the Planning Area should be considered simultaneously and no pre-decisions should be made in this RMPs.

Response (TM-32):

BLM wanted to show a route network in the Preferred Alternative for both allocations to maintain wilderness characteristics and in ACECs so the public could comment on it. However, there was insufficient time to do an adequate route evaluation process and the routes were not shown. The statements you refer to (and in other places it might have occurred in the Draft document) were errors not caught before publication. They have been removed from the Proposed RMPs/ Final EIS.

Public Comments (TM-32):

Comment: Also in section 2.7.1.6 the RMP states, "Motorized vehicle routes within lands allocated to maintain or enhance wilderness characteristics would be designated in the RMP and shown on maps". The process of designating routes in the RMP in and around areas with wilderness characteristics was not made public as BLM has consistently told the public the route designation process would not occur inside the RMP. We feel this is inappropriate and all routes in the planning area should be considered simultaneously and no pre-decisions should be made in this RMP considering BLM did not

make the public aware of this. This statement may be a typo in the document and if so please correct this in the final. Also please refer to February 17th, 2005 letter sent by AZ Wilderness Coalition, The Sierra Club Grand Canyon Chapter, and The Wilderness Society for further comments on the management of wilderness characteristics (attached for your easy reference). (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2264, letter #343)

Comment: Concerning Page 300, Row 4, Alt E 470, Alt B and E, commenter states, "Impacts ...would be similar to those described under Alternative B." (Alternative B states that routes would be reduced by 82 miles) Location Chapter 2 Statement (No routes proposed to be closed at this time)" (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1401, letter #401)

Public Concern (TM-33):

BLM should consider in route designation: (1) routes available to "permitted use" to organized clubs who have demonstrated "responsibility;" (2) ATVs and dirt bikes shouldn't be "aggregated" with Jeeps and 4x4s; (3) Routes that provide technical challenge; and (4) Useable maps of the route inventory should be made publicly available.

Response (TM-33):

The route evaluation and designation process will consider many factors, including the items you list.

Some inventory maps have been distributed to the public for several years. Other maps of the route inventory will be made available as soon as possible, though the cost of map production may require they be sold or may limit the numbers that can be produced.

Public Comments(TM-33):

Comment: In the upcoming route designation process, it is important that the following items be recognized: a.) Some routes should be kept open for "permitted use" to organized clubs who have demonstrated their resource and OHV

responsibility. b.) ATV's and dirt bikes should not be aggregated with Jeep and other 4X4 use as their use and impacts are different. c.) 4X4 routes that provide technical challenges for skilled drivers with modified vehicles are important to maintain. d.) Useable maps of the route inventory should be made available as soon as possible for ongoing review by users so that when the designation process begins, all participants can be adequately prepared to have productive dialogue in the process (Individual, Cornville, AZ - Comment: #1085, letter #160)

Comment: In the upcoming route designation process, it is important that the following items be recognized: Useable maps of the route inventory should be made available as soon as possible for ongoing review by users so that when the designation process begins, all participants can be adequately prepared to have productive dialogue in the process. (Verde Valley 4 Wheelers, Cottonwood, AZ - Comment: #1963, letter #400)

Public Concern (TM-34):

The State of Arizona Game and Fish Department believes it is inappropriate (pre-decisional) to make statements about route closures or analyze potential impacts from route closures since decisions will be made at a later date. They further believe these statements could result in routes being closed during the route evaluation/designation process in order to be consistent with these statements and requirements of the NEPA, rather than the result of a resource-based evaluation process.

Response (TM-34):

Since the route designation process was not going to be completed in the RMP (except within the National Monument) it would be difficult to estimate impacts of plan decisions on transportation. To be able to compare transportation related decisions between Alternatives and provide some measure of quantitative analysis, we employed a commonly used "model" concept. The model we used is described in Appendix N and points out that it "...is a tool for RMP level analysis and not an RMP decision." The mileage figures used in the

impact analysis come from this model and are presented as a way to estimate impacts between Alternatives. As you point out, the route designation will be conducted at a later date and actual route mileage will be determined at that time. In the absence of hard numbers, models are commonly employed as a means to estimate impacts of actions. Since the route model is not a plan decision, it has no constraint or bearing on the eventual outcome of the route evaluation and designation process.

Public Comments (TM-34):

Comment: Concerning Executive Summary Page s-xviii, “Impacts on Travel Management,” commenter states “...route modeling developed to simulate route decisions Comment We do not believe that it is appropriate to predict how many miles of routes may be closed under the various alternatives. This could be considered pre-decisional to the Transportation Plan.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1358, letter #401)

Comment: We (ADBSS) were completely overwhelmed trying to comprehend the context of roads and access. It did appear, however, that the impacts of various assumed road closures were analyzed but the extent and/or parameters of these road closures were not identified under the listed alternatives. This appears to be backwards and that the analyzed impacts are therefore invalid. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2145, letter #342)

Public Concern (TM-35):

Commenters feel route designation should be done as a part of this plan and encourage completion of a motorized route evaluation and designation using a process like the Route Evaluation Tree©, at an early date.

Response (TM-35):

As much as the BLM agrees that the route designation should be conducted simultaneously with our land use planning effort, it is not practical to do so in the Bradshaw-Harquahala Planning Area for several reasons.

- The route inventory was not completed at the time of the publication of the Draft RMPs/Draft EIS.
- The 2000+ miles of route that was inventoried at the time of the DRMPs/DEIS publication could take several years to work through the route evaluation process and work with the public on the designation.
- Route designation is an implementation action that is not required to be done at the time of the RMP.
- It is BLM policy that the designation should be completed within 5 years of plan approval.

Because a portion of the route inventory within the Bradshaw-Harquahala Planning Area was incomplete at the time we conducted impact analysis in the EIS, we attempted to “model” how management decisions would affect route networks in each Alternative. The model described in Appendix N is not an RMP decision, but rather a way to characterize potential impacts of decisions in each Alternative. The model allows us to articulate a comparison of management approaches, but the actual route network designation will occur after approval of this plan by the Arizona State Director and will be conducted in accordance with the Route Evaluation and Designation Process described in Appendix D of the Proposed RMPs/Final EIS.

Developing a sustainable motorized route network, supplemented with a sustainable non-motorized trail system, is key in long-term sustainability of natural resources and recreation opportunities. With that in mind, it will be a priority for BLM and the Phoenix District to complete the evaluation and designation as quickly as possible. Policy from the Washington Office is to complete that effort within five years of RMP completion.

Public Comments (TM-35):

Comment: Motorized recreation use is arguably both the heaviest public use of these BLM lands and the greatest potential hazard for the natural resources and landscapes of these lands, and it is one of the most controversial land management issues in the area. The Route Evaluation Tree

process which BLM has used in other Districts has proven to be a fair and systematic way of collecting and analyzing information about routes and their benefits and impacts on resources and other uses. We encourage BLM to complete, at an early date, the evaluation and designation of motorized routes in both the Agua Fria National Monument and the Bradshaw-Harquahala areas using this type of process. (Individual, Phoenix, AZ - Comment: #472, letter #204)

Comment: The route designation process should be done as part of the plan to avoid any potential for route predetermination. (Individual, Yuma, Arizona - Comment: #1145, letter #382)

Public Concern (TM-36):

Commenters feel BLM should present the results of the Tree© analysis for each route in Agua Fria National Monument. Without this information, the analysis of direct, indirect, and cumulative impacts associated with motorized travel is inadequate and incomplete.

Response (TM-36):

The route evaluation data is in the public record and has been available upon request in the public room of the Phoenix District from 7:30 am to 4:15 pm Monday through Friday (except for holidays) since January 6, 2006. It is also attached to this document on a CD.

Public Comments (TM-36):

Comment: This section addresses several issues with the use of the "Route Evaluation Tree" (© ARS, Inc.). We support your concept to create a process to collect information on the impacts of various routes in order to generate alternatives in a uniform and documented process. However, very little information is presented regarding the route designation process itself, or the BLM's findings during the route designation process for the Monument. For example, while the Route Evaluation Tree © analyzes each route individually, no information on impacts is presented for any route. Without this information, it is impossible for the public to understand how the BLM made its decision, and assess the impacts to sensitive resources.

Recommendation: BLM should present the results of the Tree © analysis for each route in Agua Fria National Monument. Without this information, the analysis of direct, indirect, and cumulative impacts associated with motorized travel is inadequate and incomplete. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2249, letter #343)

Comment: Finally, Alternative E, say that there are 12 miles worth of roads and trails ready to be closed. We were told from the very beginning of this process that no roads or trails would be closed until each road or trail went through an evolution process that included public input and that each road and trail would be put through an evaluation tree. Well this evaluation tree must have been taken out of the sight of the public, because we have no idea what roads are scheduled to be closed and what trails are scheduled to be closed and until we are able to go look at these roads and trails individually, and determine how the evaluation tree was applied to each one of these, no roads or trails should be closed, it should remain a separate process where we can have a separate meeting to evaluate each road and trail for its viability, its recreational value, and where it may end up being connected to other roads and trails that help make a better recreational opportunity for all. (Prescott Open Trails Association, Prescott, AZ - Comment: #1041, letter #104)

Public Concern (TM-37):

Commenters recommend that BLM decline to use the Tree© for future route designation in the rest of the planning area. They also submit that the Tree is not an evaluation tool, but is instead merely a data-gathering device that collects information into a computer database. Others think that this process should be used on all route designations and has established policy.

Response (TM-37):

The methodology for evaluating routes has been standardized and policy has been issued from the Arizona State Office that we use the Tree© throughout Arizona BLM.

Public Comments (TM-37):

Comment: In addition, as previously communicated to the Arizona BLM on several previous occasions, we continue to hold that the Tree © in its most recent form is overly simplistic and fails to acknowledge several key issues that are critical for informed route designation decision-making. We recommend that the Bradshaw-Harquehala office decline to use the Tree© for future route designation in the rest of the planning area. We also submit that the "Tree" is not an evaluation tool, but is instead merely a data-gathering device that collects information into a computer database. While we fully support collecting data into a reproducible and transparent form, such as a computer database, there are many simple and cost effective ways to do this with widely-available database and/or spreadsheet programs. Applying the Tree© software requires a significant investment of taxpayer dollars, which seems unwise in the face of declining federal budgets and when the agency could achieve similar electronic data collection through other common database and/or spreadsheet programs. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2250, letter #343)

Comment: The other thing on route designations, is the decision tree going to be used? I think that is very important that is used. It's proved itself out it, it has established policy and pretty much at this point, and I think it ought to be used on all route designations. (Individual, Phoenix, AZ - Comment: #67, letter #82)

Public Concern (TM-38):

In order to comply with NEPA, respondents recommended the following modifications to the Route Evaluation Tree©:

- *Eliminate yes/no questions and remove branches that imply an order of issues to be raised.*
- *Incorporate information on cumulative impacts, including how the severity of such impacts may be influenced by other past, present and reasonably foreseeable future actions.*
- *Incorporate legal obligations under the Executive Orders, ORV regulations, NEPA,*

ESA, NHPA, Monument Proclamations, and National Conservation Area Legislation.

- *Include a description/evaluation of mitigation measures.*
- *Include data sources, the identification of data gaps, and the need for additional data gathering:*

Response (TM-38):

The evaluation tree process is simply a planning and data management tool that helps the agency staff and public to see route and landscape issues, benefits, uses and concerns, while providing possible options for management decisions. It is not a substitute for NEPA.

The use of a systematic process, such as, but not limited to the Route Evaluation Tree© is Arizona State BLM policy. We use the Evaluation Tree © knowing that BLM staff makes the route decisions, not the tree. Your recommendations are considerations we take into account, regardless of how generally the Tree© is worded. It is BLM's responsibility to define what regulations to apply. The purpose for the Tree© is to maintain a systematic method of gathering data and identifying key issues, being as specific and accurate as possible. As a result of meeting with your organization, we additionally applied Craters of the Moon National Monument questions you supplied to some of the key routes in AFNM. The outcomes of both processes were the similar. Based on this, we feel confident that we have used the Evaluation Tree© process to the best of our ability.

Public Comments (TM-38):

Comment: We recommend the following modifications to the Route Evaluation Tree ©. 1. Tree© should eliminate yes/no questions, and remove the Branches that imply an order of issues to be raised: By phrasing the data-gathering inquiries as yes or no answers and by placing them in the order shown, the Tree© inevitably implies decision-making and sheds its promise as a data-gathering tool. The format of the Tree© implies that once a question is "answered" and the next "step" is taken, the

decision or evaluation of the route in question has concluded that it can remain open despite any potential impacts or damage. In order to remedy this problem, the inquiries should be phrased to report all information on a route, including impacts (i.e., sensitive resource affected and description of effects), valid rights-of-way or permitted uses, condition, maintenance records, and use levels, all of which can then be evaluated in the appropriate context. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2252, letter #343)

Comment: However, if the BLM chooses to incorporate the Tree© into the future route designation process, we have several recommendations for how it should be modified. If possible, we would also like to see these recommendations implemented and re-applied to the Agua Fria route designation process. We realize that the Tree© is but one step in a multiple-step process, and that the agency intends to gather other information in earlier or later steps, such as in regards to legal obligations and cumulative impacts. However, the Tree© data-gathering process is quite extensive, and channels evaluators down a branch that generally leads to a range of alternatives for that route. Therefore, it seems common-sense that these other information needs be incorporated into the data summary that is the result of the Tree© process. Therefore, we recommend that other information needs be incorporated so as to simplify the agency's job by having all relevant information summarized in one database/spreadsheet. Currently, the Tree© does not incorporate BLM's obligations under the Executive Orders, ORV regulations, NEPA, ESA, NHPA, Monument Proclamations, and National Conservation Area Legislation. We understand that ARS can customize the Tree© by adding inquiries, and we recommend that the agency require this so as to ensure your legal responsibilities are met. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2251, letter #343)

Public Concern (TM-39):

Respondents feel BLM should recognize that some users will break the rules and travel off designated routes. Therefore, the BLM should

analyze impacts accordingly, as well as include specific management actions that will reduce travel off of designated routes. BLM should identify, quantify, and analyze these likely impacts in both the "affected environment" and "environmental impact" sections of the EIS.

Response:

NEPA and CEQ regulations require we analyze the impacts of our actions. No action we are taking is designed to encourage illegal or improper use of motorized vehicles. So, it is not required that we attempt to identify, quantify, or analyze the affects of an unauthorized activity.

Management actions to reduce off road travel vary by site specific conditions. Management actions including (but not limited to) post-and-cable barriers, rock barriers, and trenching, along with signing and increasing patrols are all possible depending on the needs of the site. A laundry list of possible actions is not necessary as many possibilities exist, and new methods may present themselves depending on specific site needs and development of innovative solutions.

Public Comments (TM-39):

Comment: If designated routes are not clearly indicated on a widely-accessible map and appropriately signed, then it is likely that users may travel onto administrative routes or closed routes that are visible. Even the BLM's own Oil and Gas Surface Operating Standards for Oil and Gas Exploration and Development, also referred to as the "Gold Book," recognizes the associated impacts from roads and oil and gas development: Oil and gas roads that are not closed to public use (through the use of gates or other traffic control devices) have the potential to serve secondary uses such as providing access for hunters and other recreational users who are not familiar with the road and area. In addition, roads have the potential to cause environmental harm through erosion, air pollution, stream degradation, habitat alteration, and increased public use of an area. [4th Edition, 2005, p. 16] Although this quote refers to oil and gas roads, the same logic applies to all visible, ungated routes, which could include administrative and

closed (but not yet restored or blocked) routes. If the route is visible but unblocked, motorized users could use it, even if it is against the rules. Agua Fria and the rest of the planning area have limited staff, and existing law enforcement rangers cannot be everywhere all the time. Recommendation: BLM should include specific management decisions that will make it easy for ORV users to stay on designated routes, such as: (1) by providing a detailed and widely available map of available open routes; (2) signing routes that are open; (3) gating administrative routes; and (4) obliterating the "entrance" to closed routes as soon as possible to reduce their visibility. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2246, letter #343)

Comment: The intent of a designated route network is to limited motorized use to specific routes, and restrict use on closed routes, administrative routes, or cross-country. However, the BLM should recognize that some users will break the rules and travel off designated routes. Therefore, the BLM should analyze impacts accordingly, as well as including specific management actions that will reduce travel off of designated routes. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2245, letter #343)

Public Concern (TM-40):

Respondents are worried that the route mapping and designation may result in unfair or unjust enforcement, especially before the designation and signing is complete and existing routes are inventoried. They suggest the following language be included under Administrative Actions: "Citations will be issued only for vehicle travel on clearly pre-existing motorized routes when the routes are signed as closed to motorized travel."

Response (TM-40):

Most public lands in the Planning Area are inventoried as to route locations. The described circumstances of unjust or unfair enforcement prior to route evaluation and designation have not been a concern with BLM's law enforcement rangers, field staff, or our visitors. We have,

however, added the following clarifying language in Section 2.7.3.8 Travel Management section:

Prior to OHV route designations, citations may be issued and other enforcement actions taken for illegal or unauthorized vehicle travel documented by BLM and Law Enforcement personnel.

BLM's OHV route inventory for any subject area will represent all existing routes open and available for vehicle travel. Vehicle use in areas or on "routes" not included as part of the inventoried route network will be considered illegal and unauthorized, off-road or cross-country travel. Signing may or may not be present based on the location. In this case, citations may be issued at the discretion of the law enforcement officer. Citations will be issued for vehicle travel on inventoried and pre-existing motorized routes when the routes are signed as closed to motorized travel.

Public Comments (TM-40):

Comment: Motorized Use of Roads and Trails. Apparently BLM is nationally committed to mapping all roads and trails and declaring all others, not mapped, as illegal for motorized use. We understand the arguments for this. However, total accurate mapping is very, very difficult. There are bound to be accidental omissions, and surely there will be new roads and trails created by prospectors, by ranchers mending their fences or tending their livestock and unfortunately some by group or individual recreational users. We are concerned that the mapping requirement will result in unnecessarily restricted use if totally enforced or else sporadic and selective enforcement, which, of course, is intrinsically unfair and unjust. For example, the section on p. 261 entitled "Management Actions" provides, "all motorized/mechanized vehicle travel and access would be limited to vehicle routes selected by BLM through inventory." How would an ordinary person driving out from Phoenix for the day know what was and wasn't in the BLM inventory?" For that matter, would he be likely to have a map even after the roads are mapped? Nevertheless, we are apparently going to have to live with the mapping plan, so

we have one suggestion for minimizing the problems and the unfairness: Add a paragraph under the subsequent section beginning on p. 262 entitled "Administrative Actions", reading, "Citations will be issued only for vehicle travel on clearly pre-existing motorized routes when the routes are signed as closed to motorized travel." (Individual, Prescott, AZ - Comment: #1990, letter #270)

Public Concern (TM-41):

Respondents feel that there will be unacceptable negative impacts on monument objects, including cultural and natural resources, from the route network and that the impact analysis fails to examine the direct, indirect, and cumulative impacts or justify how each route contributes to preserving monument objects.

Response (TM-41):

We believe the route network in the Proposed Plan (Map 2-76) protects vulnerable cultural resources, as shown by the following analysis. The following table (5-7) describes the distances, at ¼ mile intervals, between the nearest open routes and the 12 sites/site clusters, under existing baseline conditions and as designated in the Final RMPs. The specific names and locations of the sites are available for review by qualified researchers at the Phoenix District.

Increased distances between open routes and vulnerable sites, especially across rocky surfaces and rugged terrain, are expected to enhance site protection, by reducing access and visibility. In regard to the 12 most vulnerable site areas, the route designations would increase the accessible distances to 7 sites, by designating current routes as "closed" or for "administrative use only." The proposed route system also would maintain the current closures of two routes that once led directly to sites, but now restrict vehicle traffic. Under the current transportation system, there are 7 vulnerable sites that are less than ½ mile, and 5 sites that are further than ½ mile, from an open route. Under the proposed transportation system, there are 3 sites that would be less than ½ mile, and 9

sites that would be further than ½ mile, from an open route.

Prior to the late 1990's, roads led directly to 7 of the 12 most vulnerable sites/site areas. Under the proposed transportation system, direct route access will be cut off to all but one of these sites. This particular site on Black Mesa, which has been identified for possible interpretive development, will be closely monitored to detect any vandalism; a nearby, redundant route to the site will be closed.

For these 12 particularly vulnerable sites, 9 sites would maintaining existing closures or changing the closest, currently open routes to "closed" or "administrative use only." At the other 3 sites, proposed route closures would reduce the number and density of open roads in the surrounding areas. The elimination of redundant routes and overall route densities would reduce impacts to sites from vandalism and soil erosion.

In general, and in terms of cumulative impacts from vandalism and erosion, cultural and natural resources would be protected by the elimination of redundant routes and overall route densities; the closure of at least 9 routes leading to canyon rims; and the closure of several routes near the river and creeks. Mitigation measures, which could include additional route closures, would be implemented if new surveys or monitoring observations revealed cases of damage associated with open routes.

In addition, the Proposed Management Plan includes closures or solely administrative use for a number of existing routes within riparian areas, pronghorn movement corridors, and pronghorn fawning areas. These designations will help protect biological resources and reduce habitat fragmentation.

Site Type, General Area	Distance to open route, current route system	Distance to open route, proposed route system	Comment
Pueblo, Perry Mesa	¼ mile	¼ mile	Current closure
Pueblo, Perry Mesa	½ mile	¾ mile	Direct route no longer exists
Pueblo, Perry Mesa	½ mile	¾ mile	
Pueblo, Perry Mesa	0 miles	½ mile	
Pueblo, Perry Mesa	0 miles	¾ mile	
Pueblo, Perry Mesa	0 miles	2¼ miles	
Pueblo, Black Mesa	¾ mile	¾ mile	
Pueblo, Black Mesa	¼ mile	¼ mile	
Pueblo, Black Mesa	½ mile	¾ mile	
Rock Art, Black Mesa	<¼ mile	<¼ mile	
Rock Art, Black Mesa	½ mile	½ mile	Current closure
Rock Art, North zone	¼ mile	¾ mile	

As a part of our document revision process in preparation of the Proposed Resource Management Plan and Final Environmental Impact Statement, we have reviewed the proposed route network. We have included our evaluation data in the public record that has been available in the Public Room of the Phoenix District for public review since January 6, 2006, and it is attached to this document on a CD. We believe the proposed route network provides the protection required by the Proclamation while allowing motorized access to the monument.

Public Comments (TM-41):

Comment: As stated earlier in these comments, given that the purpose of the Monument is protection of "objects" and given that Monument roads were not built for the purpose of protecting Monument objects - and too often harm Monument objects - The question is no longer "Why shouldn't this route be here?" The question regarding each BLM road in the Monument is now "Why should it be here?" The Proclamation puts the burden of proof on each BLM route not encumbered by valid existing rights to demonstrate how it sufficiently contributes to preserving "Monument objects." Roads that fail the "protection" test should be closed, and those that cannot be closed due to valid rights of way, should be limited to that

specific administrative access only. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2217, letter #343)

Comment: The plan fails to adequately address the impacts of the road network nor does the preferred alternative adequately protect the cultural and biological resources of the monument. Many of these roads invite damage to sensitive cultural resources, fragment important pronghorn fawning habitat, and are expensive to maintain. (Individual, Tucson, AZ - Comment: #926, letter #298)

Public Concern (TM-42):

Respondents believe the Draft RMPs/EIS lacks adequate impact analysis or rationale of routes to remain open or be closed to comply with NEPA, and maybe even to NHPA. All routes designated open must be evaluated (cleared) consistent with Section 106 of NHPA before they are opened.

Response (TM-42):

Available cultural resource information was used on the national monument, and will be used in the Bradshaw-Harquahala Planning Area, to take into account potential adverse effects on cultural resources when making route

designations. The route designations would not open new areas or new routes to OHV use, but would limit use to existing routes, reduce the proliferation of new routes and provide clearer enforcement authority to reduce direct and indirect impacts to cultural resources. Routes could be closed if their use poses a threat to cultural resources. Failure to designate routes in the RMP or in the short term after RMP completion would lead to greater impacts to cultural resources in the long term.

The BLM considers designations of travel areas, roads, and trails as undertakings for the purposes of complying with Section 106 of the National Historic Preservation Act. In developing a proposed transportation plan, we have carried out the steps of the Section 106 process, which included: (1) a reasonable and good faith effort to identify historic properties that may be adversely affected; (2) consideration of potential adverse effects on the integrity of properties within the Perry Mesa National Register District and other areas of the monument; (3) assessment of the effects of the proposed transportation plan (and alternative plans) on historic properties; and (4) consideration of measures to avoid, minimize, or mitigate potential adverse effects of the proposed transportation plan. From the beginning of the planning process, we have consulted with the public, Indian tribes, government agencies, and the State Historic Preservation Office (SHPO), through meetings at various stages of the process. These groups were also given the opportunity to review and comment on the draft alternatives in the plan, and their comments were taken into account as we prepared the Draft RMPs/EIS for public review.

With respect to the routes proposed to remain open, our actions are consistent with BLM policy in Instruction Memorandum No. 2007-030, "Clarification of Cultural Resource Considerations for Off-Highway Vehicle (OHV) Designation and Travel Management." Consistent with this guidance, we have applied the appropriate effort for identification of historic properties, in order to comply with Section 106. In addition, we have addressed potential direct and indirect adverse impacts to

cultural resources, by closing many routes or restricting them to administrative use; and by incorporating monitoring and mitigation into the transportation plan. The natural terrain restricts the potential for route proliferation in much of the monument, and rough road conditions will continue to discourage travel into remote areas. Proposed designations that will not change or will reduce OHV use are unlikely to adversely affect cultural resources.

All OHV use is subject to prohibitions against operation of vehicles on public lands in a reckless, careless, or negligent manner. Where an authorized officer determines that OHV's are causing or likely to cause adverse effects to cultural resources, 43 CFR 8341.2 requires immediate closure to the type or types of vehicles causing the adverse effect, until the adverse effects are eliminated and measures implemented to prevent recurrence.

Public Comments (TM-42):

Comment: BLM Must Comply with Section 106 of the National Historic Preservation Act (NHPA) prior to the designation of motorized travel routes. An RMP establishes a written document of land use limitations, resource condition goals and objectives, support actions, and a number of other items. See 43 C.F.R. 1601.0-5(k). In general, it "is not a final implementation decision on actions which require further specific plans, process steps, or decisions under specific provisions of law and regulations." *Id.* However, when an RMP designates areas for transportation access and travel, as is the case here, that decision is an "undertaking" requiring compliance with Section 106 of the National Historic Preservation Act, 16 U.S.C. 470f. Adoption of the RMP is the final agency action that authorizes the designation of roads and routes as "open" for travel and transportation and off-highway vehicle (OHV) use, which have the potential to adversely affect historic properties. Therefore, BLM must comply with Section 106 prior to approving the road designation and OHV designation. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2219, letter #343)

Comment: Application of Section 106 of the NHPA to the designation of roads or routes. An RMP establishes a written document of land use limitations, resource condition goals and objectives, support actions, and a number of other items. See 43 C.F.R. 1601.0-5(k). In general, it "is not a final implementation decision on actions which require further specific plans, process steps, or decisions under specific provisions of law and regulations." *Id.* However, when an RMP designates areas for transportation access and travel, as is the case here, that decision is an "undertaking" requiring compliance with Section 106 of the NHPA, 16 U.S.C. 470f. Adoption of the RMP is the final agency action that authorizes the designation of roads and routes as "open" for travel and transportation, which have the potential to adversely affect historic properties. Therefore, BLM must comply with Section 106 prior to approving the road designation. The Draft RMP does not demonstrate compliance with the requirements of Section 106, nor is there any information that the "Route Evaluation/Designation Decision Tree Process" complies with the requirements of Section 106. Section 106 of the NHPA requires that BLM take into account the effects of its actions on all affected historic resources and to provide the federal Advisory Council on Historic Preservation ("Advisory Council") a reasonable opportunity to comment prior to making its decision. 16 U.S.C. 470f. The Advisory Council's Section 106 regulations require Federal agencies to: (1) "make a reasonable and good faith effort" to identify historic properties potentially adversely affected by an undertaking; 36 C.F.R. 800.4(b)(1); (2) determine the eligibility of historic properties for the National Register, *id.* 800.4(c); (3) assess any effects the undertaking may have on historic properties, *id.* 800.5; and (4) if the effects are adverse, develop and evaluate alternatives or modifications to the project to avoid, minimize, or mitigate those effects based on consultation with the SHPO, Indian tribes, the Advisory Council, and other consulting parties, *id.* 800.6(a). Importantly, the Section 106 regulations establish a process that creates a dialogue between the Federal agency and other parties, including identified consulting parties. Through this dialogue, when adverse

effects are determined to occur in connection to the proposed action, the federal agency will seek ways to "avoid, minimize, or mitigate" adverse effects to identified cultural resources with input from consulting parties. (Individual, National Trust for Historic Preservation, Washington, D.C. - Comment: #1805, letter #402)

Public Concern (TM-43):

Respondents are disappointed that the agencies did not consider the input of citizens for travel routes.

Response (TM-43):

The Phoenix District considered the citizens' proposal for travel routes submitted November 25, 2003. The route network depicted in Alternative D was derived from a number of individuals and groups, including:

Julie Sherman
Sierra Club Grand Canyon Chapter
202 E. McDowell Rd., Suite 277
Phoenix, Arizona 85007

Jenny Neeley
Southwest Associate
Defenders of Wildlife
302 S. Convent Ave.
Tucson, Arizona 85701

Jason Williams
Arizona Wilderness Coalition
P.O. Box 267
Prescott, Arizona 86302

David R. Parsons
Wildlife Biologist
PARSONS BIOLOGICAL CONSULTING
8613 Horacio Place NE
Albuquerque, New Mexico 87111

Michelle T. Harrington
Phoenix Area Coordinator
Center for Biological Diversity
P.O. Box 39629
Phoenix, Arizona 85069-9629

Bill Broyles
Friends of Cabeza Prieta

P.O. Box 64940
Tucson, Arizona 85728

Kelly Burke
Grand Canyon Wildlands Council
PO Box 1594
Flagstaff, Arizona 86002

Public Comments (TM-43):

Comment: We are disappointed that the agencies did not consider a citizens' proposal for travel routes submitted by a coalition of groups including the Sierra Club and the Center for Biological Diversity (comments incorporated by reference from November 25, 2003). This proposal was formally submitted as part of a public comment period on the "preliminary range of alternatives" in November 2003, and was the subject of several subsequent conversations with the agencies. At each of these times, we formally requested that this proposal be considered as part of the RMP/EIS process. While Alternatives C and D come closest to our proposal, it is still quite different and the agencies have neither presented a justification for failing to consider the Citizens' proposal nor identified the manner in which the Citizens' proposal was incorporated in other alternatives. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2242, letter #343)

Comment: In fact in 2003, we spent a good amount of time and effort to map for the BLM all of the rideable roads and trails and washes East of Vulture Mine Road and we pointed out the very few that were too dangerous to leave open and note several that need work due to natural erosion. We never got any comment or acknowledgement of our submission despite the work we had put into it. Although we didn't map it we know the Federal and State lands west of Vulture Mine Road as well. (Individual, Prescott, AZ - Comment: #1965, letter #57)

Public Concern (TM-44):

Respondents feel that no new OHV trails should be built in the monument and that designating a limited road network is a good way to protect monument objects. They suggest that

Alternative E provides unreasonable motorized access in some areas, which threatens resources such as water. Others believe that road closures in the monument should be minimized.

Response (TM-44):

All alternatives and all decisions proposed for the monument are limited by protection of monument resources and the "objects" described in the Proclamation. Protection of these resources and objects do not preclude a certain amount of public use and recreational enjoyment. Though the Proclamation emphasizes the protection of these resources and objects, the Federal Land Policy and Management Act allows for multiple use as long as the protection of monument resources and objects is ensured first. It is the opinion of BLM that all alternatives achieve this balance, and through our analysis we find the Proposed Alternative provides the best balance between protection of monument resources and objects with use and enjoyment.

The route evaluation and designation process for the national monument took many factors into consideration in determining the route network. The data related to this effort can be found in the public record and can be viewed upon request at the Phoenix District.

Public Comments (TM-44):

Comment: We believe that designating a limited road network is one of the best ways to protect the objects listed in the monument proclamation. An extensive road network can impact a variety of monument objects. For instance, roads can fragment habitat, disturb wildlife, spread invasive plants, and invite vandalism at archeological sites. In addition, roads can lead to significant impacts due to increased human activity. Please recall that the monument proclamation does not list motorized access as an object to protect or preserve. We applaud the BLM for closing many of the most inappropriate motorized routes in the monument and favor management decisions that prevent impacts to precious riparian areas such as Badger Springs Wash and the Agua Fria River. We are not seeking to limit all human access to

the monument; rather, we are concerned that Alternative E provides unreasonable motorized access in several areas which directly threatens the very resources the monument was expressly created to protect. While providing motorized access: particularly for administrative use for resource monitoring and scientific study: is important, it cannot be provided at the expense of the monument objects. Restrictions on a few routes shown on Map 2-76 are both wise and necessary. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1866, letter #340)

Comment: Minimize road closures (in AFNM). (Individual, Black Canyon City, AZ - Comment: #1940, letter #353)

Public Concern (TM-45):

Respondents request that BLM not build a four-mile alternative OHV trail from Badger Springs Wash to Bloody Basin Road because it would violate the intent of the Monument Proclamation and result in more unplanned motorized trails.

Response (TM-45):

The National Monument Proclamation says “For the purpose of protecting the objects identified above, all motorized and mechanized vehicle use off-road will be prohibited, except for emergency or authorized administrative purposes.” This does not preclude construction of a new road segment if it is determined that monument resources can be better protected through its construction or if a new route segment would enhance some aspect of monument management and no monument resources would be adversely affected. No such alternative OHV route is planned in the Proposed Alternative.

Public Comments (TM-45):

Comment: The monument proclamation clearly prioritizes the protection of monument objects over OHV recreation, stating: "For the purpose of protecting the objects identified above, all motorized and mechanized vehicle use off road will be prohibited, except for emergency or authorized administrative purposes" (page 697). As has been argued by representatives of the

OHV community itself, the construction of a one mile section for an OHV route is not consistent with the proclamation and will directly impact monument resources. This route is clearly inappropriate and should not be constructed. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1865, letter #340)

Comment: DO NOT BUILD a 4-mile alternative OHV trail from Badger Springs wash to Bloody Basin Road which would violate the intent of the Agua Fria monument proclamation and result in more unplanned motorized trails. (Individual, Prescott, AZ - Comment: #319, letter #173)

Public Concern (TM-46):

Respondents feel that having 25 miles of secondary road accessible in good weather by two-wheel-drive vehicles is too much and contrary to purposes of the Monument Proclamation. They suggest these roads be designated as tertiary instead.

Response (TM-46):

The 25 miles of secondary road includes Bloody Basin Road, a county right-of-way, a secondary access road to Cordes Lakes, and access to some of the private inholdings in the north portion of the national monument. For reasons of public safety and health, these roads will continue to be maintained at their current level.

Public Comments (TM-46):

Comment: 4.Alternative E - Page 166, 2.6.1.9 Travel Management, Public Access: “Having the 25 miles of secondary roads, accessible in good weather by two-wheel-drive vehicles would be contrary to the purposes of the Monument as stated in the President Proclamation. Having fewer miles would in point of fact, help preserve it by keeping its wilderness” feel. “We recommend that these roads be designated as tertiary roads. (Black Canyon Trail Coalition, In, Black Canyon City, AZ - Comment: #1268, letter #280)

Public Concern (TM-47):

Commenters would like to see roads “kept as far from cultural sites as practical” and support

closure of roads or designation for administrative use only to protect cultural resources.

Response (TM-47):

It appears that some roads on Perry Mesa are associated with the history of vandalism at large sites and site clusters. According to Ahlstrom et. al. (1992:31), the largest sites on the mesa have been known to pothunters and exploited by them for years. Ease or difficulty of access has probably had little effect on the attractiveness of these sites to pothunters. Instead, their appeal determined the quality of access, in the sense that a number of the roads on Perry Mesa appear to have been directed to the major sites.

This information indicates that roads to the major sites may facilitate vandalism, as well as easier access by visitors who might cause either intentional or unintentional damage. Excluding the data from the Tonto National Forest, we defined the 12 most vulnerable sites/site clusters on Perry Mesa, Black Mesa, and in other areas of the monument. Relevant considerations included site size, visibility, past vandalism, and public knowledge of site locations. These locations include all pueblo "room blocks" that contain 40 or more rooms, as well as large areas of rock art and many of the sites that have more than 20 rooms.

Prior to 1995, open roads or jeep trails led directly to seven of these 12 sites. In the late 1990's, the BLM closed one of these routes, to protect riparian habitats and cultural resources within the corridor recommended for Wild & Scenic River designation along the Agua Fria River. The closure has remained in effect since that time. Also in the late 1990's, a jeep trail that led directly to Pueblo Pato faded out of existence, due to natural reclamation and a lack of use. This change may reflect non-use by the BLM, as well as signing and more frequent monitoring of the site, after two vandals were observed there and were later arrested and successfully prosecuted under the Archaeological Resources Protection Act. In a third case, as a protective measure, the BLM recently installed a locked gate that restricts direct access to Pueblo la Plata by vehicles.

Therefore, under the current transportation system, open routes lead directly to 4 of the 12 most vulnerable sites/site clusters. There are no known cases of serious damage from roads that have gone through sites. Many archaeological sites are unobtrusive, inaccessible, and far from roads. Rugged terrain, deep canyons, and rocky mesa surfaces constrain route proliferation and discourage cross-country travel by vehicle or foot. Field inventories are needed to further evaluate the direct and indirect effects of the existing route network on sites that have yet to be discovered. For that reason, Section 2.7.2.6 defines Class III surveys of travel corridors as a major priority for inventory.

We recognize that ease of access to sites may increase their vulnerability to vandalism. Through the route evaluation process, we have identified routes that increase the vulnerability of known sites. In the Proposed Management Plan, we have generally closed those routes, converted them to administrative use, or closed them at a distance from the site that the vulnerability is negated. Through the route evaluation and designation process, we addressed access needs and protection of cultural resources. The proposed transportation network would provide enhanced protection for sites through restrictions on access, while maintaining access for monitoring and research. For a related analysis of impacts, please refer to Section 4.12.13.

Public Comments (TM-47):

Comment: We (Friends of the AFNM) support the closure of roads except for administrative use to perform site monitoring or research should vehicular access be necessary. We believe that posting the reason for the road closure (e.g., to protect cultural resources) will assuage most users. We recognize that designating routes as "for administrative use only" will not dissuade all drivers from illegally utilizing these routes and will require some basic level of maintenance and monitoring. However, we believe these costs to be significantly less than those required to monitor and prevent damage from an unrestricted roadway. Please remember that when these resources are

impaired, they will not regenerate: their value is lost forever. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2072, letter #339)

Comment: All roads that access sensitive wildfire habitat and cultural sites should be eliminated and returned to original native cover. (Phoenix Zoo, Phoenix, AZ - Comment: #1183, letter #357)

Public Concern (TM-48):

To protect monument resources, respondents support closing or limiting use of the following roads to Administrative Use only:

- *The dead-end route that crosses Black Mesa from the Sunset Point Rest Area exit.*
- *The dead-end route that accesses Lousy Tank from FR14.*
- *The dead-end route that travels west across Perry Mesa towards the southern edge of Perry Tank Canyon accessing Bob's Tank and the spur route that runs south to a stock tank.*
- *All dead-end roads on Perry Mesa*
- *The long, dead-end route that travels west across Perry Mesa toward the northern edge of Perry Tank Canyon and north towards Baby Canyon.*
- *The road originating in the extreme southern part of section 33 and leading to Pipe Tank.*
- *The power line that runs down the middle of Perry Mesa.*
- *Route crossing Silver Creek from Double Tank.*
- *A jeep trail which goes through section 20 of the Squaw Creek Mesa quad in the extreme southern part of the Monument.*

Response (TM-48):

Route evaluation was conducted for each route for each alternative on the national monument. The data indicates uses being made of each route and conflicts related to designating them open. Two issues present themselves with limiting access of roads to “Administrative Use Only.”

First, by closing a road to the public, some uses will be denied. The roads you suggest closing are popular access for hunting, bird watching, visiting cultural sites, hiking, and scientific research access to Perry Mesa, the east side of Agua Fria Canyon, and tributaries of the Agua Fria River from the east.

Second, successful closure of a road is accomplished if it can be enforced. Complete closure is achieved best if barriers are constructed at the entrance of the closed road and the road is obliterated through reclamation. If the road is still open, even for administrative use, it is visible to passing motorists. Gates designed to deny access to the public while allowing access to authorized users often present little challenge to those who are motivated to circumvent them. Especially in places like Perry Mesa, there is little or no vegetation or terrain features to help reinforce such gates. In many cases, the gates become a source of increased impact rather than the protective barrier they were designed to be.

For these reasons, we have designated roads as “Limited to Administrative Use Only” in those areas where resource protection clearly requires it and it is enforceable.

We have conducted further review of the route network in the national monument for our Proposed Plan. The network portrayed in Map 2-76) reflects this review. It is BLM’s goal to protect the resources and objects of the monument while still allowing an appropriate level of public use and enjoyment. We believe the route network in the Proposed Plan achieves this. Route evaluation data and notes from our review are available from the Phoenix District upon request.

Public Comments (TM-48):

Comment: We (Friends of AFNM) believe the following routes should be closed to all motorized travel in the final resource management plan: -The short route just north of Squaw Creek that is accessed from FR14. This is a short, dead-end route that accesses several known cultural sites. Its distance from Bloody Basin Road will make it difficult for the BLM to

adequately patrol this area and maintain the roadway. This route should be closed at the monument boundary and the current roadway converted to a footpath. -The very short route on the south side of Larry Creek that is accessed from FR14. This is an incredibly short segment that dead-ends about a mile into the monument. This route will also be difficult to maintain, provides motorized access to cultural resources, and should be converted to a footpath at the monument boundary. -The route that travels north across Silver Creek from Double Tank. This long segment provides access to a single stock tank while crossing a riparian area and a tributary to the Agua Fria River that we would like to see studied for Wild and Scenic River designation. This area has not been adequately inventoried for cultural resources and should not remain open to motorized vehicles. Please close this route to motorized vehicles where it branches off of the road to Pueblo La Plata. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2109, letter #339)

Comment: At the threshold, while I don't object to providing road access to the monuments, you propose far too many roads. By now, we all know that roads and ORVs can cause a range of impacts, such as spreading noxious weeds, allowing vandals too-easy access to cultural sites and disrupting sensitive wildlife. Please consider closing the additional 15 miles of routes recommended by the Arizona Wilderness Coalition. These routes are generally dead-end routes, and closure would preserve archaeological sites, pronghorn habitat, and streams. (Individual, Nathrop, CO - Comment: #408, letter #317)

Public Concern (TM-49):

Respondents think that building a new OHV route near Badger Springs is prohibited by the Proclamation and should be removed from the final plan. They feel that Badger Springs Wash Trail should remain closed to help improve the riparian corridor, reduce garbage, and preserve the scenic qualities of this trail without the noise and disruption of the motor vehicles.

Others would like to keep the Badger Springs Jeep trail open and request that the wash to

remain open for OHV recreation use. This would minimize impacts caused by creating a parallel trail, limit soil disturbance, reduce the cost to the tax payers for digging a new trail, reduce dust and visual impacts from OHVs, and would be more consistent with practices in other places, such as the Grand Staircase Escalante National Monument. Impacts could be mitigated through seasonal closures, interruptive sites, interpretive maps, and educational materials.

Response (TM-49):

We examined reopening Badger Springs Wash to the river and chose not to for the following reasons:

- It is in conflict with our legal requirement to manage the suitable Wild segment of the Agua Fria River for non-impairment until Congress makes a determination of its designation.
- The riparian character of the wash segment is recovering from degradation due to motorized use.
- Riparian habitat is clearly an object of the monument the proclamation requires us to protect.

In addition, we reconsidered retaining the motorized access upstream from the parking area to Bloody Basin Road. After several field visits and upon coordination with concerned citizens, we have maintained the proposed closure as described in our original route network for the following reasons:

- The access route up the wash bottom threatens long term recovery and sustainability of the riparian zone in the lower portion of the wash segment
- In moist climatic cycles the lower portion of the wash segment runs water for as much as several months to year-round. Continued access along this portion when water is present could disturb riparian recovery and wildlife access to the water.
- Alternative routes would require construction that could also threaten monument objects or resources of interest.

We would like to remind the readers that the designated route network for the national monument is an implementation decision, which is not protestable. It is, however, appealable upon signature of the Record of Decision. Protest and appeal processes are described in the Dear Reader letter of this document.

Public Comments (TM-49):

Comment: Badger Springs Wash Trail should remain closed. I have personally witnessed the conditions of the wash before and after the closure of the wash to ORV use. The riparian corridor has improved remarkably. Willow, cottonwood, and grasses have returned in places that were erosional ruts. The amount of garbage and trash has also declined significantly. It is unfortunate that most garbage and trash that comes into an area is brought in by vehicle users (this could probably be proven by a scientifically designed study). The walk along Badger Creek Wash is very short, approximately 1/2 mile. This distance does not deny access to most people since there is very little vertical change and the trail is easily navigated by most people. Being able to enjoy the scenic qualities of this trail without the noise and disruption of the motor vehicles has made this location a favorite destination for my educational field trips in field ecology. During these field trips I have been able to teach about the values of riparian desert ecosystems and cultural resources that would be at greater risk to vandalism and destruction due to vehicular accessibility. (Individual, Prescott, AZ - Comment: #817, letter #157)

Comment: the sole remaining off highway vehicle access to the Agua Fria River is via the Badger Springs wash jeep trail. Alternative E has as a facet of it the rerouting of this trail out of the wash on to higher ground. That poses a number of significant issues as far as we are concerned but I will limit my comments to just four. By rerouting the Badger Springs wash jeep trail out of the wash you are doing a number of things that run counter to what would represent in our minds good management of a national monument. Number one, by creating a parallel trail on higher ground to the Badger Springs wash trail you are going against minimal ground

disturbance which is one of things that is a facet of national monument management. Secondly, the Badger Springs wash has no riparian, archeological or soil-related issues so its continued use of an off highway vehicle trail does not pose any potential risk or harm or run counter to the protection characteristics that are part of the national monument. Thirdly, the cost that would be born by the taxpayers in having to dig a parallel trail to replace the Badger Springs wash jeep trail is unnecessary. And finally, the trail that would be substituted for Badger Springs wash would be made of soils. And use of those trails would create dust and that dust would be visible from I-17 which is the gateway to the Agua Fria National Monument. From a visual resources management standpoint it represents a bad idea. Leaving us in the wash where the sand particles are heavier, they don't rise as high, settle much quicker, it is a much better way to channel your off highway vehicle use with a minimal amount of environment impact. (Prescott Open Trails Association, Prescott, AZ - Comment: #1035, letter #232)

Public Concern (TM-50):

Respondents want to know how the number of ATV and motorcycle routes in the monument was calculated, what the total number of inventoried trails in monument is, and the location of data which shows the evaluation that closes 70 miles of trail.

Response (TM-50):

The miles of route in the Agua Fria National Monument were determined by trained, experienced personnel who conducted the on-the-ground inventory using state-of-the-art GPS units.

The total route mileage in the AFNM is 171 miles. The section of the plan showing miles of routes open, closed or limited in each Alternative are 2.3.1.8(Alt B), 2.4.1.8(Alt C), 2.5.1.8(Alt D), 2.6.1.9(Alt E).

The route evaluation and designation data for the Agua Fria National Monument has been available in the public room at the Phoenix District, 21605 N. 7th Ave., Phoenix, AZ, 85027

from 7:30 am to 4:15 pm Monday through Friday (except holidays) since January 6, 2006. The public is welcome to come and look it over anytime during the above hours.

Public Comments (TM-50):

Comment: You show that in the AFNM, there are only 4 miles of ATV or Motorcycle trail, how was this number arrived at? What was the total number of inventoried trails in the AFNM? Where is the data from the Trails evaluation in the AFNM that designated the 70 miles of trail closure? (Comment: #199, form #2)

Comment: Why are trails being closed? (Individual - Comment: #254, letter #172)

Public Concern (TM-51):

Respondents suggest that without inventory of non-motorized trails, any non-motorized trails are illegal because they have not been inventoried and analyzed through NEPA or cleared for cultural resources and that data is required to show no impacts exist from non-motorized uses. Further, they request all users be restricted to existing designated trails and no cross country travel be allowed by any user group and that when competitive events are prohibited, that these events be prohibited for all user groups as well. Respondents want to know the location of data supporting the claims that the building of new non-motorized trails and recreation facilities has a beneficial impact on the Desired Future Condition of an area.

Response (TM-51):

All designated hiking and equestrian trails in the Planning Area have recreation project plans, cultural clearances, and NEPA-related environmental assessments. Designated non-motorized routes include the Black Canyon Trail, the Harquahala Peak Pack Trail, the Vulture Peak Trail, and trails within Hell's Canyon and Hassayampa River Canyon wildernesses.

The claim that without inventory of non-motorized trails, any non-motorized trails are illegal also holds true for most primitive roads and single-track routes in the Planning Area.

Though they have been inventoried, most of these motorized routes have never had any site-specific NEPA analysis or been cleared for cultural or endangered species, and many were illegally created by users through cross-country travel along former cattle or wildlife paths – these motorized routes would also be illegal. The vast majority of motorized routes in the planning area had no planning or design to minimize the impacts on other resources, or maximize the route's contribution to the overall travel and transportation network

It is true that there are non-motorized routes that have not been inventoried. Many such routes surround communities within the Planning Area. These trails are a result of those communities' long history of casual and commercial use of the public lands. The Wickenburg community is in the process of inventorying local horse and foot travel routes at this time. Other communities are also building citizen efforts to conduct similar inventory in their vicinities. These efforts will allow non-motorized routes to be addressed in travel management planning within those areas as the RMP is implemented over the next several years.

Public Comments (TM-51):

Comment: Which brings us to the main issue, if you have no inventory of existing non-motorized trails and you have no drawings or data in the plan as to the location of proposed non-motorized route and trails in the planning document, how do you justify, in data, that replacing the motorized use with non-motorized use is the mitigate of resource issues or will meet your DFC? If you have no inventory, you have no way to use the Evaluation criteria your Planning document says you will use. Without the evaluation the trails can not be included in the planning document. Without the inventory and evaluation, you have no NEPA or SHPO documentation and the trails are illegal. (Arizona Off-Highway Vehicle Coalition, Phoenix, AZ - Comment: #1616, letter #261)

Comment: Non -Motorized Routes Inventory Throughout the Management Plan, new non-motorized trails are being created. -Where are the inventory data and maps showing the

locations of existing non-motorized and these new trails? -Dates these existing non-motorized trails were inventoried? -If these trails were inventoried, who inventoried them and who paid for them to be inventoried? -If you do not have that data, how will you evaluate those trails and will you use the same evaluation process for non-motorized as for motorized evaluation? (Whiplash Motorsports, Phoenix, AZ - Comment: #1764, letter #389)

Public Concern (TM-52):

Numerous comments were received concerning whether or not Bloody Basin Road could be rerouted to reduce pronghorn impacts. If not, BLM should investigate ways to reduce pronghorn impacts of existing road.

Response (TM-52):

Bloody Basin Road is a right-of-way to Yavapai County. Currently, there is no evidence it has any affect on pronghorn movement or habitat. The greatest risk to pronghorn in the future would be to fence the road. BLM and Arizona Game and Fish Department will continue to monitor the pronghorn herd in the national monument and if it is determined the Bloody Basin Road is affecting pronghorn, we will work with Yavapai County to develop mitigation.

Public Comments (TM-52):

Comment: Alternative E - Page 159. 2.6.1.4 Cultural Resource Management Actions Moderate Use SCRMA (8,750 acres) - Determine if there is a way to reroute the Bloody Basin Road so that pronghorn migration areas are not crossed. -If rerouting is not possible, investigate ways to minimize the impacts. (New River/Desert Hills Community Association, Phoenix, AZ - Comment: #1523, letter #393)

Public Concern (TM-53):

Respondents believe BLM should avoid upgrading roads that will result in impacts to pronghorn and limit roads that impact fawning habitat. For instance, the four dead-end routes that cross Perry Mesa and affect Pronghorn fawning habitat and provide too much access to the cultural resources should be closed to

administrative use only. Seasonal restrictions on use should apply to all user groups.

Response (TM-53):

The final AFNM route designation reflects your comments. Between the draft and final document, we have reanalyzed the route network to include more closures of routes to protect Pronghorn Antelope and known archeological sites. Changes were made to include the use of administrative use only routes for motor vehicles in areas with sensitive resources. Time was spent on the ground reviewing the possibility of making such designations. In an effort to further monitor all types of use that might affect monument resources, a backcountry camping free permit will be required. Motorized and mechanized vehicles will be restricted to designated routes and hiking trails may be developed in the future to contain human use to designated trail corridors.

Public Comments (TM-53):

Comment: The preferred transportations plan allows unnecessary roads in areas critical to pronghorn for fawning. Please close the four dead-end routes across Perry Mesa and the dead-end route to the windmill north of Silver Creek. (Individual, Glendale, AZ - Comment: #328, letter #274)

Comment: 2.6.1.3 Biological Resources page 158 Management Actions You are limiting or Mitigating Vehicle Routes (OHV) because of Prong Horn Sheep and other animal corridors and areas of concern. ALL use will have a similar affect on animals and their surroundings. Please apply the same rules and restrictions (seasonal, closures) To all users (Whiplash Motorsports, Phoenix, AZ - Comment: #1713, letter #389)

Public Concern (TM-54):

Respondents believe the concerns related to cultural resources and wildlife outlined should be assessed in the future route designation process.

Response (TM-54):

The route evaluation and designation process for the Bradshaw-Harquahala Planning Area will include an appropriate level of environmental analysis.

Public Comments (TM-54):

Comment: In regards to the Bradshaw-Harquahala planning area, we are aware that IM No. 2004-005 allows BLM to delay route designation for five years in this planning area, but it does instruct BLM to use the open, closed, and limited designations. The concerns related to cultural resources and wildlife outlined here should also be assessed in the Bradshaw-Harquahala planning area in alternatives and the affected environment sections of the RMP in regards to travel management. Furthermore these issues should be addressed in the future route designation process. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2238, letter #343)

Public Concern (TM-55):

Respondent is concerned about vehicle collisions with wildlife, cows, and wild burros and suggests limiting and reducing the amount of roads to minimize collisions.

Response (TM-55):

Vehicle collisions with wildlife or livestock are possible and occasionally do occur. Laws for unsafe use of vehicles are in effect today and can be invoked at the discretion of law enforcement officers. Furthermore, routes will be designated in accordance with CFR8342.1 and other applicable laws and regulations.

Public Comments (TM-55):

Comment: I am also concerned about vehicle collisions with native wildlife. I am also concerned about vehicle collisions with cows and wild burros. I suggest that limiting and reducing the amount of roads to minimize collisions. (Individual, Prescott, AZ - Comment: #700, letter #227)

Public Concern (TM-56):

Respondent does not want to see mechanized travel being used in the areas of ecological concern.

Response (TM-56):

Areas of ecological concern such as Areas of Critical Environmental Concern and riparian areas will be protected through the route evaluation /designation process. Mechanized travel and non-mechanized travel modes will be considered for their effect on sensitive resources. Appendix D describes the designation process.

Public Comments (TM-56):

Comment: I do not want to see mechanized travel being used in the areas of the ecological concern. (Individual, Prescott, AZ - Comment: #715, letter #229)

Public Concern (TM-57):

Respondents feel to experience a fuller experience of the monument, a decent road to La Plata Pueblo is necessary. There is a nice circuit from the pueblo to the fort, looping back past the agave fields and the terraces which would be an ideal interpretive trail.

Response (TM-57):

Pueblo la Plata is proposed as the primary area for interpretive development within the monument. Associated sites within the High Use SCRMA, such as Fort Silver and prehistoric fields, may be incorporated into the interpretive plan that will be developed in the future. We will keep your suggestion in mind when we begin preparing an interpretive plan. It is consistent with the cultural landscape approach that we are encouraging in scientific research and public education.

Bloody Basin Road is maintained by Yavapai County, and the BLM also conducts annual maintenance on segments of this key transportation route. Since Bloody Basin Road crosses the pronghorn movement corridor and increased traffic and speeds could affect pronghorn movement to the Perry Mesa fawning area, it is unlikely to be improved much beyond current conditions. The primitive route to Pueblo la Plata currently requires the use of a

high-clearance vehicle. In developing an interpretive plan for the site, the BLM will consider the feasibility and impacts of improving this route to enhance public access. However, it would not be paved and would likely remain accessible primarily by high-clearance vehicles. The BLM will also consider the development of parking areas and hiking trails to the site from Bloody Basin Road or the Double Tanks area, within the High Use SCRMA.

Public Comments (TM-57):

Comment: Second, for those who wish a fuller experience of the monument, a decent road to La Plata Pueblo is necessary. Having given a number of tours out there to students, reporters, and interested laypeople there is a nice circuit from the pueblo to the fort, looping back past the agave fields and the terraces. This would be an ideal interpretive trail. Those less adventurous could simply tour around the pueblo. The La Plata location provides a wonderful sense of relative isolation (not possible in the Richinbar exit location) that visitors from Phoenix have enjoyed immensely. (ASU School of Human Evolution and Social Change, Tempe, AZ - Comment: #1975, letter #325)

5.4.14 WILD HORSES AND BURROS

Public Concern (WB-1):

Respondents feel burros should be removed due to impacts to wildlife waters in Browns Canyon and Hummingbird Springs. BLM should aggressively seek removal of all burros in the Harquahala Herd Area.

Response (WB-1):

We believe the RMP addresses the management of wild horse and burros for both of the areas in question. The Harquahala Herd Area is targeted for total burro removal as described in Section 2.7.3.11.

Public Comments (WB-1):

Comment: *Burros *should be removed wherever they occur. The fact that they were turned loose as unwanted animals and have become feral no more makes them "native" than it would to consider unwanted dogs dumped in the area to be "native." Both should be removed, as one would get rid of unwanted weeds. (Individual, Black Canyon City, AZ - Comment: #1934, letter #353)

Comment: Burro Removal. Due to burro impacts to wildlife waters in Browns Canyon and Hummingbird Springs, I believe BLM should aggressively seek removal of all burros in the Harquahala Herd Area. (Individual, Sierra Vista, AZ - Comment: #1135, letter #286)

5.4.15 DOCUMENT COMPLEXITY AND REVIEW

Public Concern (DR-1):

Respondent believes the presentation of alternatives would have benefited from an expanded use of tables to present the differences between the alternatives more clearly, such as was presented in Table E-1.

Response (DR-1):

The document format was limited by technical requirements of our ePlanning pilot effort.

Public Comments (DR-1):

Comment: BLM is to be commended for the extensive scoping that occurred for this project, including the innovative community visioning exercises. The DEIS was well written and impacts were well documented. However, the presentation of alternatives would have benefited from an expanded use of tables to present the differences between the alternatives more clearly, such as was presented in Table E-1 but with more detail. The comparison of alternatives was facilitated, however, by the excellent collection of maps that were included. (U. S. Environmental Protection Agency, San Francisco, CA - Comment: #2168, letter #396)

Public Concern (DR-2):

Respondents feel that it is inappropriate to have the companies that profit from Federal realty actions participate in the planning effort and that businesses that have taken part in the planning effort should be excluded from future contracts.

Response (DR-2):

These comments are beyond the scope and intent of this RMP.

Public Comments (DR-2):

Comment: Finally, in reviewing the list of preparers at the end of the EIS, I noted that Western Land Group worked on land and realty issues for this document. We are familiar with that company because they act as consultants and facilitators on federal land exchanges. Western Land Group has facilitated several land trades in Arizona, including the Yavapai Ranch Land Exchange that was recently approved by the U.S. Congress and signed into law. It is not appropriate for a company that promotes and profits by federal realty actions to participate in land and realty analysis for a decision-making document such as this. It is possible that the BLM was not aware of Western Land Group's other work, but we hope your agency will more carefully vet subcontractors for this kind of work and not use WLG's services again on this type of project. (Western Lands Project, Seattle, WA - Comment: #1058, letter #14)

Comment: I would also like to see any business that have taken part in the planning effort excluded from any contracts that result in this venture. (Individual, Chandler, AZ - Comment: #37, letter #50)

Public Concern (DR-3):

Respondents would like to request a six-month extension for public review of DRMPs/DEIS because the 90-day review period does not allow enough time to review the lengthy, complex document. Commenters feel that BLM must remember that at any given time there may be several planning areas out for review simultaneously and that this places a burden on the public and organizations.

Response (DR-3):

The 90-day public comment period that was provided is twice as long as required by Council on Environmental Quality regulations for Environmental Impact Statements. We regret you feel it was insufficient for your review, but it is as long as we can practically allow.

Public Comments (DR-3):

Comment: would like to request a 6-month extension for detailed public response due to the complexity of this 800 plus page document. I find it hard to believe that BLM actually expects a layman such as myself to understand, digest, and react intelligently in such a short period of time. (Individual - Comment: #248, letter #290)

Comment: We (ADBSS) feel compelled to also comment on the burden this and other concurrent BLM planning process have placed on the public and our organization in particular. Thoroughly reviewing a document the size and complexity of this RMP/EIS is a daunting task for most professional planners but it is nearly an impossible undertaking for your average public layperson or organization volunteer. Coupled with other concurrent planning processes the required effort and attention becomes overwhelming. We can only hope that future planning processes are more user friendly and not so intimidating to the general "non-professional" public. We are sure you would get more involvement and input. We would also hope that more emphasis would be placed on interpreting layperson input and not rely so heavily on a page-by-page substantive review from the public. We are not fluent in the language of federal land planning and need for our thoughts and concerns to be interpreted by those that understand our language and our set of values. To this end we have entrusted the Arizona Game and Fish Department with providing you the necessary inter-agency guidance that is responsive to the concerns of sportsmen and wildlife conservation organizations throughout the state. We trust that you will continue to view their input as if it were coming from a significant segment of the public.

(Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2150, letter #342)

Public Concern (DR-4):

Respondents recommend that careful consideration be taken when applying allocations where no overarching direction is available and that specific language is included within the plan to clarify how the associated decisions should be implemented and how they may affect other resources or uses. The impact analysis should consider the full range of implementation decisions possible, especially when there is an excessive use of the many types of designations throughout the document. It is suggested that these various designations or management type areas be reduced to avoid complexity and because excessive designations are a subtle way to impose further restrictions on the multiple-use concepts of resource management. Other commenters commend the BLM and believe that the use of management areas is a good way to present information and that the BLM avoided overly technical language in the document.

Response (DR-4):

Managing multiple uses is complex. Allocations and designations allow BLM to put some focus on management while recognizing other uses being made of the land. We recognize it is complex and often confusing. However, we have simplified as much as we feel it is possible while still being able to put focus on resources and areas that need it. BLM feels the allocations and designations presented in our Proposed RMPs/Final EIS allow the management attention needed to meet our legal requirements.

Managers must have the flexibility to interpret their plans and modify such plans to meet changing conditions. Recreation settings are designed to maintain or enhance the experiences of recreation users, and those settings are applied in a site-specific manner. The multiple designations were driven by the complexities of land management in our Planning Area. The Planning Area is now an urban and urban interface landscape. BLM must propose and implement resource-specific management

prescriptions to maintain, protect or conserve the broad range of public land resources from the increasing demands of resource use and public recreation.

Public Comments (DR-4):

Comment: There is an excessive use of the many types of designations throughout this document. If a special category has not been established by an interest group, it leaves the other "multiple uses" out and lacking in emphasis. It is suggested that these various designations or management type areas be reduced and only utilized for the very special areas. Over use of them dilutes the importance of all of them. Additionally, due to the complexities or some of these designations, it is a subtle way to impose further restrictions on the multiple use concepts of resource management. (Individual, Cornville, AZ - Comment: #1076, letter #160)

Comment: The BLM has done a good job on this document and has managed not to use the overly technical or obfuscatory language so often found in EISs. Except as noted below, the document explains quite well the potential impacts of the lands and realty component of each of the alternatives, which is the area of greatest interest to us. (Western Lands Project, Seattle, WA - Comment: #1054, letter #14)

Public Concern (DR-5):

Respondents believe that the DEIS report should be broken into at least two or more documents and that the AFNM should be considered separately from the Bradshaw-Harquahala Planning Area. This would cut down on the length of the document, reduce public confusion, and allow the public time to comment on all plans published simultaneously throughout BLM.

Response (DR-5):

The RMP/EIS includes separate and distinct resource management plans for the Agua Fria National Monument and the Bradshaw-Harquahala Planning Area. However, the organization of the document is based on the definition and analysis of a similar range of

management alternatives for each area, which requires the reader to search for the sections relating to the monument, as opposed to the rest of the Planning Area. Section 1.5.1 defines the purpose, significance, mission, and goals for the national monument, which emphasize the protection and preservation of monument values. Section 1.5.2 defines the management goals for the Bradshaw-Harquahala Planning Area, which support resource protection within a multiple-use framework that allows for a wider range of recreational activities and land uses.

Public Comments (DR-5):

Comment: Furthermore, we believe combining a National Monument with a Bureau of Land Management planning area in this draft Resource Management Plans and Environmental Impact Statement diminishes the preservation values of the National Monument and its purpose to those of a multi-use Bureau of Land Management planning area. (Hopi Cultural Preservation Office, Kykotsmovi, AZ - Comment: #1152, letter #384)

Comment: Timing of the release The overlapping public comment periods for the Arizona Strip Draft RMP/EIS and the Agua Fria National Monument/Bradshaw-Harquahala Draft RMP/EIS made it very difficult for members of the public to read, digest, and formulate substantive and helpful comments on these complex and important plans. These lands are important to citizens throughout Arizona. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1879, letter #340)

5.4.16 EDITORIAL ERRORS & CLARIFICATION

Public Concern (EI-1):

Several comments were received suggesting necessary editorial corrections to maps and text or errors in linking to the web site.

Response (EI-1):

These errors/changes have been corrected in the Proposed Resource Management Plan/ Final Environmental Impact Statement.

Public Comments (EI-1):

Comment: The NPRA-NW EIS link is connected to the Agua-Fria National Monument / Bradshaw-Harquahala DRMP/DEIS. (Individual - Comment: #33, letter #55)

Comment: Index errors: The plan contained an inordinate number of indexing errors. These errors made it significantly more difficult for the public to review the plan. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1880, letter #340)

Public Concern (EI-2):

Commenters believe transportation corridors are distinct from utility corridors and should be managed by different entities; therefore they should be labeled as such. They believe this approach will be less confusing to the reader.

Response (EI-2):

Utility and transportation corridors are different than right-of-way corridors. Both utility and transportation corridors on BLM-managed land are managed by BLM as allocations for future utility or transportation development. They constrain where future development will be entertained when proposals are brought to BLM for consideration. They do not in any way limit how right-of-way holders conduct business within their right-of-way, whether it is within an allocated corridor or not.

Public Comments (EI-2):

Comment: Section Affected Environment, Lands and Realty, Page s-xii, 1st paragraph: There is mention of utility corridors in this section, but none of existing transportation corridors in the study area. Later in the document (page 392) an explanation is provided stating "transportation corridors are included as a part of the utility corridors in both planning areas", The document is unclear in its use of the terms "Utility Corridor", and "Transportation Corridor", The text sometimes includes transportation corridors within utility corridors and sometimes not. The Arizona Department of Transportation (ADOT) believes transportation corridors are distinct from utility corridors, are managed by different

entities, and therefore should be labeled as such. We believe this approach will be less confusing to the reader. (Arizona Department of Transportation, Phoenix, AZ - Comment: #1430, letter #397)

Comment: On p. 212 there is confusing verbiage in the land use allocation that initiates discussion of "regional transportation" demand and corridors, then proceeds to discuss routing major utility systems and corridors. (Wickenburg Outdoor Recreation Committee (WORC, Wickenburg, AZ - Comment: #1906, letter #398)

Public Concern (EI-3):

ADOT would like changes made to Section 3.3.5, adding a reference to Map 2-79 and defining the CanaMex corridor more specifically.

Response (EI-3):

Section 3.3.5 is in the Affected Environment section of our document. In this section we describe the current social, environmental, and in some cases the managerial situation that would be affected by our actions. The map you ask us to refer to is the corridors we are suggesting in our Proposed Alternative. Since they represent a proposed decision for this plan rather than an existing condition or situation, reference to it is inappropriate in the Affected Environment chapter.

BLM can only make decisions for BLM-managed land. For this reason our planning document can only consider the portion of the CanaMex that crosses BLM within this Planning Area. Most of the rights-of-way you list do not cross BLM or are outside the Agua Fria National Monument and Bradshaw-Harquahala Planning Areas.

Public Comments (EI-3):

Comment: Section 3.3.5, lot paragraph, Page 392: Add a reference to Map 2-79, which depicts the "Utility & Transportation Corridors and Communication Sites for Alternative E." (Arizona Department of Transportation, Phoenix, AZ - Comment: #1444, letter #397)

Comment: Section 1.8, Page 31: Please include a reference to the following ADOT planning documents for incorporation into your planning process: US 93 Wickenburg Ultimate Bypass - Feasibility Report, July 2004. Corridor Evaluation for CANAMEX Designation Between I-10 and US 93 -Final Report, October 2004 (Arizona Department of Transportation, Phoenix, AZ - Comment: #1433, letter #397)

Public Concern (EI-4):

Respondent could not locate Table 2-7.

Response (EI-4):

Due to the length of the table, Table 2-7 is located at the end of Chapter 4, in the "Additional Tables" section.

Public Comments (EI-4):

Comment: Concerning Table 2-7, commenter states, "Not found between 2-6 and 2-8" (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1411, letter #401)

Public Concern (EI-5):

Respondents believe there are "inconsistencies" between the impact analysis summary table in Chapter 2 and the analysis in Chapter 4 and that the impact table was imprecise.

Response (EI-5):

The impact analysis summary table in Chapter 2 has been updated to more accurately reflect the more thorough discussion of impacts found in Chapter 4.

Public Comments (EI-5):

Comment: The Department [AGFD] believes if inconsistencies between the preferred alternative and the impacts analysis, as well as the issues identified in the attachment are not clarified, this document will not be in compliance with the requirements and spirit of NEP A for impact analysis and full disclosure in a manner understandable by the public. The future management of public lands is of significant interest to the public and the State of Arizona. Therefore, the Department believes it would best

serve the public interest to clarify the inconsistencies and clearly disclose which management actions are truly being proposed, along with an appropriate analysis of impacts, in a new draft document for public review. (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1352, letter #401)

Comment: Section Table -8 & Chapter 4 Page Statement Impacts will be similar to impacts in Alt X Comment Statement is frequently made in both Table 2-8 and Chapter 4. This too imprecise for reviewing impact analysis (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1397, letter #401)

Public Concern (EI-6):

Respondent feels BLM needs to clarify that Maricopa County operates Lake Pleasant Regional Park under a land use agreement with the Bureau of Reclamation.

Response (EI-6):

The land status portrayed in the document reflects the agency with surface management responsibility that most affects the public land user. We have noted in Section 2.13, Interrelationships, that the Lake Pleasant Regional Park, though managed by the Maricopa County Parks and Recreation Department is withdrawn or owned by the Bureau of Reclamation for the water storage facility.

Public Comments (EI-6):

Comment: The maps identify Lake Pleasant Regional Park as a "State, County, and City Parks." The park lands are Reclamation withdrawn lands for the Central Arizona Project. Maricopa County operates Lake Pleasant Regional Park under a land use agreement with Reclamation. This should be clarified somewhere in the document. (Bureau of Reclamation, Glendale, AZ - Comment: #1512, letter #399)

Public Concern (EI-7):

Respondent believes that the black-and-white planning area figure located in the Executive

Summary is not user friendly and that a color figure would have been helpful.

Response (EI-7):

The map referenced is a part of the Executive Summary and was intended to provide a summary overview of the plan location. The document contains at least 120 color maps of which Map 1-1 is a color, and more "user friendly" equivalent to the map on page s-ii.

Public Comments (EI-7):

Comment: 1. Summary, Page s-ii: The black-and-white planning area figure is not user friendly because a reader cannot adequately distinguish land ownership within the AFNM and BLM planning areas. A color figure would have been helpful. (Federal Highway Administration, Phoenix, AZ - Comment: #1416, letter #162)

Public Concern (EI-8):

Respondent believes that Map 2-13 appears to be inconsistent with the text in Section 2.3.1.2 regarding the Black Canyon Utility Corridor boundary.

Response (EI-8):

The map shows the eastern boundary of the Utility Corridor corresponding to the eastern-most boundary of existing rights-of-way currently within the corridor as defined in the Phoenix Resource Management Plan (BLM 1988a). Utilities now within the corridor include a power line and the El Paso natural gas line. The map and text appear to be consistent.

Public Comments (EI-8):

Comment: 7. Chapter 2, Section 2.3.1.2-Lands and Realty (AFNM), Page 52: The text indicates the Black Canyon utility corridor would be narrowed so its eastern boundary would coincide with existing rights-of-way. However, Map 2-13 shows this eastern boundary as extending 1 mile into the AFNM, thus creating an inconsistency with the text. (Federal Highway Administration, Phoenix, AZ - Comment: #1422, letter #162)

Public Concern (EI-9):

Respondent suggests adding a bullet for conserving wildlife to Section 2.6.2.2.3.5.

Response (EI-9):

The bullet list referenced is for a Special Recreation Management Area. Wildlife related land acquisition criteria are presented in Management Common to All Action Alternatives, Section 2.7.1.4, Threatened or Endangered Species.

Public Comments (EI-9):

Comment: Concerning Section 2.6.2.2.3.5 Page 192, column 1, bulleted list, commenter states, “Could Suggest adding a bullet for conserving wildlife.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1368, letter #401)

Public Concern (EI-10):

Respondent recommends changing the word “protect” to “manage” in Section 2.7.1.6.

Response (EI-10):

We believe the word protect is the intent of the discussion and so it will not be changed.

Public Comments (EI-10):

Comment: Concerning Section 2.7.1.6 Page 224, column 1, 2nd paragraph, “except the minimum needed to protect resources,” commenter states, “Change protect to manage.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1386, letter #401)

Public Concern (EI-11):

Respondent believes that Map 2-78 fails to show scattered parcels for sale in the planning area.

Response (EI-11):

We believe the maps do identify the parcels of land that are available for land tenure adjustment are clearly identified on Map 2-78, outlying parcels are not the same and represent small public lands outside of the major public land mass that are administered by the Hassayampa Field Office and are identified on Map 1-2.

Public Comments (EI-11):

Comment: At 2.6.2.1.1 (p.168) scattered parcels for sale are supposed to be @ map 2-78. While I did not find that map, outlying parcels are shown on map 1-2. I presume they are the same but note that it is most difficult to ascertain their exact location in the Arizona Atlas. (Individual, Mesa, AZ - Comment: #1158, letter #376)

Public Concern (EI-12):

Respondent thinks that maps should be clearly marked as also describing the Grazing Resources for Alternative E, or that an additional map should be added that addresses the actions of Alternative E.

Response (EI-12):

We believe Maps 2-5 and 2-21 identify the public lands within the planning area that have livestock grazing authorized as well as other resource management designations. These maps, in conjunction with the text for the alternatives, explain rangeland management for the public lands within the Planning Area.

Public Comments (EI-12):

Comment: Preferred Alternative map difficult to retrieve. The collection of Maps describing the actions of Alternative E (Maps 2-72 through 2-91) does not include a map of Grazing Resources; readers are instead referred in the text to Maps 2-5 and 2-21, which are titled as describing Grazing Resources for Alternatives A and B, respectively. These maps should be clearly marked as also describing the Grazing Resources for Alternative E, or an additional map could be added to the collection that addresses the actions of Alternative E. (Individual, Champaign, IL - Comment: #1899, letter #201)

Public Concern (EI-13):

Respondent feels that all alternatives should include this statement from Alternative A: “Small utility distribution systems would continue to be developed on an as-needed basis throughout the planning area. These small distribution systems would include all uses such as electrical lines, gas and water pipelines, and

access roads. These distribution systems would be authorized when consistent with environmental and land use considerations.” Additionally, the text should include “as well as the values and plans of the surrounding communities.”

Response (EI-13):

Refer to Section 2.7.1.2, Lands and Realty, first paragraph under the allocation Land Use Authorizations.

Public Comments (EI-13):

Comment: 6.Alternative A - Pages 44 & 45, 2.2.2.2 Lands and Realty, Utility and Transportation Corridors and Communication Sites: All alternatives should include this statement from Alternative A: “Small utility distribution systems would continue to be developed on an as-needed basis throughout the planning area. These small distribution systems would include all uses such as electrical lines, gas and water pipelines, and access roads. These distribution systems would be authorized when consistent with environmental and land use considerations.” Please add the following to the above statement, as well as the values and plans of the surrounding communities.” (Individual, Black Canyon City, AZ - Comment: #1331, letter #282)

Public Concern (EI-14):

Respondent believes that the BLM needs to clarify the statement referring to discretionary surface-disturbing activities in Section 2.7.1.6.

Response (EI-14):

Discretionary surface-disturbing activities are those where the Field Manager has the option to authorize or not authorize a land use action, based on a variety of factors. Land use authorizations that are compatible, or can be designed or mitigated to be compatible with allocated DFCs, can be authorized and implemented.

Public Comments (EI-14):

Comment: Concerning statement in Section 2.7.1.6 Page 224, column 2, 2nd paragraph,

“Discretionary surface-disturbing activities,” commenter states, “Need to clarify this statement. Almost any activity can disturb the surface.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1388, letter #401).

Public Concern (EI-15):

Respondent believes that the BLM needs to define “semi-primitive motorized corridor.”

Response (EI-15):

The Recreation Opportunity Spectrum (ROS) is the BLM’s framework to inventory, plan, and manage recreational opportunities. The ROS is divided into six classes, ranging from essentially natural, low-use areas (resource-dependent recreational opportunities) to highly developed, intensive-use areas (facility/vehicle-dependent recreational opportunities). Each class is defined in terms of three principal components: the environmental setting, the activities possible, and the experiences that can be achieved.

The primary factor in determining ROS classes is the setting. This describes the overall outdoor environment in which activities occur, influences the types of activities, and ultimately determines the types of recreation that can be achieved.

Semi-Primitive Motorized setting consists of a mostly natural landscape with some evidence of others (but numbers and frequency of contact seem to remain low) and few management controls. Activities include hunting, climbing, vehicle trail riding, back country driving, mountain biking, hiking, and snowmobiling. The experience provides for isolation from human civilization, a high degree of interaction with the natural environment, and a moderate degree of personal risk and challenge.

Public Comments (EI-15):

Comment: Alternative E - pg 177, section 2.6.2.2.1.6 Wilderness Characteristics Please define “semi-primitive motorized corridor”. (Black Canyon Trail Coalition, In, Black Canyon City, AZ - Comment: #1258, letter #280)

Public Concern (EI-16):

Respondents feel that the word “current” in Section 2.6.2.2.1.6 needs to be deleted.

Response (EI-16):

The word “current” will be deleted. However, new routes could be proposed where appropriate to protect resource values, ensure visitor safety, enhance recreation opportunities, or connect route networks as part of an approved Travel Management Plan.

Public Comments (EI-16):

Comment: 1. Alternative E - pg 177, section 2.6.2.2.1.6 Wilderness Characteristics “Desired Future Condition: Delete the word “current” from the sentence that reads “Manage the current motorized segment of the Black Canyon Trail, which crosses this allocation, as a semi-primitive motorized corridor.” Section 2.6.2.2.1.9 Travel Management, subsection titled “Management Actions” allows 2 years after plan approval to “Complete an OHV designation for all existing and proposed motorized (OHV) routes”^{cc}. Proposed routes, by definition, would not be current routes at the time of plan approval. Does this mean that proposed routes would not be allowed at all, or merely that they would not be managed as part of the semi-primitive motorized corridor” (Individual, Black Canyon City, AZ - Comment: #1316, letter #282)

Public Concern (EI-17):

Respondent believes that the statement “reveal minimum evidence of other visitors” in Section 2.7.1.6 needs to be reworded.

Response (EI-17):

The entire sentence with the word “minimum” will be deleted.

Public Comments (EI-17):

Comment: Section 2.7.1.6 Page 224, column 1, 1st bullet Statement Reveal minimum evidence of other visitors Comment. This needs to be reworded. Reveal is an action causing or allowing something to be observed. This

statement suggests BLM will point out minimum evidence of other visitors. What constitutes minimum evidence. (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1384, letter #401)

Public Concern (EI-18):

Respondent believes that the statement “The effort will then focus on...” in Section 2.7.3.7 needs to be reworded to identify a partnership with the AGFD.

Response (EI-18):

The text is correct as written. The AGFD can be involved in this effort as an external agency.

Public Comments (EI-18):

Comment: Concerning Section 2.7.3.7 Page 259, column 1, 2nd paragraph, “The effort will then focus on...” Commenter states, “Developing a Limits of Acceptable Change framework needs to be done in partnership with AFGD.” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1392, letter #401)

Public Concern (EI-19):

Respondent believes that the shading that distinguishes the land management agencies is difficult to discern and should be made clearer.

Response (EI-19):

We recognize that the map referenced in your comment is of a small scale that can be difficult to distinguish land patterns. Its purpose is to give a very general representation of where the planning area lays in relationship to the state of Arizona. Additional cross hatching within the map was not carried forward as it resulted in a much poorer quality map for reproduction purposes. The plan has many detailed maps as a part of the description of the various management decisions and they are referenced throughout the document. We believe that these maps adequately address land management within the planning area.

Public Comments (EI-19):

Comment: Maps Section Purpose and Need, page s-xiii: Shading that distinguishes the land management agencies is difficult to discern. We recommend alternative methods (e.g., cross hatch, stipple with shading) to make the areas clearer to the reader. (Arizona Department of Transportation, Phoenix, AZ - Comment: #1448, letter #397)

Public Concern (EI-20):

Respondent believes that the word "requiring" should be removed from the statement: "evaluate non-motorized trails between Bull Tank and Baby Canyon, between Badger Springs/Agua Fria Confluence and Pueblo Plata, and in other areas if needed, to enhance resource protection by encouraging or requiring visitors to use designated routes."

Response (EI-20):

We believe the flexibility to manage monument visitors is essential to protecting its resources. The intent is to manage areas where foot traffic is high, such as areas of attractions to cultural, scenic, biological, geological sites, by requiring the use of a trail rather than having a network of trails braiding over each other. This will help keep visitors from repeatedly trampling on sensitive areas; therefore, we require visitors to use designated routes wherever they exist. Hunting tends to be a dispersed activity which generally would not lead to trail braiding. In areas where hunting impacts become noticeable, adaptive management actions would be necessary.

Public Comments (EI-20):

Comment: Section 2.6.1.6 Page 165, column 1, paragraph 2 Statement Evaluate non-motorized trails between Bull Tank and Baby Canyon, between Badger Springs/Agua Fria Confluence and Pueblo Plata, and in other areas if needed, to enhance resource protection by encouraging or requiring visitors to use designated routes.

Comment: This management action would severely limit hunting and other wildlife-dependent recreation if applied. The Department

does not support this type of management action and suggests removing the word "requiring" from this sentence. (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1362, letter #401)

Public Concern (EI-21):

Respondents would like BLM to add wording about rerouting routes to discussions about closing routes in Sections 2.7.15 and 2.7.3.6.

Response (EI-21):

The current wording in the document reflects the management direction for the subject areas. If rerouting is necessary to protect a resource, used for educational enhancement, or to address a safety concern, then adaptive management measures described in Section 2.7.2.10 (Transportation Management) would be allowed.

Public Comments (EI-21):

Comment: Concerning Section 2.7.1.5 Page 221, column 2, bulleted list," commenter states, "Add rerouting routes" (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1380, letter #401)

Comment: Concerning Section 2.7.3.6 Page 250, column 1, 1st sentence, column 2, 4th sentence "Close transportation routes that lead directly to significant sites," commenter states, "Change to: Close or reroute transportation routes that lead directly to significant sites" (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1391, letter #401).

Public Concerns (EI-22):

Commenter is concerned about whether or not hiking or equestrian activities that require an Special Recreation Permit (SRP) are required to stay on existing trails in all cases.

Response (EI-22):

Yes, non-motorized activities that require a SRP would be required to stay on trails.

Public Comments (EI-22):

Concerning Section 2.7.3.8, Page 263, column 1, last paragraph, "Non-motorized activities that

require SRPs,” commenter states, “We are not sure what this means. Would hiking or equestrian activities that require an SRP be required to stay on existing trails in all cases?” (The State of Az Game and Fish Department, Phoenix, AZ - Comment: #1394, letter #401)

5.4.17 ENFORCEMENT & FUNDING

Public Concern (EF-1):

Respondents would like to see more funds diverted to law enforcement to help deter abuses seen on public lands. They believe that without more enforcement, the responsible public land users will be punished as existing trails are closed and archeological sites are looted.. Hiring enough people to do the job properly would help protect prominent archaeological sites and keep access open to OHV recreationists.

Response (EF-1):

Law enforcement and other staffing needs are not RMP decisions. We recognize more human oversight is needed to give adequate protection to cultural sites on the monument and throughout the Bradshaw-Harquahala Planning Area. Management prescriptions in the proposed plan are designed to improve site protection. Continued and expanded relationships with the Arizona Site Stewards and the Friends of the Agua Fria National Monument have the potential to increase the human presence. We continue to pursue increased staffing, but must expand a presence in any way possible.

Public Comments (EF-1):

Comment: Kind of a question here, did you guys come up with a new bank role for enforcement? Because to be honest with you, if you can't enforce it you are only punishing the responsible user. We don't get to, we'll go out there and we'll abide by the rules, but we're the only ones that are punished. Everyone else still goes out and does what they want to do. If you can't enforce it, we're the only one you're

hurting, the people who show up and the people who are part of this plan. (Individual, Phoenix, AZ - Comment: #68, letter #82)

Comment: I believe it is necessary for the plan to include a greater investment in monitoring archaeological resources. Signs placed at archaeological sites warning of penalties for vandalism and looting are insufficient to protect these fragile resources. The region has a long history of looted archaeological sites and the increased numbers of visitors will only increase the problem. Regular monitoring by law enforcement personnel during peak visitor periods (i.e. weekends) is necessary. This would also be useful to monitor ATV use and other visitor activity. During all of my visits to the area, I have never seen law enforcement personnel. (Individual - Comment: #1488, letter #333)

Public Concern (EF-2):

Several comments were received addressing funding. Respondents feel BLM needs to figure out a way to increase Federal funding, including asking Congress to fund a performance bond, for their lands in order to implement proper management strategies.

Response (EF-2):

These concerns are beyond the scope and intent of this RMP and we encourage the commenter to share these concerns with their elected officials.

Public Comments (EF-2):

Comment: While funding appears not to be explicitly considered in the development of the Management Plan, it appears that concerns about funding are shaping the direction of the planning in all alternatives. Funding the proposed development will, of course, be a challenge, particularly in the current economic environment. As long as the Monument remains relatively unknown, the demand will stay small, but so will the level of public support. BLM, with its new National Monument responsibilities must figure out a way to position its National Monuments, and notably AFNM in the budgeting process so that they receive the same sort of generally favorable treatment received by

NPS parks and monuments. This cannot happen all at once, of course, but Agua Fria can be the poster child for public demand for BLM and BLM should consider funding at Agua Fria, even now, to be an investment in public support for the BLM monuments generally. Planning for anything less than rapid growth of visitor demand, would I fear, be disastrous in the (not very) long run. (Individual - Comment: #2157, letter #297)

Comment: All amenities and roads remain, Congress should be asked to fund a performance bond sufficient to mitigate for any and all impacts that degrade the Monument. (Phoenix Zoo, Phoenix, AZ - Comment: #1184, letter #357)

5.4.18 IMPLEMENTATION, MITIGATION, AND MONITORING

Public Concern (IP-1):

Respondents state that there is an absence of implementation guidance for many allocations and management prescriptions which would provide a framework to guide planning decisions.

Response (IP-1):

Implementation actions related to this plan would require site-specific analysis of actions and proposals as they are brought forward. These site specific analyses are specific to the type and scope of the proposal and to the particular characteristics of the site. Implementation actions and possible site conditions are too variable to allow a meaningful analysis at the landscape level of a RMP. The impact analysis that was conducted in the DRMPs/DEIS reflects the landscape scope of the planning document.

Public Comments (IP-1):

Comment: RMP Information management Section 2.11 (Administrative Actions) states - "Although BLM's intent and commitment to

accomplish administrative actions are generally addressed in RMP/EIS-level documents, such activities are neither land-use-plan-level decisions nor implementation-level management-action decisions." Regardless as to how these actions are classified, providing a framework to guide the implementation of planning decisions and thereby ensure that painstakingly developed desired future conditions and management goals are assessed reliably and with some defined frequency is a crucial RMP feature. Unfortunately, from section 2.10 (Implementation and Monitoring) on, this plan seems to work hard to evade the requirement to provide future managers this valuable guidance. Although the BLM is clearly allowed discretion, the agency is obligated to integrate monitoring, intervals and evaluative standards into the RMP (43 CFR 1610.4-9). (Individual, Glendale, AZ - Comment: #1927, letter #341)

Comment: From our (ADBSS) review of the document and the number of potential conflicts discovered it is apparent that much of our concern can be attributed to a lack of clear implementation guidance as to how these new land use allocations and ROS settings are to be managed. There is apparently guidance that you can do it but no guidance on how to do it. Without clearer formal direction or established policy there is an obvious disconnect in the ability of the DRMP/DEIS to satisfactorily answer specific questions regarding allowable uses and management action prescriptions or to adequately evaluate a very wide array of associated impacts. Currently one of the few formal policies in place is for Visual Resource Management (VRM). Formal guidance for the host of other land use allocations and settings does not appear to exist as they are not clearly defined or referenced in the document nor provided in the appendices. Due to the absence of this necessary guidance or policy we feel that much of the impact analysis is incomplete or invalid. (Arizona Desert Bighorn Sheep Society, Mesa, AZ - Comment: #2142, letter #342)

Public Concern (IP-2):

Respondents feel the RMPs lack definite guidance for the future and that a plan lacking

an implementation and management framework which does not explicitly stipulate activities and specify timelines will leave so much discretion to future managers that perhaps nothing will be done. Not identifying responsible entities within and beyond the agency responsible for the conduct of critical operations is a serious oversight.

Response (IP-2):

We disagree; we believe that the RMP provides a framework for definitive guidance of the management of the public lands within the planning area. Site-specific management will be accordingly completed through the development of plans and implementation of specific measures.

Public Comments (IP-2):

Comment: Lacking some sort of definitive guidance within the RMP will mean that the monitoring, inventory and evaluation efforts in support of adaptive management at best will be haphazard. The plan shows clear evidence of this as it a hodgepodge of good ideas (e.g., recreation resources sections 2.7.2.7 and 2.7.3.7) which offer the ideas of a limits of acceptable change assessment program and adaptive management efforts that specify goals and timelines. At worst, a plan lacking an implementation and management framework that does not explicitly stipulate activities and specify timelines will leave so much discretion to future managers that perhaps nothing will be done. In an era of declining budgets and progressively fewer agency personnel there may well be irresistible temptation to conveniently forget about critical management activities. (Individual, Glendale, AZ - Comment: #1928, letter #341)

Comment: While there seems to be a commitment to adopt adaptive management methods, this cannot be left to simply happen by accident or through the random efforts of monument managers. The Department of Interior Departmental Manual (516 DM 4.16) provides an explicit definition of adaptive management as "a system of management practices based on clearly identified outcomes,

monitoring to determine if management actions are meeting outcomes, and, if not, facilitating management changes that will best ensure that outcomes are met or re-evaluate the outcomes." Offering no framework within the RMP that stipulates how and when monitoring and evaluation activities and does not identify responsible entities within and beyond the agency responsible for the conduct of these critical operations is a serious oversight. (Individual, Glendale, AZ - Comment: #1929, letter #341)

Public Concern (IP-3):

Respondents suggest that the BLM use scientifically valid and repeatable monitoring to demonstrate no undue harm to the monument's objects and to justify management actions because protecting the diversity and number of species in the monument is inherent to the proclamation. Promoting the ecological health of monument ecosystems is important and the plan should require sufficient monitoring of biological resources and habitat to allow the BLM to take corrective action as required. BLM needs to implement and fund vigorous monitoring techniques in order to properly manage the resources.

Response (IP-3):

Effective monitoring is the process of collecting data and information in order to determine whether or not desired outcomes (expressed as goals and objectives in the land use plan) are being met (or progress is being made toward meeting them) as the allowable uses and management actions are being implemented.

A monitoring strategy must be developed as part of the land use plan that identifies indicators of change, acceptable thresholds, methodologies, protocols, and timeframes that will be used to evaluate and determine whether or not desired outcomes are being achieved.

The monitoring process should collect information in the most cost-effective manner and may involve sampling or remote sensing. Monitoring could be so costly as to be prohibitive if it is not carefully and reasonably

designed. Therefore, it is not necessary or desirable to monitor every management action or direction. Unnecessary detail and unacceptable costs can be avoided by focusing on key monitoring questions and proper sampling methods.

The level and intensity of monitoring will vary, depending on the sensitivity of the resource or area and the scope of the proposed management activity.

We will determine specific areas where comprehensive site assessments would be initiated to do the following:

- determine existing physical and social impacts of recreation activities,
- define desired conditions and standards,
- establish monitoring plans to manage camping and other recreation uses, and
- determine a route maintenance standard and document current status of each route.

BLM and the BLM's Resource Advisory Committee are developing OHV-based Land Health Standards and Guidelines for OHV Management. We will monitor OHV route and route network use to determine if Land Health Standards are being met, and to identify, reduce, or eliminate other resource and social conflicts.

The narrative and guidance above has been addressed in the Management Common to All Action Alternatives Section in Chapter 2 of this document.

Public Comments (IP-3):

Comment: The BLM should use of scientifically valid and repeatable monitoring to demonstrate no undue harm to the Monument's objects and to justify management actions. (Center for Biological Diversity, Tucson, AZ - Comment: #1568, letter #338)

Comment: Monitoring - While this is an implementation level aspect, the RMP should establish the working framework as to how and when it will be done, who is charged with defining the key questions that it must address

and develop the monitoring strategy that will enable the evaluation of the plan. Presumably, the agency technical staff will develop a set of indicators that can be quantified and compared statistically, is realistic, fits within budgetary constraints and eliminates any data collection work that does not answer key needs. This group can also develop the standard assessment and reporting methods needed. This vital first step will ensure an efficient and systematic effort with continuity between changing agency personnel and help avoid setting up a situation in which management becomes more crisis response than proactive stewardship. Evaluation - Some sort of fundamental and periodic evaluation schedule should be established at the outset to ensure that management stays proactive, essential monitoring data is available for use, and explicit personnel are charged with the conduct of this activity. A lack of an inception plan may mean that the needed evaluations do not take place or occur only after resource degradation is severe. This could be as simple as putting in place in the RMP the requirement that desired future conditions/outcomes are examined every couple of years to determine how things are proceeding as well as fine-tuning monitoring efforts. At longer intervals, managers could be required to assess the attainment of broader objectives for the monument as a whole. (Individual, Glendale, AZ - Comment: #1930, letter #341)

Public Concern (IP-4):

Respondents believe BLM must provide specific mitigation measures that seek to avoid, minimize, or mitigate adverse effects to sensitive resources within the preferred alternative and the impact sections of the RMPs for each proposed management action. These should include roads, grazing decisions, and recreational proposals such as OHV designations.

Response (IP-4):

Management decisions on the national monument are limited by any potential for adverse effects to the resources and objects of the monument. The plan says in many places that monitoring for impacts to monument

resources will be conducted and we will mitigate if adverse impacts are determined. Monitoring of the effects of Bloody Basin Road is included in this adaptive management approach. Section 2.7.2.7 contains a discussion of Adaptive Management related to recreation on the national monument.

The proposed transportation plan will reduce public access and potential adverse impacts on the most vulnerable areas of archaeological sites in the monument. However, as new sites are discovered, and levels of visitation increase in future years, the BLM may identify new threats or adverse impacts to cultural resources. Routes open to vehicle use will be monitored for impacts to resources. A cultural resource specialist will be included on teams responsible for developing and implementing the monitoring standards and processes. Monitoring procedures will take into consideration the intensity and type of OHV use, the relative density and sensitivity of cultural resources in the area, and the potential for adverse indirect and cumulative impacts, including route proliferation.

When monitoring is proposed to assess potential effects from route designation, the decision record will clarify which mitigation actions will be taken; when they will be taken; and how their effectiveness will be assessed and ensured. The specific mitigation measures will depend on the specific situation. Mitigation measures may include, but need not be limited to, one or more of the following actions.

- Installing new signs that clearly designate the problem areas as off-limits to vehicles.
- Increasing the presence of staff and volunteers in sensitive areas during high-use periods, to discourage off-road travel and provide information on *Tread Lightly* and other guidelines for responsible vehicle use. Issuing citations to violators.
- Conducting mapping, documentation, or limited surface collections to preserve information from sensitive archaeological sites.
- Installing physical barriers to exclude vehicle traffic away from open routes.

- Installing measures designed to reduce and control erosion.
- Reducing travel through limitations on seasonal use, speed, or vehicle type.
- Implementing emergency closures to restrict ongoing damage and install protective measures.
- Rehabilitating closed routes to eliminate the possibility of re-use.
- Changing the designation of an open route to “administrative use” or “closed.” The route network may be updated, as necessary, in any plan maintenance or plan amendment process.

Public Comments (IP-4):

Comment: Furthermore, the plan should state that the impacts of vehicular volume, noise, speed, dust, and other characteristics will be measured and appropriate mitigation actions will be taken if monument resources (including aesthetics) are compromised. (Friends of the Agua Fria National Monument, Glendale, AZ - Comment: #2060, letter #339)

Comment: The lack of mitigation measures appears to be directly related to the Draft RMP's failure to adequately analyze the direct and indirect impacts associated with the transportation plan. The Draft RMP does suggest mitigation measures for OHV use where OHV use is determined to be inconsistent with the Monument's management objectives, i.e., "closing routes," "limiting seasonal use," "limiting vehicle types, speeds, and noise," "rerouting offending route segments," and "modifying routes to reduce or eliminate conflicts." Id. at 2-241. While we support these mitigation measures with respect to OHV use designations, we remain concerned that mitigation measures designed to mitigate those impacts associated with roads are not fully evaluated and integrated into the resource management planning process. We recommend that BLM provide specific mitigation measures seeking to avoid, minimize, or mitigate adverse effects to identified and unidentified cultural resources within the environmental consequences analysis of the RMP for the transportation and access decisions. Further, if

BLM is using the "Route Evaluation/Designation Decision Tree Process" to designate roads and routes within the Monument, we strongly recommend that BLM incorporate more specific methods of mitigation based on detailed information about cultural resources for roads it determines can be "opened" without causing adverse impacts to these resources into the Final RMP. (Individual, National Trust for Historic Preservation, Washington, D.C. - Comment: #1804, letter #402)

5.4.19 INVENTORY OF RESOURCES

Public Concern (IV-1):

For the affected environment, commenters believe BLM must seek to provide appropriate, specific baseline information about cultural, wildlife, special status plants, and other sensitive resources, in order to comply with NEPA and the Monument Proclamation and to evaluate the broad range of impacts encompassed by a NEPA analysis.

Response (IV-1):

We believe the RMP adequately addresses the affected area within the planning area and meets the legal mandates required for the agency. However, for further information, an additional table describing special status species occurrence and habitat use in the planning areas has been added as Appendix U and riparian habitat condition data is presented in Appendix Q1 and Q2.

Public Comments (IV-1):

Comment: Without an adequate inventory and evaluation that create a baseline of knowledge of cultural, wildlife, special status plants, and other sensitive resources, the agencies are unable to fulfill their obligation to analyze impacts under NEPA or to preserve "monument objects." For example, in regard to cultural resources, the draft RMP states that, "one can reasonably expect that several thousand prehistoric and historic sites remain undiscovered on public

lands in the planning areas" (3.6) Draft RMP at 404. The Monument's cultural sites, as previously noted, are Monument objects that the agencies are required to preserve, yet there is little information presented on which to assess whether these resources are being adequately protected. Further, BLM does not attempt to provide a baseline of cultural resources that have been damaged or destroyed by OHV, vandalism, or other activities to date. Without adequate baseline information about cultural resources, it is difficult to understand the extent to which the roads will impact these significant resources, and to evaluate and mitigate the potential impacts, especially the areas where the roads will remain open or mitigated open. Another example is pronghorn, where the RMP states that the species is present, but the only population data presented is part of a summary of all large game species, that "recent drought conditions have generally affected large game population trends." (3.5.3) Draft RMP at 398. Without an adequate inventory or understanding of the sensitive resources in the planning area, especially in areas where motorized travel will occur, it will be difficult to understand the extent to which the proposed transportation network will affect sensitive resources over the life of the plan. Recommendation: Because the disclosure and identification of cultural and other sensitive resources is critical to BLM's required NEPA analysis of the potential environmental impacts associated with proposed actions for each alternative, BLM must seek to provide appropriate, specific baseline information about cultural resources. In order to comply with the requirements of NEPA and the Monument Proclamation, the agencies must gather baseline data on all sensitive resources, but especially for each of the "Monument objects" identified in the management framework section of these comments. If the data are not readily available, the agencies must collect them using a reliable sampling strategy that focuses first on the areas most vulnerable to damage from routes and motorized travel. The agencies should assess which areas are likely to be vulnerable, which would likely focus on open motorized travel routes proposed. These data and analyses must be used in the EIS to present a full picture of the location, status, and trends of sensitive

resources, such as cultural sites and wildlife, in order to comply with NEPA's requirement to consider direct, indirect and cumulative (including reasonably foreseeable future) environmental impacts. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2225, letter #343)

Comment: Establishing baseline conditions for the affected environment is an essential requirement of the NEPA process. In order to evaluate the broad range of impacts encompassed by a NEPA analysis, it is critical that BLM adequately and accurately describe the environment that will be affected by the proposed action under consideration - the "affected environment." 40 C.F.R. 1502.15. The importance of accurate baseline data have been emphasized by the U.S. Court of Appeals for the Ninth Circuit, which stated that "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA." *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988). The court further held that, "The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process." *Ibid.* However, the agencies have failed in this regard. In most cases, the "affected environment" section of the draft RMP/EIS simply notes presence of a wildlife species or sensitive resource, with virtually no data on the location, status, or future trends of any species of concern. As noted above, the agency spent many resources collecting data on the location, use, and condition of routes across the Planning Area as part of the "route inventory process." It is irresponsible that the agency would not expend comparable resources to gather similar quantities of data on the resources it is required by law to protect. (The Wilderness Society/AZ Wilderness Coalit., Denver, CO - Comment: #2224, letter #343)

5.4.20 PUBLIC PARTICIPATION

Public Concern (PP-1):

Respondents encourage partnerships to implement Alternative E. Many appreciate how BLM implemented a planning process that gathered community input at the beginning of the planning effort and throughout the planning area. Some thank the BLM for providing an additional public meeting in Prescott, but others think that more care should be taken to select locations and times that would better allow residents to attend. Several commenters believe BLM did an admirable job of capturing the public's opinion and presenting it in the various plan alternatives while others feel that government agencies always ask for input but that the document did not reflect their views.

Response (PP-1):

The Phoenix District and the Hassayampa Field Office thank you for your support of our proposed plan. The challenge of managing multiple-use public land is to recognize the primary focus of the lands while attempting to allow as full a range of other uses, and at the same time, protecting the long-term productivity of the land. The Phoenix District believes we have achieved the best combination of these things in our Proposed Plan and understands that successful implementation of the plan depends very highly on participation by citizens through volunteerism and partnerships.

Public Comments (PP-1):

Comment: The Friends of the Agua Fria River Basin would like to congratulate the BLM on working toward the goal of building lasting collaborative partnerships with the public. Once this plan is final it will be a model for future land use plans. It will demonstrate how the BLM and the public can work together to create a plan that will reflect the public's input as well as sustain the health, diversity and productivity of our public lands for the use and enjoyment of present and future generations. (Friends of the Agua Fria River Basin, Mayer, AZ - Comment: #455, letter #239)

Comment: At the onset I would like to congratulate the BLM for implementing a planning process that gathered community input throughout the planning area at the very beginning of the planning effort. From meetings attended by MCPRD staff, it was evident the public had strong opinions on how federal lands should be managed. We believe you did an admirable job of capturing that opinion and presenting it in the various plan alternatives. (Maricopa County Parks and Recreation Depart, Phoenix, AZ - Comment: #1450, letter #350)

Comment: In addition I was under the impression when we were told "If you don't tell us what you want, we won't be able to put it in the plan" that our comments would have an affect on the alternatives and some of them would be included, yet I don't see any of the comments included. (Individual - Comment: #752, letter #293)

Public Concern (PP-2):

The Sonoran Audubon Society would like the planning document to recognize the Important Bird Area designation and the efforts of its volunteers.

Response (PP-2):

Reference to the designation of the Important Bird Area in the Agua Fria National Monument has been added to Chapter 3. While we greatly appreciate the volunteer efforts of the Sonoran Audubon, we have chosen not to mention any of our many volunteer groups, partners, and cooperators specifically in the plan in order to avoid trying to be all inclusive and inadvertently omitting someone.

Public Comments (PP-2):

Comment: Given this very high level of cooperator partnership between BLM and Audubon we would very much like to see the Important Bird Area designation and the volunteer efforts of Sonoran Audubon Society members recognized in this planning document. (Audubon Arizona, Phoenix, AZ - Comment: #1230, letter #279)

5.4.21 RESEARCH, EDUCATION, AND COLLABORATION

Public Concern (RE-1):

Respondent believes it is critical that all sites on the monument be available for consideration as the subject of scientific or historical study, including excavation. This allows for important flexibility in research questions and designs.

Response (RE-1):

Most of the sites are allocated to the category of scientific use and will be available for consideration as the subject of scientific study. A limited number of sites are allocated to 'conservation for future use,' which does not preclude their use in scientific studies. Most of the sites allocated to this category are in the more remote zones of monument, where there will be an emphasis on the maintenance of primitive conditions and wilderness characteristics. The intent is to direct more intensive research activities toward sites that can yield important information, but are more accessible, vulnerable to damage from visitors, and suitable for interpretive development. At sites allocated to conservation use, scientific studies normally will be limited to surveys, mapping, and other noninvasive documentation methods. However, following BLM Manual 8110, the BLM could specify provisions that would allow for scientific excavations, under limited circumstances. The permit applicant would need to justify why this work would be a critical component of an approved research design, and why comparable information could not be obtained elsewhere in the monument.

Public Comments (RE-1):

Comment: Archaeological national monuments protect archaeological resources not only for public viewing and education but also for further research so that the cultures that produced the archaeological record can be understood in greater depth. The most successful archaeological National Parks and Monuments protect multiple sites across fairly large

landscapes so that a community-level understanding of the past can be gained through sustained research. Two parks and monuments at which I have conducted research over the past twenty years include Hopewell Culture National Historical Park, which protects a series of Ohio Hopewell earthwork sites, and Salinas Pueblo Missions National Monument, which protects three missionized pueblos in central New Mexico. In both cases, comparative field work conducted by a series of researchers across multiple sites has substantially enhanced our understanding of the peoples and activities that created these sites. Moreover, active research enhances the experience of monument visitors. At both these parks, while we were in the field our projects became a component of the interactive interpretive offerings of the monuments. Visitors appreciated the opportunity to interact with archaeologists who were in the process of collecting further information on the places they were visiting. AFNM presents a similarly important opportunity to investigate the relationships among different components of the community that was created there in the late 1200s, and that was the impetus for the original creation of the monument. It is critical that all sites on the monument be available for consideration as the subject of scientific or historical study, including excavation. Different research designs will require access to different kinds of sites on the AFNM landscape. Since the permitting process keeps the BLM in control of exactly what research activities take place where on the monument, the management plan should allow all sites to be the potential focus of research. This is important for flexibility in research questions and research designs. (ASU School of Human Evolution and Social Change, Tempe, AZ - Comment: #1978, letter #325)

Public Concern (RE-2):

Respondent feels the benefits of a teaching component to research should not be overlooked in development of the management plan.

Response (RE-2):

We agree that teaching is an important component to research, and fully support the opportunities that research provides. The

proclamation for the Agua Fria National Monument recognized the potential that this important area provides and so states.

Public Comments (RE-2):

Comment: Research routinely involves collaboration with students. In my experience, teaching collaborative ecology-archaeology field seminars at AFNM has substantially enhanced the knowledge about socioenvironmental interaction at the monument while contributing to the development of both undergraduate and graduate student research skills. In fact, several of the papers given in previous AFNM research seminars will be presented at the 2006 Annual Meeting of the Society for American Archaeology. The benefits of a teaching component to research should not be overlooked as the monument develops its management plan. (ASU School of Human Evolution and Social Change, Tempe, AZ - Comment: #1980, letter #325)

Public Concern (RE-3):

Respondents strongly support emphasis on collaborative research partnerships in plan.

Response:

Interest in research includes many entities besides BLM. Collaborating on research will help assure the monument achieves its scientific potential and is regarded as a critical component of a productive, state-of-the-art science program in the monument, which will provide benefits to resource management strategies, as well as teaching and the advancement of knowledge. We plan to sustain existing partnerships and foster new ones.

Public Comments (RE-3):

Comment: Research. There is a lot that we don't know about the monument and it presents exciting opportunities for a great variety of archaeological and natural science research. Over the next 20 years, the monument should pursue, with partners in universities and elsewhere, a deliberate program of serious research in at least the fields of archaeology and ecology. It would be useful for the Monument to constitute a scientific advisory committee to

help design (and implement) this effort. The results of this research program, and to a limited extent the actual scientific research process, should be integrated into the interpretive program discussed briefly below. A coupled research/interpretive program would make the monument unique and make it uniquely effective as an educational resource (including to those not really seeking any education) while contributing to the advancement of science. (Individual - Comment: #2155, letter #297)

Comment: I strongly support the emphasis on establishing and maintaining collaborative research partnerships with academic institutions, professional and non-profit organizations, tribal governments, and avocational organizations. Such partnerships bring critical resources, knowledge, and personnel to BLM efforts to understand, interpret, and monitor the AFNM landscape and its resources, while also providing many benefits to these diverse partners. Collaborative enterprises are win-win situations for all concerned. (ASU School of Human Evolution and Social Change, Tempe, AZ - Comment: #1983, letter #325)

Public Concern (RE-4):

Respondents feel education is the key to protect the land. They would like to see collective communities and users of the lands educate each other about “not doing the wrong things,” and have them contribute to rehabilitating the lands, through clean ups and maintaining trails. This will be especially important in implementing the preferred alternative.

Response (RE-4):

Community and citizen involvement with this plan was paramount in the development of the document. Continued involvement is essential for the implementation of the actions found within the plan. We fully intend to engage the communities, groups and citizens. We are counting on their continued participation to help BLM achieve the goals of the plan.

Public Comments (RE-4):

Comment: I would like to see us as our collective communities, users of these lands,

educate ourselves, each other and people coming into with whatever use they wish to make of our lands, educate those people, have them contribute in the clean ups and the maintenance of trails. (Individual, Scottsdale, AZ - Comment: #159, letter #78)

Comment: Although the draft RMP is laced with statements such as "...importance of collaborative stewardship as a strategy for implementation" (section 1.4.2), "communities will be engaged" (section 1.5.2.1), "establish criteria through external collaboration to determine when monument values are at risk" and "&develop partnerships" (section 2.7.2.7,) there is no indication and as to when and how the BLM will involve the public in decision-making, develop volunteer groups or perhaps formal partnerships and contracts to carry out the vital operations needed to conserve resources. The clear trend is an ever-increasing agency reliance on the public, educational institutions, conservation groups and other organized interests in such matters and this plan should get ahead of the curve. This RMP neither offers managers guidance as to how to proceed nor does it even make a commitment to undertake these endeavors that might make a significant contribution to the plan outcome. For example, the BLM has fostered a successful "Friends of the Agua Fria National Monument" group that has already conducted service activities on the monument and attracted considerable public interest. It seems odd that there is no mention as to how this effort fits into the overall management plan or how the FAFNM group success could serve as a template for other groups in the future. This is a serious omission. Agency personnel and the cadre of citizen volunteers are all going to change over the lifetime of this RMP. With an agency master strategy and oversight, managers can generate a sustained effort that extends beyond the working lifetime of a few key individuals or agency personnel and employ citizen volunteers efficiently. (Individual, Glendale, AZ - Comment: #1932, letter #341)

Public Concern (RE-5):

Respondents want to emphasize the importance of public education and appropriate

interpretation in the monument. They feel that BLM's planning must be designed to realize the potential of the monument with respect to archaeological and natural resource education and that the audiences that must be most strongly attended to are visitors from the Phoenix metropolitan area and 1-17 travelers. BLM should provide relevant materials for interpreted cultural sites while minimizing obtrusive signage so that visitors can learn and understand the significance of the irreplaceable resources at Agua Fria and continue collaboration with Hopi.

Response (RE-5):

We agree that the monument has extraordinary potential as an educational resource and that the Agua Fria National Monument offers a unique and excellent opportunity to conduct interpretation at the scale of the cultural landscape, which would include the portion of Perry Mesa in the adjacent Tonto National Forest. The monument also provides opportunities to incorporate active science into interpretive programs.

Interpretation and public education focused on the monument's archaeological resources within the natural ecosystem, are important objectives in the RMPs and are an important aspect of cultural resource protection. Consistent with the Archaeological Resources Protection Act, (16 U.S.C. 470 ii(c)), each Federal land manager shall establish a program to increase public awareness of the significance of the archaeological resources located on public lands...and the need to protect such resources. Therefore, the benefits of interpretive development and related activities will be planned and conducted in ways that are sensitive to resource protection and the concerns of culturally affiliated Native American tribes, while relying on and supporting ongoing scientific studies. For these reasons, many sites have been excluded from interpretive uses.

Partnerships will be crucial to the implementation of effective educational materials and activities for adults and children, which will contribute to resource protection in the long run. We look forward to working with

various partners to achieve these objectives. We agree that collaboration with the Hopi and other tribes, who have strong cultural ties to the area, could contribute substantially to the research and interpretive programs. The Hopi are extremely interested and not particularly supportive of extensive educational or interpretive programs. However, we will continue to seek tribal perspectives and incorporate them into such programs.

Public Comments (RE-5):

Comment: We [the Hopi tribe] request continuing consultation on the selection and allocation of our ancestral sites interpretive development, educational uses, visitation, and scientific uses. (Hopi Cultural Preservation Office, Kykotsmovi, AZ - Comment: #1153, letter #384)

Comment: The Agua Fria National Monument is a tremendous resource in terms of archaeological and ecological resources. I have been fortunate to be involved with archaeological research on the monument and become familiar with the area. The AFNM has tremendous possibilities with regards to recreation and interpretation and I look forward to continue visiting the monument in the future. After reviewing the draft management plan I have the following comments. I would like to see the education and interpretation of the monument resources be more highlighted within the plan. I believe there is a primary focus in the management plan on recreation and preservation aspects. The monument has a tremendous possibility to interpret and educate the public about Arizona archaeology and natural resources. The proximity to Sunset Point Rest Area and the Phoenix metropolitan area means that the visitor use will only increase over time. (Individual - Comment: #1486, letter #333)

Public Concern (RE-6):

Respondents would like to explore ways to cooperatively interpret the important riparian habitat along Morgan City Wash near Lake Pleasant Dam for the benefit of public education.

Response (RE-6):

BLM agrees with your proposal to explore ways to cooperatively interpret the important riparian habitat along Morgan City Wash near Lake Pleasant Dam and interpret and protect the cultural resources for the benefit of public education.

Public Comments (RE-6):

Comment: [The following actions are elements of the RMP I believe would fit well within the mission of MCPRD, and would be areas where cooperative management between out two agencies might serve the public well:] Protection and interpretation of the Morgan City Wash proposed "Wilderness Characteristics" area - MCPRD presently has established a conservation education area at the important riparian habitat along Morgan City Wash near Lake Pleasant Dam. We support your proposed management actions to protect the watershed of this riparian area as stated in Alternative E, and would like to explore ways to cooperatively interpret this unique watershed and associated riparian habit for the benefit of public education. (Maricopa County Parks and Recreation Depart, Phoenix, AZ - Comment: #1455, letter #350)

Comment: [The following actions are elements of the RMP I believe would fit well within the mission of MCPRD, and would be areas where cooperative management between out two agencies might serve the public well:] Interpretation and protection of important cultural resources - around southern portion of the HMU and at the northern portion of the County's Lake Pleasant Regional Park are extensive cultural resource sites we could cooperatively interpret and protect. (Maricopa County Parks and Recreation Depart, Phoenix, AZ - Comment: #1454, letter #350)

Public Concern (RE-7):

Respondents suggest promoting the Agua Fria National Monument by marketing it outside the local area. Restaurants, service stations, and other facilities where people tend to stop before entering the area could be places where written publication could be made available.

Response (RE-7):

The monument is unique in that it does not contain developed amenities like paved roads, developed campgrounds, drinking fountains, or a visitor center or lodge, which would remain the case under the proposed plan. Aside from basic visitor amenities such as visitor kiosks, visitor registers and information, signing, pit toilets and basic trails, most visitor information would be available in local communities such as Black Canyon City and Cordes Junction. This could include community visitor centers, tourist destinations, and business in addition to other natural and cultural areas and parks throughout the state.

Public Comments (RE-7):

Comment: Educate mostly by pamphlets (about AFNM) and written materials available in nearby communities. How about putting them at restaurants, service stations, etc., where people tend to stop before entering the area. (Individual, Black Canyon City, AZ - Comment: #1942, letter #353)

Comment: If you want to promote the Agua Fria National Monument you must not only market the area in our locally area phone books in and Around our beautiful area of Page-Lake Powell but, outside the different counties in our state. Just like the Governor said we all must be tourist in our own backyard. Please give all necessary information to our different phone directories to be published in future phone Books. As well as our very own Visitor Center. (Individual, Page, AZ - Comment: #314, letter #27)

5.4.22 E-PLANNING**Public Concern (EP-1):**

Respondents thank the BLM for its willingness to present the plan and the ePlanning system to their organization. However several suggestions were made to improve ePlanning. Respondents would like to be able to submit multiple comments attached to multiple sections and to have a confirmation copy that their

comments were submitted. They also noted that the map viewer was inaccessible from browsers other than Microsoft's Internet Explorer and the system seemed to suffer from significant periods of downtime.

Response (EP-1):

We are forwarding all comments to the ePlanning lead for future use by the agency.

Public Comments (EP-1):

Comment: I would also like to let you know that the electronic format and the website worked well for me as I was really able to utilize it to research the project. Thank you for that as well. (Individual, Prescott, AZ - Comment: #725, letter #231)

Comment: Eplanning and workshops The ePlanning online tool provided useful access to the plan for people tenacious enough to work

through the convoluted user interface. While the public comment function of the system provides an easy way for members of the public to submit comment, users are not provided a confirmation copy of their comments to submit in case the electronic transmission was not properly received by the planning staff. In addition, we found the map viewer to be inaccessible from browsers other than Microsoft's Internet Explorer and the system seemed to suffer from significant periods of downtime. In spite of these flaws, we did find the mapping feature to be useful, although future releases should attempt to address user interface issues. However, our understanding is that the ePlanning system is a beta test, and we applaud the BLM for attempting to make the plan more accessible to the public and look forward to future enhancements. (Sierra Club Southwest Regional Office, Phoenix, AZ - Comment: #1881, letter #340)

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List of Recipients

Abbreviations and Acronyms

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Glossary

Additional Tables

Appendices
(A – U)

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Gila River Indian Community
Hopi Tribal Council
Salt River Pima-Maricopa Community Council
Yavapai-Prescott Tribe

Federal Agencies

Department of Agriculture
 Forest Service
 Prescott National Forest
 Tonto National Forest
 Natural Resource Conservation Service
Department of Defense
 Air Force
 Army Corps of Engineers
Department of Energy
 Western Area Power Administration
Department of the Interior
 Bureau of Indian Affairs
 Bureau of Reclamation
 Fish and Wildlife Service
 National Park Service
Department of Justice
 Citizenship and Immigration and Naturalization Service
 Environmental Protection Agency

Arizona State Agencies

Arizona Department of Agriculture
Arizona Department of Environmental Quality
Arizona Department of Mines and Mineral Resources
Arizona Department of Transportation
Arizona Department of Water Resources
Arizona Game and Fish Department
Arizona Geological Survey
Arizona State Clearinghouse
Arizona State Historic Preservation Office
Arizona State Land Department
Arizona State Mine Inspector
Arizona State Parks

Local Agencies

City of El Mirage
City of Goodyear
City of Surprise
La Paz County Board of Supervisors
Maricopa County Board of Supervisors
Maricopa County Environmental Services
Maricopa County Flood Control District
Maricopa County Parks and Recreation Department
Maricopa County Planning and Development Department
Maricopa County Department of Transportation
Phoenix Parks, Recreation and Library Department
Pinal County Board of Supervisors
Town of Buckeye
Town of Wickenburg
Town of Youngtown
Yavapai County Board of Supervisors
Yavapai County Planning and Zoning Department

Interest Groups

Arizona Archaeological Society
Arizona Cattle Growers Association
Arizona Desert Bighorn Sheep Society
Arizona Mining Association
Arizona Mining and Prospecting Association
Arizona Parks and Recreation Association
Arizona Public Service Company
Arizona Roamers
Arizona State Association of Four-Wheel-Drive Clubs, Inc.
Arizona State Horsemen's Association
Arizona Wilderness Coalition
Arizona Wool Producers Association
Blue Ribbon Coalition, Inc.
Cyprus Bagdad Copper Company
Defenders of Wildlife
Desert Tortoise Council
El Paso Natural Gas Company
Gila Bend Natural Resource Conservation District
Greater Arizona Bicycling Association-Phoenix Metro Chapter
Greater Arizona Bicycling Association-West Valley Chapter
Greater Arizona Bicycling Association-Prescott Chapter
International Society for the Protection of Mustangs and Burros
International Sonoran Desert Alliance
National Wildlife Federation
The Nature Conservancy, Arizona Chapter
People for the West
Phelps Dodge Corporation

Salt River Project
Sierra Club-Palo Verde and Southwest Regions,
Sierra Club-Rincon Groups
Center for Biological Diversity
Southwest Minerals Explorers Association
Tonopah Area Coalition
Tonopah Valley Association
Western Pima County Community Council
Wickenburg Natural Resource Conservation District
Wild Horse Organized Assistance
The Wilderness Society, Four Corners
Yavapai Cattle Growers

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Senator John McCain
Representative Ed Pastor
Representative Rick Renzi
Representative John Shadegg
Representative Jim Kolbe
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Secretary of State Janice Brewer
Senator Marilyn Jarrett (District 19)
Senator Jake Flake (District 5)
Senator Marsha Arzberger (District 25)
Senator Ken Bennett (District 1)
Senator Albert Hale (District 2)
Representative Manuel V. "Manny" Alvarez (District 25)
Representative Jennifer J. Burns (District 25)
Representative Albert Tom (District 2)
Representative Ann Kirkpatrick (District 2)
Representative Lucy Mason (District 1)
Representative Tom O'Halleran (District 1)
Representative Jack A. Brown (District 5)
Representative Bill Konopnicki (District 5)
Representative Gary L. Pierce (District 19)
Representative Chuck Gray (District 19)

Abbreviations and Acronyms

ACECs:	Areas of Critical Environmental Concern
ADA:	Americans with Disabilities Act
ADEQ:	Arizona Department of Environmental Quality
ADES:	Arizona Department of Economic Security
ADOT:	Arizona Department of Transportation
ADR:	Arizona Department of Revenue
ADWR:	Arizona Department of Water Resources
AFNM:	Agua Fria National Monument
AGFD:	Arizona Game and Fish Department
ALHS:	Arizona Land Health Standards
ALRIS:	Arizona Land Resource Information System
AMA:	Active Management Area
AML:	Appropriate Management Level (Abandoned Mine Land)
AMP:	Allotment Management Plan
AMS:	Analysis of the Management Situation
APHIS:	Animal and Plant Health Inspection Service
AQCR:	Air Quality Control Regulations
ARPA:	Archaeological Resources Protection Act
ARS:	Arizona Revised Statute
ASLD:	Arizona State Land Department
ASM:	Arizona State Museum
ASU:	Arizona State University
ATV:	All-Terrain Vehicle
AUM:	Animal Unit Month
BAT:	Best Available Technology
BE:	Biological Evaluation
BEA:	Bureau of Economic Analysis
BLM:	Bureau of Land Management
CAA:	Clean Air Act
CAP:	Central Arizona Project
CEQ:	U.S. Council on Environmental Quality
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act
CFR:	U.S. Code of Federal Regulations
CFS:	Cubic feet per second
CHAMP:	AGFD Challenged Hunter Access/Mobility Permit
CO:	Carbon-monoxide
CRM:	Cultural Resource Management
CRMA:	Cooperative Recreation Management Area (Alternative A only)
CRPUA:	Cultural Resource Public Use Area
CRU:	Community Resource Unit
CWA:	Clean Water Act
CYL:	Cattle Year-Long
CZMA:	Coastal Zone Management Act
DEIS:	Draft Environmental Impact Statement
DES:	Department of Economic Security
DFC:	Desired Future Condition
DHS:	Department of Homeland Security

DNA:	Documentation of land use plan conformance and NEPA Adequacy
DOI:	Department of the Interior
DPC:	Desired Plant Community
DRMP:	Draft Resource Management Plan
EA:	Environmental Assessment
EIS:	Environmental Impact Statement
EJ:	Environmental Justice
EPA:	Environmental Protection Agency
EPCRA:	Emergency Planning and Community Right to Know Act
EQIA:	Environmental Quality Improvement Act
ERMA:	Extensive Recreation Management Area
ESA:	Endangered Species Act
EO:	Executive Order
FCC:	Federal Communications Commission
FIL:	Fire Intensity Level
FIRE:	Finance, Insurance, and Real Estate
FLPMA:	Federal Land Policy Management Act
FLTFA:	Federal Land Transaction Facilitation Act
FMP:	Fire Management Plan
FMZ:	Fire Management Zone
FONSI:	Finding of No Significant Impact
FR:	Federal Register
FWS:	U.S. Fish and Wildlife Service
FY:	Fiscal Year
GMU:	Game Management Unit
GUI:	Graphical User Interface
HA:	Herd Area
HAZMAT:	Hazardous Materials
HMA:	Herd Management Area
HMP:	Habitat Management Plan
HRU:	Human Resource Unit
HSWA:	Hazardous and Solid Waste Amendments
I-17:	Interstate 17
IM:	Instruction Memorandum
JKA:	James Kent Associates
LAC:	Limits of Acceptable Change
LUA:	Land Use Allocation
LUP:	Land Use Plan
MA:	Management Action
MAG:	Maricopa Association of Governments
MCAA:	Management Common to Action Alternatives
MCL:	Maximum Contaminant Levels
MCLG:	Maximum Contaminant Level Goals
MFP:	Management Framework Plan
MIST:	Minimum Impact Suppression Tactics
MLRA:	Major Land Resource Area
MOU:	Memorandum of Understanding
MPA:	Municipal Planning Area
MPO:	Mining Plan of Operation
MRMA:	Multiple Resource Management Areas (Alternative A only)
MSA:	Management Situation Analysis

MU:	Management Unit
NAAQS:	National Ambient Air Quality Standards
NAGPRA:	Native American Graves Protection and Repatriation Act
NCA:	National Conservation Areas
NEPA:	National Environmental Policy Act
NFDRS:	National Fire Danger Rating System
NFP:	National Fire Plan
NHPA:	National Historic Preservation Act
NIFC:	National Interagency Fire Center
NOI:	Notice of Intent
NO(x):	Nitrogen Oxides
NPDES:	National Pollutant Discharge Elimination System
NRCS:	Natural Resource Conservation Service
NRHP:	National Register of Historic Places
OHV:	Off-Highway Vehicle
ONA:	Outstanding Natural Area
ORV:	Off-Road Vehicle
PCB:	Polychlorinated Bi-phenyls
PILT:	Payments in Lieu of Taxes
PFC:	Proper Functioning Condition
PD:	BLM Phoenix District
PM₁₀:	Particulate Matter 10 microns in diameter or smaller
PNC:	Potential Natural Community
PPA:	Pollution Prevention Act
PSD:	Prevention of Significant Deterioration
R&PP:	Recreation and Public Purposes
RAC:	Resource Advisory Council
RAZ:	Regional Analysis Zone
RCA:	Resource Conservation Area
RCRA:	Resource Conservation and Recovery Act
RL:	Representative Location
RMA:	Riparian Management Area
RMIS:	Recreation Management Information System
RMP:	Resource Management Plan
RMZs:	Recreation Management Zones
RNA:	Research Natural Area
ROD:	Record of Decision
ROS:	Recreation Opportunity Spectrum
ROW:	Right of Way
SARA:	Superfund Amendments and Reauthorization Act
SCRMA:	Special Cultural Resource Management Area
SDWA:	Safe Drinking Water Act
SGM:	Spatial Growth Model
SHPO:	State Historic Preservation Officer
SIP:	Arizona State Implementation Plan
SLUP:	Special Land Use Permit
SMA:	Special Management Areas
SRMA:	Special Recreation Management Area
SRP:	Salt River Project
SRP:	Special Recreation Permits
SWCG:	Southwest Area Coordinating Group

T&E:	Threatened and Endangered
TGA:	Taylor Grazing Act
TSCA:	Toxic Substance Control Act
USACE:	United States Army Corp of Engineers
USC:	United States Code
USDA:	United States Department of Agriculture
USGS:	United States Geological Survey
VOC:	Volatile Organic Compounds
VRM:	Visual Resource Management
WA:	Wilderness Areas
WFIP:	Wildland Fire Implementation Plan
WFMP:	Wildland Fire Management Policy
WHBA:	Wild Free Roaming Horse and Burro Act
WHA	Wildlife Habitat Area
WMAs:	Wildlife Management Areas
WSA:	Wilderness Study Areas (Alternative A only)
WSR:	National Wild and Scenic Rivers System
WUI:	Wildland-Urban Interface

References

- Ahlstrom, Richard V.N., Malcolm Adair, R. Thomas Euler, and Robert C. Euler
1992 *Pothunting in Central Arizona: The Perry Mesa Archeological Site Vandalism Study*. Cultural Resources Management Report No. 13. USDA Forest Service, Southwestern Region, and Bureau of Land Management, Phoenix.
- Ahlstrom, Richard V.N., and Heidi Roberts
1995 *Prehistory of Perry Mesa: The Short-Lived Settlement of a Mesa-Canyon Complex in Central Arizona, ca. A.D. 1200-1450*. Arizona Archaeologist No. 28. Arizona Archaeological Society, Phoenix.
- American Recreation Coalition. 2001. *Outdoor Recreation in America 2001*. Available: www.funoutdoors.com/research.html.
- Arizona Game and Fish Department. 2001. *Wildlife 2006: Wildlife Management Program Strategic Plan for the Years 2001–2006*. Phoenix, AZ. January 22.
- _____. 1998. *Off-Highway Vehicle Strategic Plan 1999-2004*. Phoenix, AZ.
- Arizona State Mine Inspector. 2001. *Abandoned Mine Safety Fund Annual Report*. Arizona State Mine Inspector. Available at: www.asmi.state.az.us/safety2001.pdf.
- _____. 2002b. *Abandoned Mine Safety Fund Annual Report*. Available at: www.asmi.state.az.us/safety2001.pdf.
- Barnett, Loyd O., Richard H. Hawkins, and D. Phillip Guertin. 2002. *Reconnaissance Watershed and Hydrologic Analysis on the Upper Agua Fria Watershed*. Prepared in cooperation with the Upper Agua Fria Watershed Partnership, funded by the Arizona Rural Watershed Initiative, and administered by Arizona Department of Water Resources. Tucson: University of Arizona, School of Renewable Natural Resources.
- Buckeye, Town of. 2001. *Town of Buckeye General Development Plan*. Buckeye, AZ. Adopted September 18.
- Bureau of Land Management. 1983. *Lower Gila North Management Framework Plan*. Phoenix District, Phoenix, AZ. March.
- _____. 1988. *Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan*. Washington, DC.
- _____. 1988a. *Phoenix Resource Management Plan and Final Environmental Impact Statement*. Phoenix District, Phoenix, AZ. December.
- _____. 1990. *Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona*. Instruction Memorandum No. AZ-91-16). Arizona State Office, Phoenix, AZ.
- _____. 1990. *Use of Biological Control Agents of Pests on Public Lands*. (BLM Manual 9014). Washington, DC. October 30.
- _____. 1991. *Environmental Impact Statement for Vegetation Treatments, Watersheds and Wildlife Habitats on Public Lands Administered by the BLM in the Western United States, Including Alaska*. Nevada State Office, Reno, NV. May.

- _____. 1992. *Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona: New Guidance on Compensation for the Desert Tortoise*. (Instruction Memorandum No. AZ-92-46). Arizona State Office, Phoenix, AZ.
- _____. 1993. *Black Canyon Habitat Management Plan* (revised). Phoenix Field Office, Phoenix, AZ.
- _____. 1993. *Kingman Resource Area Resource Management Plan and Final Environmental Impact Statement*. Kingman Resource Area Office, Kingman, AZ. September.
- _____. 1993. *Black Canyon Tobosa Grassland Prescribed Burn Environmental Analysis*. Phoenix Field Office, Phoenix, AZ.
- _____. 1993. *Process for Assessing Proper Functioning Condition*. Technical Reference 1737-9 1993. Denver, CO: BLM Service Center.
- _____. 1994. *Agua Fria Wild and Scenic River Study Area*. Phoenix, AZ: BLM Phoenix District.
- _____. 1994. *Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement*. Arizona State Office, Phoenix, AZ. December.
- _____. 1994. *Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas*. Technical Reference 1737-11 1994. Denver, CO: BLM Service Center.
- _____. 1995. *Final Rule for Grazing Administration*. Federal Register, Vol 60, No 35.
- _____. 1997. *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration*. Arizona State Office, Phoenix, AZ. April.
- _____. 1997. *Statewide Plan Amendment of Land Use Plans in Arizona for Implementation of Arizona Standards for Rangeland Health and Guidelines for Grazing Administration*. Arizona State Office, Phoenix, AZ.
- _____. 1997. *Bureau of Land Management Strategic Plan*. Washington, DC. September 30.
- _____. 1998. *Coordinated Resource Management Plan for the Horseshoe Ranch Grazing Allotment*. Phoenix Field Office, Phoenix, AZ.
- _____. 1999. *Supplemental Guidance for Desert Tortoise Compensation*. (Instruction Memorandum No. AZ-99-008). Arizona State Office, Phoenix, AZ.
- _____. 2000. *Land Use Plan Evaluation*. Phoenix, AZ: BLM Phoenix District.
- _____. 2000. *Planning Guidance for National Monuments and National Conservation Areas*. Instruction Memorandum No. 2001-022. Washington, DC. October 31.
- _____. 2002. *Agua Fria National Monument Current Management Guidance*. May.
- _____. 2003. *Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management: Environmental Assessment*. Prepared by Dynamac Corporation, Idaho Falls, ID. September.
- _____. 2003. *BLM Implementation of the Settlement of Utah v. Norton Regarding Wilderness Study*. Instruction Memorandum 2003-274. Washington, DC.

- Jones & Stokes. 2003. *Scoping Report for the AFNM/Bradshaw-Harquahala Planning Areas*. Phoenix, AZ.
- _____. 2004. *Policy for Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas*. Instruction Memorandum 2004-089. Washington, DC.
- Bureau of Land Management and U.S. Fish and Wildlife Service, Arizona and New Mexico. 1999. *Guidance Criteria for Determinations of Effects of Grazing Permit Issuance and Renewal on Threatened and Endangered Species*.
- Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Forest Service. 2002. *Interagency Standards for Fire and Aviation Operations*. National Interagency Fire Center, Boise, ID. April.
- Cabe, L., and R. Coupal. 2001. *Final Report: Employment and Income in the Western U.S. Attributable to BLM Recreation*. Available: <http://www.blm.gov/nhp/efoia/wo/fy01/im2001-131.html>.
- CH2M HILL, in association with Logan, Simpson & Dye and EcoPlan Associates. 1997. *Salt-Gila River Baseline Ecological Characterization*. Prepared for City of Phoenix, Phoenix, AZ.
- Cordes, Henry E. 2002 *Interview with Henry Edward Cordes, September 24, 2002*. Oral history on file at the BLM Phoenix District and the Sharlot Hall Museum, Prescott.
- Cryptogammic. (2006). Retrieved October 4, 2006, from Wikipedia, The Free Encyclopedia Web site: <http://en.wikipedia.org/wiki/cryptogammic>.
- Duke, Philip, Donna Cave, and Robert Kimmick 2003 *The Effects of Fire on Cultural Resources*. USDA Forest Service, San Juan National Forest.
- Fleming, John B. 2004. *Hydrologic Characteristics of the Agua Fria National Monument, Arizona, Determined from the Phase I Reconnaissance Study*. U. S. Geological Survey Scientific Investigations Report 2004 (draft). Prepared in cooperation with the Bureau of Land Management. Tucson: U.S. Geological Survey.
- Hanes, Richard (editor) 2001 *Fire Effects Guide: Cultural Resources*. National Wildfire Coordinating Group.
- Heuett, Mary Lou, and Paul V. Long, Jr. 1996 *A Cultural Resource Inventory of Fifteen Selected Linear Transects and a 300-Acre Quadrant on Perry Mesa in Southeastern Yavapai County, Arizona*. Cultural and Environmental Systems Technical Series No. 51, Tucson.
- James Kent Associates. 2003. *A Social-Economic Community Assessment Related to Bureau of Land Management Activities in the Phoenix Field Office*. Ashland, OR. January 15.
- Maricopa Association of Governments. 2000. *Desert Spaces: Environmentally Sensitive Development Areas (ESDA) Policies and Design Guidelines*. Phoenix, AZ. June.
- _____. 2002. *Long Range Transportation Plan 2002 Update*. Phoenix, AZ. May.
- Maricopa County. 1991. *Maricopa County: Mobile Planning Area Land Use Plan*. Phoenix, AZ. Adopted August 12.
- _____. 2002. *Long Range Transportation Plan 2002 Update*. Maricopa Association of Governments. Maricopa County, Arizona.

_____. 2002. Maricopa County 2020, Eye to the Future: The Maricopa County Comprehensive Plan. Phoenix, AZ. Adopted October 20, 1997; revised August 7, 2002.

_____. In prep. MAG Northwest Area Transportation Study.

Marshall, R.M., S. Anderson, M. Batchler, P. Comer, S. Cornelius, R. Cox, A. Gondor, D. Gori, J. Humke, R. Paredes Aguilar, I.E. Parra, S. Schwartz. 2000. *An Ecological Analysis of Conservation Priorities in the Sonoran Desert Ecoregion*. Prepared by The Nature Conservancy Arizona Chapter, Sonoran Institute, and Instituto del Medio Ambiente y el Desarrollo Sustentable del Estado de Sonora with support from Department of Defense Legacy Program, Agency and Institutional partners. 146 pp.

North, Chris D. 2002 *Farmers of Central Arizona's Mesa-Canyon Complex: Archaeology Within and Adjacent to the Agua Fria National Monument*. Cultural Resources Report No. 02-339. SWCA Environmental Consultants, Phoenix.

Peoria, City of. 2002. Peoria General Plan. Prepared by BRW, Inc. Phoenix, AZ. December.

Phoenix, City of. 2001. General Plan of Phoenix. Adopted November 7.

Prescott Valley, Town of. 2002. *Prescott Valley General Plan 2020*. Adopted January 17.

Riper, C. & Ockenfels, R. (1998). The influence of transportation corridors on the movement of Pronghorn Antelope over a fragmented landscape in Northern Arizona.

Silberman, J. 2003. *The Economic Importance of Off-Highway Vehicle Recreation: Economic Data on Off-Highway Vehicle Recreation for the State of Arizona and Each Arizona County*. Prepared for Arizona State University West School of Management, Phoenix, AZ.

Stone, Connie L. 1986 *Deceptive Desolation: Prehistory of the Sonoran Desert in West Central Arizona*. Cultural Resource Series No. 1. Bureau of Land Management, Phoenix.

Sonoran Institute. 2003. *Population, Employment, Earnings and Personal Income Trends: Yavapai County, AZ*. Bozeman, MT. October 31.

U.S. Department of Agriculture, National Agricultural Statistics Service. Arizona Agricultural Statistics Service Annual Bulletins, 1999–2002. Available: www.nass.usda.gov/az.

U.S. Department of Interior. 2002. *Interim Management Policy for Bureau of Land Management National Monuments and National Conservation Areas* (Instruction Memorandum No. 2002-008). October 4.

U. S. Department of the Interior, Bureau of Land Management. 2006. *Roads and trails report*.

U.S. Forest Service, Prescott National Forest. 2001. *Proposed Action: Forest Plan Amendment*. Prescott, AZ. November.

USDI, Bureau of Land Management 1997. Grazing Management for Riparian-Wetland Areas. Riparian Area Management, TR-1737-14. Steve Leonard, Gene Kinch, Van Elsbernd, Dr. Mike Borman, and Dr. Sherman Swanson; 1997.

Wickenburg, Town of. 1988. Wickenburg General Plan.

Yavapai County. 2003. Yavapai County General Plan. Adopted April 7.

Glossary

ABIOTIC - The nonliving, material (as opposed to conceptual) components of the environment, such as air, rocks, soil, water, coal, peat, and plant litter. See **BIOTIC**.

ACCELERATED SOIL EROSION - Soil loss above natural levels resulting directly from human activities. Because of the slow rate of soil formation, accelerated erosion can permanently reduce plant productivity.

ACQUIRED PUBLIC LANDS - Lands in Federal ownership that the Government obtained as a gift or by purchase, exchange, or condemnation. See **PUBLIC LANDS**.

ACRE-FOOT - A volume that covers an area of 1 acre to a depth of 1 foot (43,560 ft³).

ACTIVE MANAGEMENT AREAS - Five areas in Arizona (i.e. Prescott, Phoenix, Pinal, Santa Cruz, and Tucson) where the Arizona Department of Water Resources regulates groundwater use. Groundwater regulations stem from the 1980 Arizona Groundwater Management Code, which provides the management framework to ensure dependable water supplies for Arizona well into the future. Ensuring dependable supplies, the code places conservation requirements on municipal and agricultural water use and promotes the use of renewable supplies, such as Colorado River water delivered by the Central Arizona Project.

ACTIVE MINING CLAIM - A parcel of Federal land, valuable for a mineral deposit or deposits. A claim is a parcel for which one has asserted a right of possession. The right is restricted to extracting and developing a mineral deposit. The rights granted by a mining claim are valid against a challenge by the United States and other claimants only after the discovery of a valuable mineral deposit. There are two types of mining claims: lode and placer.

Since October 5, 1992, only claimants who have a legal interest in ten or fewer mining claims nationwide and who also meet other requirements, may perform assessment work and file evidence of assessment. All other claimants must pay an annual fee of \$125 per claim to BLM or file for a waiver from payment by August 31. Failure to file by August 31 requires BLM to declare the claim or site null and void by operation of law.

ACTIVITY PLAN - A detailed and specific plan for managing a single resource program or plan element undertaken, as needed, to implement the more general resource management plan (RMP) decisions. BLM prepares activity plans for specific areas to reach specific resource management objectives within stated timeframes.

ADMINISTRATIVE USE OF MINERAL MATERIALS - BLM's use of mineral materials from public land for land management projects.

ADVANCED ECOLOGICAL STATUS - A condition that is considered to be achieved when the vegetation community at a defined ecological site has a high correlation to the potential natural community for that site (i.e. ecological site rating > 50). These conditions are determined from ecological site inventories using the Natural Resource Conservation Service ecological site guides to compare the existing vegetation communities on each ecological site to the potential plant community for that site. Achieving an advanced ecological status is assumed to be an expression of the physical and biological condition or degree of function needed to sustain a healthy rangeland ecosystem.

AGGREGATE- Any combination of sand, gravel, and crushed stone in its natural or processed state.

AIR QUALITY RATING - See **CLASS I AIR QUALITY RATING** and **CLASS II AIR QUALITY RATING**.

AIRSHED - An area that shares the same air because of topography, meteorology, and climate; the atmospheric zone potentially influenced by air pollutants from various sources.

ALLOTMENT - An area of one or more pastures where one or more operators graze their livestock. An allotment generally consists of Federal rangelands, but may include intermingled parcels of private, State, or Federal lands. BLM stipulates the number of livestock and season of use for each allotment.

ALLOTMENT MANAGEMENT PLAN (AMP) - A livestock grazing management plan for a specific unit of rangeland and based on multiple use resource management objectives. The AMP considers livestock grazing in relation to other uses of rangelands and to renewable resources--watershed, vegetation, and wildlife. An AMP establishes the seasons of use, number of livestock to be permitted on rangelands, and the range improvements needed.

ALLUVIAL FAN - A low, outspread, relatively flat to gently sloping mass of sediment, shaped like an open fan and deposited by a stream where it flows from a narrow mountain valley onto a plain or broad valley.

ALLUVIUM - Any sediment deposited by flowing water as in a riverbed, floodplain, or delta.

ANALYSIS OF THE MANAGEMENT SITUATION (AMS) - Step 4 in BLM's resource management planning process. An MSA describes a planning area's current public land management and suggests opportunities to better manage this land.

ANIMAL UNIT- One mature (1,000 pound) cow or the equivalent based upon an average daily forage consumption of 26 pounds of dry matter per day.

ANIMAL UNIT MONTH (AUM) - The amount of forage needed to sustain one cow, five sheep, or five goats for a month.

ANNUAL PLANT - A plant that completes its life cycle and dies in 1 year or less. Also see **PERENNIAL PLANT**.

APPROPRIATE MANAGEMENT

LEVEL (AML) - In wild horse and burro management, a single number that is the high point of an established population range to maintain a thriving natural ecological balance, based on available forage, water, and other resource needs or conflicts.

AQUATIC HABITATS - Habitats confined to streams, rivers, springs, lakes, ponds, reservoirs, and other water bodies.

AQUIFER - A water-bearing bed or layer of permeable rock, sand, or gravel capable of yielding large amounts of water.

AQUIFER RECHARGE - Adding water to an aquifer, a process that occurs naturally from the infiltration of rainfall and from water flowing over earth materials that allow it to infiltrate below the land surface.

ARCHAEOLOGICAL FEATURE - A nonportable object, not recoverable from its matrix (usually in an archeological site) without destroying its integrity. Examples are rock paintings, hearths, post holes, floors, and walls.

AREA OF CRITICAL ENVIRONMENTAL CONCERN

(ACEC) - A designated area on public lands where special management attention is required- (1) to protect and prevent irreparable damage to fish and wildlife; (2) to protect important historic, cultural, or scenic values, or other natural systems or processes; or (3) to protect life and safety from natural hazards.

ARIZONA STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR GRAZING

ADMINISTRATION - Standards and guidelines developed collaboratively by BLM and the Arizona Resource Advisory Council (RAC) to address the minimum requirements of the Department of the Interior's final rule for Grazing Administration, effective Aug. 21, 1995.

ASPECT- See VISUAL ASPECT.

AZSITE DATABASE - A computer database containing cultural site information managed by the State Historic Preservation Office and maintained by Northern Arizona University and Arizona State University.

BACK COUNTRY BYWAY - A component of the national scenic byway system which focuses primarily on corridors along back country roads which have high scenic, historic, archeological, or other public interest values. The road may vary from a single track bike trail to a low speed, paved road that traverses back country areas. (BLM Handbook H-8357-1, B 2)

BACK COUNTRY ZONE - Areas with undeveloped, primitive, and self-directed visitor experience without provisions for motorized or mechanized access, except for designated routes. Also see **FRONT COUNTRY ZONE** and **PASSAGE ZONE**.

BAJADA - A broad continuous slope extending along and from the base of a mountain range and formed by coalescing alluvial fans.

BAR - A ridge-like accumulation of sand, gravel, or other alluvial material formed in the channel, along the banks, or at the mouth of a stream where a decrease in velocity induces deposition. Also see **WATER BAR**.

BASAL DIAMETER - Diameter of a tree stem as measured 0.5 feet above the ground.

BASE FLOW (DISCHARGE) - The portion of stream discharge derived from such natural storage sources as groundwater, large lakes, and swamps but not derived from direct runoff or flow from stream regulation, water diversion, or other human activities.

BASE HERD - The constant livestock herd size that is continually licensed but may not be the same as the grazing (carrying) capacity. Also see **GRAZING CAPACITY**.

BASE LEVEL - The lowest level to which a land surface can be reduced by the action of running water.

BASE METAL- A metal inferior in value to gold and silver; a term generally applied to the commercial metals such as copper and lead.

BASIN (INTERMONTANE BASIN) - A broad structural lowland between mountain ranges, commonly elongated and many miles across.

BIOLOGICAL ASSESSMENT- Information prepared by or under the direction of a Federal agency to determine whether a proposed action is likely to (1) harm threatened or endangered species or designated critical habitat, (2) jeopardize the existence of species that are proposed for listing, or (3) adversely modify proposed critical habitat. Biological assessments must be prepared for major construction activities. The outcome of a biological assessment determines whether formal Section 7 consultation or a conference is needed. Also see **BIOLOGICAL EVALUATION**.

BIOLOGICAL DIVERSITY (BIODIVERSITY) - The full range of variability within and among living organisms and the ecological complexes in which they occur. Biological diversity encompasses ecosystem or community diversity, species diversity, and genetic diversity.

BIOLOGICAL EVALUATION - The gathering and evaluation of information on proposed endangered and threatened species and critical and proposed critical habitat for actions that do not require a biological assessment. Also see **BIOLOGICAL ASSESSMENT**.

BIOLOGICAL OPINION - A document that includes the following- (1) the opinion of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service as to whether a Federal action is likely to jeopardize the existence of a species listed as threatened or endangered or destroy or adversely modify designated critical habitat, (2) a summary of the information on which the opinion is based, and (3) a detailed discussion of the effects of the action on listed species or designated critical habitat.

BIOLOGICAL VEGETATION

TREATMENT - Methods of vegetation treatment that employ living organisms to selectively suppress, inhibit, or control herbaceous and woody vegetation. Examples of such methods include insects; pathogens; and grazing by cattle, sheep, or goats.

BIOMASS - The total amount of living matter in a given unit of the environment.

BIOTIC - Pertaining to life or living; the living components of the environment. Also see **ABIOTIC**.

BIRDS OF CONSERVATION

CONCERN - As listed by the U.S. Fish and Wildlife Service, birds (other than threatened or endangered species) that are in greatest need of conservation action and without such action might become listed as threatened or endangered.

BLM SENSITIVE SPECIES - See **SENSITIVE SPECIES**.

BOSQUE - A woodland dominated by trees more than 15 feet tall.

BRAIDING - A pattern of an interlacing or tangled network of several branching and reuniting stream channels separated by branch islands or channel bars.

BROWSE - The part of leaf and twig growth of shrubs, woody vines, and trees available for animal consumption.

BURNBLOCK - In prescribed burning, an area having uniform enough conditions of stand and fuel to be treated uniformly under a given burning prescription. The size of burnblocks ranges from the smallest that allows an economically acceptable cost per acre, up to the largest that can conveniently be treated in one burning period.

BURN OUT - Setting fire inside a control line to widen it or consume fuel between the edge of the fire and the control line.

CANDIDATE SPECIES - Species not protected under the Endangered Species Act, but being considered by the U.S. Fish and Wildlife Service for inclusion on the list of federally threatened and endangered species.

CANOPY - The cover or leaves of branches formed by the tops or crowns of plants as viewed from above the cover measured by the vertical projection downward of the extent of the cover and expressed as a percentage of the ground so covered.

CARBON-14 DATING - A method of estimating the age of an artifact containing carbon by measuring the radioactivity of its carbon-14 content to determine how long ago the specimen was separated from equilibrium with the atmosphere/plant/animal cycle. Continuously produced in the atmosphere by cosmic ray bombardment, carbon-14 decays with a half-life typically described as 5,568 years. An object is dated by comparing its carbon-14 activity per unit mass with that in a contemporary sample.

CARRYING CAPACITY

(RECREATION) - The amount of recreation use a given resource can sustain before the resource's quality begins to irreversibly deteriorate.

CARRYING CAPACITY (WILDLIFE) -

The most animals a specific habitat or area can support without causing deterioration or degradation of that habitat. Also see **GRAZING CAPACITY**.

CASUAL USE (MINING) - Mining that only negligibly disturbs Federal lands and resources and does not include the use of mechanized earth moving equipment or explosives or motorized equipment in areas closed to off-highway vehicles. Casual use generally includes panning, non-motorized sluicing, and collecting mineral specimens using hand tools.

CASUAL USE (RECREATION) -

Noncommercial or nonorganized group or individual activities on public land. Casual use does the following:

- complies with land use decisions and designations, i.e. Special Area Designations,
- does not award cash prizes,
- is not publicly advertised,
- poses minimal risk for damage to public land or related water resources, and
- generally requires no monitoring.

If the use goes beyond those conditions, the activity should be treated as any other organized recreational group or competitive activity or event for which BLM would require the event organizer to obtain a special recreation permit (SRP).

CASUAL USE OF MINERAL

MATERIALS - Extracting mineral materials for limited personal (noncommercial) uses.

CATEGORICAL EXCLUSION - A

category of Federal actions that do not individually or cumulatively have a significant effect on the human environment and for which an environmental impact statement or an environment assessment is required.

CATTLE GUARD - A device placed in a road, usually a grate or series of metal bars placed perpendicular to the flow of traffic, which allows free passage of vehicles but which livestock will not cross.

CATTLE YEAR-LONG (CYL) - The amount of forage needed to sustain one cow for a 1-year period. One CYL equals 12 animal unit months (AUMs). Also see **ANIMAL UNIT MONTH**.

CHANNEL - A natural or artificial watercourse with a definite bed and banks to confine and conduct continuously or periodically flowing water.

CHANNELIZATION - The process of rebuilding the natural course of a stream to make it flow into a restricted path.

CHANNEL MORPHOLOGY- The structure and form of a stream channel.

CHEMICAL VEGETATION

TREATMENTS - The applying of chemicals to control unwanted vegetation.

CLASS I AIR QUALITY RATING -

Under the Clean Air Act, the rating given areas of the country selected to receive the most stringent degree of air quality protection. Also see **CLASS II AIR QUALITY RATING**.

CLASS II AIR QUALITY RATING -

Under the Clean Air Act, the rating given areas of the country selected for somewhat less stringent protection from air pollution damage than Class I areas, except in specified cases. Also see **CLASS I AIR QUALITY RATING**.

CLIMAX - A plant community's final and highest ecological development, which emerges after a series of successive vegetational stages. The climax community perpetuates itself indefinitely unless disturbed by outside forces. Also see **DISCLIMAX**.

COLLUVIUM - Any loose, heterogeneous and incoherent mass of soil and/or rock fragments moved downslope by gravity-driven processes (like creep or sheet wash) and deposited at the base of the slope or hillside.

COLONIZATION - Occupation of an area by a group of organisms that previously did not occupy the area.

COMMUNITY - A collective term used to describe an assemblage of organisms living together; an association of living organisms having mutual relationships among themselves and with their environment and thus functioning at least to some degree as an ecological unit.

COMPETITIVE RACES - For purposes of this plan, all competitive events that have an element of speed as a component, including, motorcycle enduros, OHV desert racing, and equestrian endurance rides.

CONSERVATION EASEMENT - An easement to assure the permanent preservation of land in its natural state or in whatever degree of naturalness the land has when the easement is granted. Also see **EASEMENT**.

COMMUNITY RESOURCE UNIT (CRU) - In social ecology, a subdivision of a human resource unit that shows the "catchment area" of a community, or its zone of influence, beyond which people relate to another community. Geographic features or settlement patterns often determine these boundaries. People in CRUs experience great face-to-face knowledge, and the caretaking systems through informal networks are the strongest. Also see **HUMAN RESOURCE UNIT (HRU)**.

CONSERVATION EASEMENT- An easement to assure the permanent preservation of land in its natural state or in whatever degree of naturalness the land has when the easement is granted. Also see **EASEMENT**.

COOL-SEASON PLANTS - Plants whose major growth occurs during the late fall, winter, and early spring. Also see **WARM-SEASON PLANTS**.

COOPERATIVE MANAGEMENT AGREEMENT - A document that describes agreements made between BLM and the public on adjusting grazing use. This document also defines the specific adjustments and the schedule of adjustments (usually over a 5-year period).

COOPERATIVE RECREATION MANAGEMENT AREA (CRMA) - An area for which BLM enters into a cooperative management agreement with a local government to manage recreation land.

CORRIDOR- See **DESIGNATED CORRIDOR**.

COVER - (1) Plants or plant parts, living or dead, on the surface of the ground; (2) plants or objects used by wild animals for nesting, rearing of young, escape from predators, or protection from harmful environmental conditions.

COW-CALF LIVESTOCK OPERATION - A livestock operation that maintains a base breeding herd of mother cows and bulls. The cows produce a calf crop each year, and the operation keeps some heifer calves from each calf crop for breeding replacements. Between the ages of 6 and 12 months, the operation sells the rest of the calf crop along with old and nonproductive cows and bulls.

CREEPING PLANT - A plant that spreads over the ground or other surface.

CRETACEOUS - In geologic history the third and final period of the Mesozoic era, from 144 million to 65 million years ago, during which extensive marine chalk beds formed.

CRITERIA AIR POLLUTANTS - Air pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples of such pollutants are ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM₁₀ and PM₂₅.

CRITERIA POLLUTANTS - See CRITERIA AIR POLLUTANTS.

CRITICAL HABITAT, DESIGNATED - Specific parts of an area (1) that are occupied by a federally listed threatened or endangered plant or animal at the time it is listed and (2) that contain physical or biological features essential to the conservation of the species or that may require special management or protection. Critical habitat may also include specific areas outside an area occupied by a federally listed species if the Secretary of the Interior determines that these areas are essential for conserving the species.

CROSSING LANE - A fenced corridor that allows livestock to cross a stream without spreading out into the water.

CULTURAL HERITAGE VALUES - The irreplaceable qualities that are embodied in cultural resources, such as scientific information about prehistory and history, cultural significance to Native Americans and other groups, and the potential to enhance public education and enjoyment of the Nation's rich cultural heritage. Section 1 of the National Historic Preservation Act states that "the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic and energy benefits will be maintained and enriched for future generations of Americans."

CULTURAL RESOURCE - A location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. Cultural resources include archaeological and historical sites, structures, buildings, objects, artifacts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains or areas where significant human events occurred, even though evidence of the events no longer remains. And they may include definite locations of traditional, cultural, or religious importance to specified social or cultural groups.

CULTURAL RESOURCE DATA - Cultural resource information embodied in material remains such as artifacts, features, organic materials, and other remnants of past activities. An important aspect of data is context, a concept that refers to the relationships among these types of materials and the situations in which they are found.

CULTURAL RESOURCE DATA RECOVERY - The professional application of scientific techniques of controlled observation, collection, excavation, and/or removal of physical remains, including analysis, interpretation, explanation, and preservation of recovered remains and associated records in an appropriate curatorial facility used as a means of protection. Data recovery may sometimes employ professional collection of such data as oral histories, genealogies, folklore, and related information to portray the social significance of the affected resources. Such data recovery is sometimes used as a measure to mitigate the adverse impacts of a ground-disturbing project or activity.

CULTURAL RESOURCE INTEGRITY - The condition of a cultural property, its capacity to yield scientific data, and its ability to convey its historical significance. Integrity may reflect the authenticity of a property's historic identity, evidenced by the survival or physical characteristics that existed during its historic or

prehistoric period, or its expression of the aesthetic or historic sense of a particular period of time.

CULTURAL RESOURCE INVENTORY

(SURVEY) - A descriptive listing and documentation, including photographs and maps of cultural resources. Included in an inventory are the processes of locating, identifying, and recording sites, structures, buildings, objects, and districts through library and archival research, information from persons knowledgeable about cultural resources, and on-the-ground surveys of varying intensity.

Class I: A professionally prepared study that compiles, analyzes, and synthesizes all available data on an area's cultural resources. Information sources for this study include published and unpublished documents, BLM inventory records, institutional site files, and state and National Register files. Class I inventories may have prehistoric, historic, and ethnological and sociological elements. These inventories are periodically updated to include new data from other studies and Class II and III inventories.

Class II: A professionally conducted, statistically based sample survey designed to describe the probable density, diversity, and distribution of cultural properties in a large area. This survey is achieved by projecting the results of an intensive survey carried out over limited parts of the target area. Within individual sample units, survey aims, methods, and intensities are the same as those applied in Class III inventories. To improve statistical reliability, Class II inventories may be conducted in several phases with different sample designs.

Class III: A professionally conducted intensive survey of an entire target area aimed at locating and recording all visible cultural properties. In a Class III survey, trained observers commonly conduct systematic inspections by walking a series of close-interval parallel transects until they have thoroughly examined an area.

CULTURAL RESOURCE PROJECT

PLAN - For cultural resource projects, a

detailed design plan that defines the procedures, budget, and schedule for such activities as structure stabilization, recordation, interpretive development, and construction of facilities such as trails. These plans include estimates on workforce, equipment, and supply needs.

CULTURAL SITE- A physical location of past human activities or events, more commonly referred to as an archaeological site or a historic property. Such sites vary greatly in size and range from the location of a single cultural resource object to a cluster of cultural resource structures with associated objects and features.

CUMULATIVE IMPACTS – (40 CFR 1508.8) "...is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

CRYPTOGAMMIC SOILS

(Cryptobiotic soils) –Primarily consist of cyanobacteria, along with lichens, mosses, fungi, and bacteria. These soils or crusts are vital to the desert ecosystem. On the Colorado Plateau, that may make up 70-80 percent of the living ground cover in some areas. The crusts are living autotrophic organisms.

DATA RECOVERY - See **CULTURAL RESOURCE DATA RECOVERY**.

DECISION RECORD - A manager's decision on a categorical exclusion review or an environmental assessment. Comparable to the record of decision for an environmental impact statement, the decision record includes- (1) a finding of no significant impact, (2) a decision to prepare an environmental impact statement, or (3) a decision not to proceed with a proposal. Also see **RECORD OF DECISION**.

DEFERRED ROTATION GRAZING -

Moving grazing animals to various parts of a range in succeeding years or seasons to provide for seed production, plant vigor, and seedling growth.

DESERT TORTOISE HABITAT

CLASSIFICATIONS - Three categories of desert tortoise habitat based on population, viability, size, density, and manageability and derived from BLM inventories of desert tortoise habitat throughout the planning areas between 1989 and 1999. The categories are as follows-

Category I: Medium to high tortoise density. Habitat area essential for maintaining large, viable populations.

Category II: Low to moderate tortoise density. Habitat is manageable.

Category III: Isolated patches of good habitat exist but are difficult to manage. Most management conflicts are not resolvable.

DESIGNATED CORRIDOR - BLM's preferred route for placing rights-of-way for utilities (i.e. pipelines and powerlines) and transportation (i.e. highways and railroads).

DESIRED PLANT COMMUNITY - The plant community that has been determined through a land use or management plan to best meets the plan's objectives for a site. A real, documented plant community that embodies the resource attributes needed for the present or potential use of an area, the desired plant community is consistent with the site's capability to produce the required resource attributes through natural succession, management intervention, or a combination of both.

DETRITAL COVER - Cover that consists of dead organic matter.

DETRITUS - Disintegrated matter, such as rock fragments or organic debris accumulated in pond water, mud, or soil.

DIKE - An upright or steeply dipping sheet of igneous rock that has solidified in a crack or fissure in the earth's crust; a human-made structure used to control stream flow.

DISCLIMAX - An enduring climax community altered by human or livestock disturbance, such as grassland that has replaced a deciduous forest. Also see **CLIMAX**.

DISCRETIONARY- Where the Field Manager has the option to authorize or not authorize a land use action, based on a variety of factors.

DISPERSED RECREATION- Recreation that does not require developed sites or facilities.

DISTURBANCE REGIME- The regular pattern of occurrence or characteristic behavior of disturbance that includes type, intensity, frequency, and spatial extent.

DIVISION FENCE - A fence that separates pastures or allotments.

DRAW - A natural drainage basin or gully.

EASEMENT- The right to use land in a certain way granted by a landowner to a second party. Also see **CONSERVATION EASEMENT**.

ECOLOGICAL CONDITION - See **ECOLOGICAL SITE RATING**.

ECOLOGICAL INTEGRITY- The quality of a natural unmanaged or managed ecosystem in which the natural ecological processes are sustained, with genetic, species, and ecosystem diversity assured for the future.

ECOLOGICAL NICHE- See **NICHE**.

ECOLOGICAL SITE (RANGE SITE) - A distinctive kind of land that has specific physical characteristics and that differs from

other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

ECOLOGICAL SITE DESCRIPTIONS

(RANGE SITE GUIDE) - Descriptions of the following characteristics of an ecological site- soils, physical features, climatic features, associated hydrologic features, plant communities possible on the site, plant community dynamics, annual production estimates and distribution of production throughout the year, associated animal communities, associated and similar sites, and interpretations for management.

ECOLOGICAL SITE INVENTORY -

The basic inventory of present and potential vegetation on BLM rangeland.

ECOLOGICAL SITE RATING

(ECOLOGICAL CONDITION/

ECOLOGICAL STATUS) - The present state of vegetation of an ecological site in relation to the potential natural community for the site. Independent of the site's use, the ecological site rating is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble those of the potential natural community. The four ecological status classes correspond to 0-25 percent, 25-50 percent, 51-75 percent, or 76-100 percent similarity to the potential natural community and are called early-seral, mid-seral, late-seral, and potential natural community, respectively.

ECOSYSTEM - Organisms, together with their abiotic environment, forming an interacting system and inhabiting an identifiable space.

ECOTOURISM - Tourism that essentially focuses on natural rather than developed attractions with the goal of enhancing the visitor's understanding and appreciation of nature and natural features. Such tourism often attempts to be environmentally sound and to contribute economically to the local community.

ELIGIBLE RIVER SEGMENT-

Qualification of a river for inclusion in the National Wild and Scenic Rivers System by determining that it is free flowing and, with its adjacent land area, has at least one river-related value considered to be outstandingly remarkable. Eligibility determinations are followed by suitability analyses that result in recommendations to Congress to designate river segments to the national system.

EMERGENT VEGETATION - Aquatic plant species that are rooted in wetlands but extend above the water's surface. Also see **SUBMERGENT VEGETATION**.

ENDANGERED SPECIES - Any animal or plant species in danger of extinction throughout all or a significant portion of its range as designated by the U.S. Fish and Wildlife Service under the Endangered Species Act. Also see **THREATENED SPECIES**.

ENDURO - An off-road competition against the clock and usually over long distances.

ENERGY FLOW - The intake, conversion, and passage of energy through organisms or through an ecosystem.

ENTRENCHMENT - The process by which a stream erodes downward (incision) creating vertical, often eroding banks and abandoning its floodplain. Entrenched streams are often referred to as gullies.

ENVIRONMENTAL ASSESSMENT

(EA - (40 CFR 1508.9)

"(a) Means a concise public document for which a Federal agency is responsible that serves to-

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.
3. Facilitate preparation of a statement when one is necessary.

(b) Shall include brief discussions of the need for the proposal, of alternatives as required by section 102 (2) (E), of the environmental impacts of the proposed action and Alternatives, and a listing of agencies and persons consulted." Also see **ENVIRONMENTAL IMPACT STATEMENT**.

ENVIRONMENTAL IMPACT

STATEMENT (EIS) - (40 CFR 1508.11)

"...means a detailed written statement as required by section 102 (2) (C) of the Act" (referring to the National Environmental Policy Act.) Also see **ENVIRONMENTAL ASSESSMENT**.

ENVIRONMENTAL JUSTICE (EJ) -

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," directs Federal agencies to assess whether their actions have disproportionately high and adverse human health or environmental effects on minority or low-income populations.

EPHEMERAL FORAGE - Part-time or seasonal forage; forage produced by annual forage species.

EPHEMERAL STREAM - A stream or portion of a stream that (1) flows only in direct response to precipitation, (2) receives little or no water from springs or no long continued supply from snow or other sources, and (3) has a channel that is always above the water table.

ETHNOECOLOGY- The study of the relationship between a society and its natural environment, including the spatio-temporal organization of human activities and how nature and natural resources are used (i.e. hunting, fishing, collecting, farming, preparing food); the

study of how people perceive and manipulate their environments.

EVAPORITES - Sedimentary rocks formed by the precipitation of salts in hot dry regions from shallow seas or lakes.

EXCAVATION - The scientific examination of an archaeological site through layer-by-layer removal and study of the contents within prescribed surface units, e.g. square meters.

EXCLOSURE - An area fenced to exclude animals.

EXOTIC - An organism or species that is not native to the region in which it is found.

EXTENSIVE RECREATION

MANAGEMENT AREA (ERMA) - A blanket RMP allocation for recreation use made in a resource management plan for all BLM's land covered by the plan but not otherwise allocated in special recreation management areas or recreation management zones.

EXTIRPATED SPECIES - A locally extinct species; a species that is no longer found in a locality but exists elsewhere.

EXTIRPATION - See **EXTIRPATED SPECIES**.

FACILITY FOOTPRINT - The area on the ground defining or delineating the extent of the facility. For a building, it could be the outside edge of the foundation. For a parking lot, staging area, or trail head, it could be a barrier fence or artificial boundary that defines the limits of the particular use.

FAULT BLOCK MOUNTAINS

(BLOCK MOUNTAINS) - Mountains formed by block faulting which divides the earth's crust into fault blocks of different elevations and orientations.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA) - The act that- (1) set out, for the Bureau of Land Management, standards for managing the public lands including land use planning, sales, withdrawals, acquisitions, and exchanges; (2) authorized the setting up of local advisory councils representing major citizens groups interested in land use planning and management, (3) established criteria for reviewing proposed wilderness areas, and (4) provided guidelines for other aspects of public land management such as grazing.

FEE SIMPLE TITLE - Unrestricted ownership of real property (i.e. land and whatever is erected or growing on it).

FINDING OF NO SIGNIFICANT IMPACT (FONSI) - A document that is prepared by a federal agency and that briefly explains why an action not otherwise excluded from the requirement to prepare an environmental impact statement (EIS) would not significantly affect the human environment and not require an EIS.

FINE PARTICULATE MATTER (PM_{2.5}) - Particulate matter that is less than 2.5 microns in diameter. Also see **PARTICULATE MATTER** and **INHALABLE PARTICULATE MATTER**.

FIRE INTENSITY - The rate of heat release for an entire fire at a specific time.

FIRE MANAGEMENT - The integration of fire protection, prescribed burning, and fire ecology knowledge into multiple use planning, decision making, and land management.

FIRE MANAGEMENT PLAN - A plan that defines a program to manage wildland and prescribed fires and documents the fire management program in the approved land use plan.

FIRE SUPPRESSION - All the work of extinguishing or confining a fire, beginning with its discovery.

FIRE SUPPRESSION RESOURCES - People, equipment, services, and supplies available or potentially available for assignment to incidents.

FIXED STOCKING RATE - A stocking rate that is fixed and cannot vary from season to season or year to year. Also see **STOCKING RATE** and **VARIABLE STOCKING RATE**.

FLOODPLAIN - Nearly level land on either or both sides of a channel that is subject to overflow flooding.

FORAGE - All browse and herbage that is available and acceptable to grazing animals or that may be harvested for feed.

FORB - An herbaceous plant that is not a grass, sedge, or rush.

FREE USE PERMIT - A permit that allows the removal of timber or other resources from the public lands free of charge.

FRONT COUNTRY ZONE - Focal areas for motorized and non-motorized visitation, concentrating use along major access routes. Also see **BACK COUNTRY ZONE** and **PASSAGE ZONE**.

FUEL BED (IN FIRE SUPPRESSION) - The fuel composition in natural settings.

FUEL LOAD (IN FIRE SUPPRESSION) - The oven-dry weight of fuel per unit area usually expressed in tons/acre.

FUEL LOADING - The amount of fuel present expressed by weight of fuel per unit area.

FUEL MOISTURE CONTENT (FUEL MOISTURE) (IN FIRE SUPPRESSION)

- The water content of a fuel expressed as a percentage of the fuel's oven-dry weight. For dead fuels, which have no living tissue, moisture content is determined almost entirely by relative humidity, precipitation, dry-bulb temperature, and solar radiation. The moisture content of live fuels is physiologically controlled within the living plant.

FUGITIVE DUST - Dust particles that are introduced into the air through certain actions such as soil cultivation or vehicles crossing open fields or driving on dirt roads or trails.

FUNCTIONING WATERS (WILDLIFE)

- A well, catchment, spring, reservoir, or other feature (human made or natural) that provides a reliable source of potable water on a year-long basis. For such a source of water to be considered functional, the quality and quantity of water must be sufficient to sustain native wildlife populations in the local area. For example, a reservoir that fills up during monsoon rains but goes dry in a few weeks is not functional from a wildlife standpoint.

FUNDAMENTALS OF RANGELAND

HEALTH - As Described in 43 CFR 4180, the conditions in which (1) rangelands are in proper functioning physical condition, (2) ecological process are supporting healthy biotic populations and communities, (3) water quality is meeting state standards and BLM objectives, and (4) special status species habitat is being restored or maintained.

GENERALIST - An organism that can survive under a wide variety of conditions and does not specialize to live under any particular set of circumstances.

GENETIC DIVERSITY - The variation in genes in a population pool that contributes to the ability of organisms to evolve and adapt to new conditions.

GRAZING CAPACITY (CARRYING CAPACITY)

- The highest livestock stocking rate possible without damaging vegetation or related resources. Grazing capacity may vary from year to year or in the same area because of fluctuating forage production.

GRAZING CYCLE - The amount of time required for livestock to rotate completely through all the pastures under an allotment management plan.

GRAZING PERMIT/LICENSE/LEASE

- Official written permission to graze a specific number, kind, and class of livestock for a specified period on a defined rangeland.

GRAZING PRIVILEGES - The use of public land for livestock grazing under permits or leases.

GRAZING REST - Any period during which no livestock grazing is allowed within an area.

GRAZING SEASON - An established period for which grazing permits are issued.

GRAZING SYSTEM - A systematic sequence of grazing use and nonuse of an allotment to meet multiple use goals by improving the quality and amount of vegetation.

GROUND COVER - See COVER.

GROUND LITTER - See LITTER.

GROUNDWATER - Subsurface water and underground streams that supply wells and springs. Use of groundwater in Arizona does not require a water right, but must only be "reasonable." Groundwater is separated from surface water by the type of alluvium in which the water is found. Water in the younger, floodplain alluvium is considered surface water. Water in the older, basin-fill alluvium is considered groundwater.

HABITAT - An area that provides an animal or plant with adequate food, water, shelter, and living space.

HABITAT FRAGMENTATION - Process by which habitats are increasingly subdivided into smaller units resulting in their increased insularity and losses of total habitat area.

HABITAT MANAGEMENT PLAN - A site-specific wildlife habitat plan.

HALF-SHRUB - A perennial plant with a woody base whose annually produced stems die each year.

HAZARDOUS MATERIALS

(HAZMAT) - An all-encompassing term that includes hazardous substances; hazardous waste; hazardous chemical substances; toxic substances; pollutants and contaminants; and imminently hazardous chemical substances and mixtures that can pose an unreasonable risk to human health, safety, and property.

HEAP LEACHING - A low-cost technique for extracting metals from ore by percolating leaching solutions through heaps of ore placed on impervious pads. This method is generally used on low-grade ores.

HERBACEOUS - Of, relating to, or having the characteristics of a vascular plant that does not develop woody tissue.

HERD AREA (HA) - A geographic area occupied by a wild horse or burro herd and its habitat in 1971.

HERD MANAGEMENT AREA (HMA) - An area established for maintaining wild horse and burro herds.

HISTORICAL SITE - A location that was used or occupied after the arrival of Europeans in North America (ca. A.D. 1492). Such sites may consist of physical remains at

archaeological sites or areas where significant human events occurred, even though evidence of the events no longer remains. They may have been used by people of either European or Native American descent.

HOHOKAM - A group of North American Indians who lived between perhaps 300 BC and AD 1400 in central and southern Arizona, largely along the Gila and Salt Rivers.

HOLDING AREA (HOLDING GROUND) - An area where livestock are often held during roundups.

HOME RANGE - The area in which an animal travels in the scope of natural activities.

HUMAN RESOURCE UNIT (HRU) - An area that is roughly equivalent in size to a county but seldom corresponds to county boundaries. HRU boundaries are derived from the cultural descriptors listed below and by self-reporting by residents living in these areas.

- HRUs are characterized by frequent and customary interaction.
- HRUs reveal face-to-face human society where people could be expected to have personal knowledge of each other and where informal caretaking systems are the strongest.
- People's daily activities occur mainly within their HRU, including work, school, shopping, social activities, and recreation.
- Health, education, welfare, and other public services are highly organized at this level, with a town or community almost always as its focal point.
- An HRU is characterized by a sense of place, a sense of identity with the land and the people, a sense of a common understanding of how the resources of their HRU should be managed, and a common understanding of how things

are normally done at this territorial level.

- The regularity of interaction within an HRU reinforces a recognition and identification by the residents of natural and human-made features as "home."
- Because of this familiarity, boundaries between HRUs are clearly defined in the minds of those living within them.

Also see **COMMUNITY RESOURCE UNIT (CRU)**.

HYDRIC- Characterized by, relating to, or requiring an abundance of moisture.

HYDROLOGIC CYCLE - The circuit of water movement from the atmosphere to the earth and its return to the atmosphere through various stages or processes, such as precipitation, interception, runoff, infiltration, percolation, storage, evaporation, and transpiration.

IGNEOUS ROCK - Rock, such as granite and basalt, which has solidified from a molten or partially molten state.

INCIDENT - A human-caused or natural occurrence, such as wildland fire, that requires emergency action to prevent or reduce the loss of life or damage to property or natural resources.

INCIDENT COMMANDER - The person responsible for managing all operations in response to incidents (i.e. wildfires and other events requiring emergency action).

INDICATORS - Elements of the human environment affected, or potentially affected, by a change agent. An indicator can be a structural component, a functional process or an index. A key indicator integrates several system elements in such a way as to indicate the general health of that system.

INDUSTRIAL MINERALS - All minerals that humans extract from the earth's crust except for fuels, metallic ores, water and gemstones.

INFILTRATION - The downward entry of water into the soil or other material.

INFRASTRUCTURE- The set of systems and facilities that support a region or community's social and economic structures. Examples of such systems include energy, transportation, communication, education, medical service, and fire and police protection.

INHALABLE PARTICULATE MATTER (PM₁₀) - Particulate matter in ambient air exceeding 10 microns in diameter. Also see **PARTICULATE MATTER** and **FINE PARTICULATE MATTER**.

INHOLDING - Parcels of land owned or managed by someone other than BLM but surrounded in part or entirely by BLM-administered land.

INITIAL ATTACK - The actions taken by the first resources to arrive at a wildland fire to protect lives and property and prevent further extension of the fire.

INSTREAM WATER USE - Water use within a stream channel for such purposes as navigation, recreation, fish and wildlife preservation, water quality improvement, and hydroelectric power generation.

INSTREAM WATER RIGHT (INSTREAM FLOW WATER RIGHT) - A water right that reserves water for and protects such specific instream water uses as fish spawning and recreation. The instream water right allows water needed for these activities to be set aside and keeps later water users from appropriating water that may affect the instream activity. Also see **INSTREAM WATER USE**.

INTERMITTENT STREAM - A stream that generally flows during wet seasons, but is dry during dry seasons.

INVASIVE SPECIES (INVADERS) - Plant species that were either absent or present only in small amounts in undisturbed portions of a specific range site's original vegetation and invade following disturbance or continued overuse.

KEY FORAGE SPECIES - Forage species whose use serves as an indicator of the degree of use of associated species.

KEYSTONE SPECIES - Species that create a special habitat on which other species depend and without which some wildlife would become severely depleted. Two examples of key stone species are beavers, which create ponds, and prairie dogs, which create burrows.

LAND USE AUTHORIZATION - BLM's authorizing through leases, permits, and easements of uses of the public land. Land use authorizations may allow occupancy, recreational residences and cabin sites, farming, manufacturing, outdoor recreation concessions, National Guard maneuvers, and many other uses.

LARAMIDE OROGENY- A series of mountain building events that affected much of western North America in Late Cretaceous and Early Tertiary periods. (The Cretaceous period ended 65 million years ago and was followed by the Tertiary period.)

LEACHATE - The liquid that has percolated through and dissolved minerals out of ore.

LEASABLE MINERALS - Minerals whose extraction from federally managed land requires a lease and the payment of royalties. Leasable minerals include coal, oil and gas, oil shale and tar sands, potash, phosphate, sodium, and geothermal steam.

LEAVE NO TRACE - A nationwide (and international) program to help visitors with their decisions when they travel and camp on America's public lands. The program strives to educate visitors about the nature of their recreational impacts as well as techniques to prevent and minimize such impacts.

LITTER - The uppermost layer of organic debris on the soil surface, essentially freshly fallen or slightly decomposed vegetal material.

LIVE FUEL MOISTURE- See **FUEL MOISTURE**.

LIVESTOCK TRESPASS- The unauthorized grazing of livestock.

LOAM - A soil texture class for soil material that contains 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.

LOCATABLE MINERALS - Minerals that may be acquired under the Mining Law of 1872, as amended.

LOCATION - The act of taking or appropriating a parcel of mineral land, including the posting of notices, the recording thereof when required, and marking the boundaries so they can be readily traced.

MAINTENANCE (ROAD) - (From BLM 9100 Manual) The work required keeping a facility in such a condition that it may be continuously utilized at its original or designed capacity and efficiency, and for its intended purposes. Road or trail maintenance actions include (a) signage, (b) minor repairs, e.g. correction of drainage, erosion, or vegetation interference problems. Upon performance of condition assessment, maintenance could also be construed as (c) allowing road or trail to remain in present state for regular and continuous use.

MAJOR LAND RESOURCE AREAS

(MLRAs) - Broad geographic areas that have a particular pattern of soils, climate, water

resources, vegetation, and land use. Each MLRA in which range and forest land occur is further broken into range sites.

MAJOR RIGHTS-OF-WAY- Rights-of-way along which pass transmission lines (consisting of 115kV or higher) used to transmit large blocks of energy to load centers for distribution.

MANAGEMENT SITUATION

ANALYSIS (MSA) - See ANALYSIS OF THE MANAGEMENT SITUATION (AMS).

MANUAL VEGETATION

TREATMENTS - The use of hand-operated power tools and hand tools to cut, clear, or prune herbaceous and woody plants. In manual treatments, workers cut plants above ground level; pull, grub, or dig out plant root systems to prevent later sprouting and regrowth; scalp at ground level or remove competing plants around desired vegetation; or place mulch around desired vegetation to limit the growth of competing vegetation. Manual vegetation treatments cause less ground disturbance and generally remove less vegetation than prescribed fire or mechanical treatments.

MECHANICAL VEGETATION

TREATMENTS - The use of mechanical equipment to suppress, inhibit, or control herbaceous and woody vegetation. BLM uses wheeled tractors, crawler-type tractors, mowers, or specially designed vehicles with attached implements for such treatments.

MESOZOIC ERA - One of the great eras of geologic time (248 million to 65 million years ago), following the Paleozoic era, preceding the Cenozoic era, and including the Triassic, Jurassic, and Cretaceous periods.

MICROHABITAT- The smallest unit of a habitat, like a clump of grass or a space between rocks.

MINERAL ENTRY- The filing of a claim on public land to obtain the right to any minerals it may contain.

MINERALIZATION - Evidence of the presence of minerals.

MINERAL MATERIAL DISPOSAL- The disposal through sale or free use permit of sand, gravel, decorative rock, or other materials defined in 43 CFR 3600.

MINERAL MATERIALS - Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.

MINERALS PLANNING AREA - The area with federally administered minerals, where (1) the surface rights are held by BLM, the State of Arizona, or private parties, and located within the administrative boundaries of BLM's Phoenix District but (2) are not being planned for in the Sonoran Desert National Monument RMP and Phoenix South RMP Revision.

MINING DISTRICT- An area, usually designated by name, with described or understood boundaries, where minerals are found and mined under rules prescribed by the miners, consistent with the Mining Law of 1872.

MINING PLAN OF OPERATIONS - A plan for mineral exploration and development that a mining operator must submit to BLM for approval for all mining, milling, and bulk sampling of more than 1,000 tons and for exploration disturbing more than 5 acres or on special status lands, including wilderness, areas of critical environmental concern, national monuments, national conservation areas, and lands containing proposed or listed threatened or endangered species or their critical habitat. A plan of operations must document in detail all actions that the operator plans to take from exploration through reclamation.

MONITORING- The collection of information to determine the effects of resource management and detect changing resource trends, needs, and conditions.

MOSAIC- A pattern of vegetation in which two or more kinds of communities are interspersed in patches.

MOTORIZED TRAIL- A designated route that allows for the use of small-wheel-based motorized vehicles such as all-terrain vehicles and motorcycles.

MULTIPLE USE- A combination of balanced and diverse resource uses that considers long-term needs for renewable and nonrenewable resources including recreation, wildlife, rangeland, timber, minerals, and watershed protection, along with scenic, scientific, and cultural values.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) - The allowable concentrations of air pollutants in the ambient (public outdoor) air specified in 40 CFR 50. National ambient air quality standards are based on the air quality criteria and divided into primary standards (allowing an adequate margin of safety to protect the public health including the health of "sensitive" populations such as asthmatics, children, and the elderly) and secondary standards (allowing an adequate margin of safety to protect the public welfare). Welfare is defined as including effects on soils, water, crops, vegetation, human-made materials, animals, wildlife, weather, visibility, climate, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) - The Federal law, effective January 1, 1970, that established a national policy for the environment and requires federal agencies- (1) to become aware of the environmental ramifications of their proposed actions, (2) to fully disclose to the public

proposed Federal actions and provide a mechanism for public input to Federal decision-making, and (3) to prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS

AMENDED (NHPA) - A Federal statute that established a Federal program to further the efforts of agencies and individuals in preserving the Nation's historic and cultural foundations. The National Historic Preservation Act- (1) authorized the National Register of Historic Places, (2) established the Advisory Council on Historic Preservation and a National Trust Fund to administer grants for historic preservation, and (3) authorized the development of regulations to require Federal agencies to consider the effects of federally assisted activities on properties included on or eligible for the National Register of Historic Places. Also see **NATIONAL REGISTER OF HISTORIC PLACES**.

NATIONAL MONUMENT- An area designated to protect objects of scientific and historic interest by public proclamation of the President under the Antiquities Act of 1906, or by Congress for historic landmarks, historic and prehistoric structures, or other objects of historic or scientific interest on public lands. Designation also provides for the management of these features and values.

NATIONAL RECREATION TRAIL- One of the three categories of national trails defined in the National Trails System Act of 1968 that can only be established by Secretarial order and are administered by federal agencies, although part or all of their land base may be owned and managed by others. National recreational trails are existing regional and local trails recognized by either the Secretary of Agriculture or the Secretary of the Interior upon application.

NATIONAL REGISTER DISTRICT- A group of significant archaeological, historical, or architectural sites, within a defined geographic area, that is listed on the National Register of Historic Places. See **NATIONAL REGISTER OF HISTORIC PLACES**.

NATIONAL REGISTER OF HISTORIC PLACES - The official list, established by the National Historic Preservation Act, of the Nation's cultural resources worthy of preservation. The National Register lists archeological, historic, and architectural properties (i.e. districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff. The National Park Service maintains the National Register. Also see **NATIONAL HISTORIC PRESERVATION ACT**.

NATIONAL REGISTER ELIGIBLE PROPERTIES - Cultural resource properties that meet the National Register criteria and have been determined eligible for nomination to the National Register of Historic Places because of their local, state, or national significance. Eligible properties generally are older than 50 years and have retained their integrity. They meet one or more of four criteria- (a) associated with events that have made a significant contribution to the broad patterns of our history; (b) associated with the lives of persons significant in our past; (c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master; and (d) have yielded, or may be likely to yield, information important in prehistory or history.

NATIONAL WILD AND SCENIC RIVERS SYSTEM- A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historical, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams- (1)

recreation—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, (2) scenic—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and (3) wild—rivers or sections of rivers free of impoundments and generally inaccessible except by trails with watersheds or shorelines essentially primitive and waters unpolluted.

NATIVE DIVERSITY- The diversity of species that have evolved in a given place without human influence.

NATIVE SPECIES- A species that is part of an area's original flora and fauna.

NEOTROPICAL MIGRATORY BIRDS

- Birds that travel to Central America, South America, the Caribbean, and Mexico during the fall to spend the winter and then return to the United States and Canada during the spring to breed. These birds include almost half of the bird species that breed in the United States and Canada.

NEST PARASITISM (BROOD

PARASITISM) - The exploitation by one bird species of the parental behavior of another species. A nest parasite lays eggs in the nest of another bird species to be cared for by a host. The parasite benefits from saving time, energy, and survival prospects, whereas the host may suffer partial or complete loss of its own current reproduction.

NICHE- The role of an organism in the environment, its activities and relationships to the biotic and abiotic environment.

NITROGEN OXIDES (OXIDES OF NITROGEN, NO_x) - A general term for compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen.

Nitrogen oxides are typically created during combustion and are major contributors to smog formation and acid deposition. NO₂ is a criteria air pollutant and may have many adverse health effects.

NONATTAINMENT AREA- An area in which the level of a criteria air pollutant is higher than the level allowed by the federal standards. A single area may have acceptable levels of one criteria air pollutant but unacceptable levels of one or more other criteria air pollutants. Therefore, an area can be both attainment and nonattainment at the same time.

NONPOINT SOURCE POLLUTION (WATER) - Pollution sources that are diffuse and do not have a single point of origin or are not introduced into a receiving water body from a specific outlet. These pollutants are generally carried off the land by storm water runoff from such sources as farming, forestry, mining, urban land uses, construction, and land disposal.

NOXIOUS WEED - the Federal Noxious Weed Act, 1974 (PL 930629) defines a noxious weed as, "any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind which is of foreign origin, is new to or not widely prevalent in the U.S., and can directly or indirectly injure crops, other useful plants, livestock, poultry or other interests of agriculture, including irrigation, navigation, fish and wildlife resources, or the public health."

NUTRIENT CYCLE- A general term for the movement of any particular life essential substance through the physical and biological environment. Essential nutrient cycles include those of carbon, nitrogen, oxygen, and water.

OBLIGATE- Essential, necessary, unable to exist in any other state, mode, or relationship.

OFF-HIGHWAY VEHICLE (OHV)- Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain (deriving motive power from any source other than muscle.) OHVs exclude (1) any

nonamphibious registered motorboat; (2) any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; (3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved, (4) Vehicles in official use; and (5) Any combat or combat support vehicle when used in times of national defense emergencies (43 CFR 8340.0-5)

OFF-ROAD VEHICLE (ORV) - See **OFF-HIGHWAY VEHICLE (OHV)**.

OFFSET - A method used in the 1990 Clean Air Act to give companies that own or operate large sources in nonattainment areas flexibility in meeting overall pollution reduction requirements when changing production processes. If the operator or owner of the source wants to increase the release of a criteria air pollutant, an offset (reduction of a somewhat greater amount of the same pollutant) must be obtained either at the same plant or by buying offsets from another company.

OUTSTANDING NATURAL AREA (ONA) - ACECs which contain unusual natural characteristics and are managed primarily for educational and recreational purposes.

OVERBURDEN- All the earth and other materials that overlie a natural mineral deposit.

OVERSTORY- The portion of the trees in a forest stand forming the upper crown cover. Also see **UNDERSTORY**.

PALEONTOLOGICAL RESOURCES- The remains of plants and animals preserved in soils and sedimentary rock. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

PALEOZOIC ERA- An era of geologic time (600 million to 280 million years ago) between the Late Precambrian and the Mesozoic eras and

comprising the Cambrian, Ordovician, Silurian, Devonian, Mississippian, Pennsylvanian, and Permian periods.

PANICULATE AGAVE- Certain agave species such as Palmer's agave (*Agave palmeri*) and Parry's agave (*Agave parryi*), whose flowers are arranged on the stalk in a pyramidal, loosely branched cluster (panicle). The nectar and pollen of paniculate agaves are consumed by the lesser long-nosed bat, a federally listed endangered species.

PASSAGE ZONE- Lands along secondary travel routes where visitor or other uses would not be directed or encouraged, but could be accommodated. Also see **BACK COUNTRY ZONE** and **FRONT COUNTRY ZONE**.

PATENT- The instrument by which the Federal Government conveys title to the public lands.

PAYMENTS IN LIEU OF TAXES

(PILT) - Payments made to counties by BLM to mitigate losses because public lands cannot be taxed. BLM calculates the amount of payments using a formula based on population and the amount of Federal land in a particular local jurisdiction. These payments are in addition to Federal revenues transferred to local governments under other programs, such as income generated from timber harvests, mineral receipts, and the use of federal land for livestock grazing.

PARTICULATE MATTER- Fine liquid or solid particles suspended in the air and consisting of dust, smoke, mist, fumes, and compounds containing sulfur, nitrogen, and metals. Also see **FINE PARTICULATE MATTER** and **INHALABLE PARTICULATE MATTER**.

PASTURE- A grazing area that is separated from other areas by fencing or natural barriers.

PEDESTALLING- The removal of soil from the base of a plant, exposing the roots. Pedestalling is often a result of wind and streambank erosion.

PERFORMANCE- See **LIVESTOCK PERFORMANCE**.

PERENNIAL PLANT- A plant that has a life cycle of 3 or more years. Also see **ANNUAL PLANT**.

PERENNIAL STREAM- A stream that flows continuously during all seasons of the year.

PERMEABILITY, SOIL- The ease with which gases, liquids, or plant roots penetrate or pass through a bulk mass of soil or a layer of soil.

PERMITTEE- A person or company permitted to graze livestock on public land.

PERMIT TYPES AND DEFINITIONS-

Commercial Use- The activity, service, or use is commercial if-

- Any person, group, or organization makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation from participants in recreational activities occurring on public lands led, sponsored, or organized by that person, group, or organization;
- Anyone collects a fee or receives other compensation that is not strictly a sharing of actual expenses, or exceeds actual expenses, incurred for the purposes of the activity, service, or use;
- There is paid public advertising to seek participants; or

- Participants pay for a duty of care or an expectation of safety.

Competitive Use- Any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and either or both of the following elements apply-

- Participants register, enter, or complete an application for the event;
- A predetermined course or area is designated;

Or, one or more individuals contesting an established record such as for speed or endurance.

Organized Group Activity and Event Use- A structured, ordered, consolidated, or scheduled event on, or occupation of, public lands for the purpose of recreational use that is not commercial or competitive.

Vending- The sale of goods or services, not from a permanent structure, associated with recreation on the public lands or related waters, such as food, beverages, clothing, firewood, souvenirs, filming or photographs (video or still), or equipment repairs.

PERSONAL INCOME- The sum of wage and salary payments, other labor income, proprietors' income, rental income of persons, personal dividend and interest income, and transfer payments to persons, less personal contributions for social insurance.

PETROGLYPH - Pictures, symbols, or other art work pecked, carved, or incised on natural rock surfaces.

PILT- See **PAYMENTS IN LIEU OF TAXES.**

PIPING- See **SOIL PIPING.**

PITHOUSE- A type of house built partly underground by prehistoric people.

PLACER CLAIM- A mining claim located on surficial or bedded deposits, particularly for gold located in stream gravels.

PLAN OF OPERATIONS- See **MINING PLAN OF OPERATIONS.**

PLANT SUCCESSION- The process of vegetational development by which an area becomes successively occupied by different plant communities of higher ecological order.

PLANT VIGOR- The relative wellbeing and health of a plant as reflected by its ability to manufacture enough food for growth and maintenance.

PLEISTOCENE (ICE AGE)- An epoch in the Quaternary period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciation, during which continental glaciers covered nearly one fifth of the earth's land.

PM_{2.5} PARTICULATES- Tiny particles with an aerodynamic diameter of 2.5 microns or less. These particles penetrate most deeply into the lungs.

PM₁₀ PARTICULATES- A criteria air pollutant consisting of small particles with an aerodynamic diameter of 10 microns or less. Their size allows them to enter the air sacs deep within the lungs where they may be deposited in have adverse health effects. These particles include dust, soot, and other tiny bits of solid materials in the air.

POKER RUN- A noncompetitive off-highway vehicle ride where riders have a choice of two or more clearly marked loop courses and pass several checkpoints to the finish line. After finishing the course, participants will draw poker hands for cash or other prizes.

POOL- A portion of a stream that has reduced current velocity and often water deeper than

surrounding areas and that is frequently usable by fish for resting and cover.

POPULATION- A group of interbreeding organisms of the same kind occupying a particular space; a group of individuals of a species living in a certain area.

PORPHYRY COPPER- A disseminated replacement deposit in which copper minerals occur as discrete grains and veinlets throughout a large volume of rock; a large-tonnage, low-grade copper deposit.

POTENTIAL NATURAL COMMUNITY (PNC)- The stable biotic community that would become established on an ecological site if all successional stages were completed without human interference under present environmental conditions. The PNC is the vegetation community best adapted to fully use the resources of an ecological site.

PRESCRIBED FIRE (BURNING) - The planned applying of fire to rangeland vegetation and fuels under specified conditions of fuels, weather, and other variables to allow the fire to remain in a predetermined area to achieve such site-specific objectives as controlling certain plant species; enhancing growth, reproduction, or vigor of plant species; managing fuel loads; and managing vegetation community types.

PRIMARY ROAD- See ROAD AND TRAIL TYPES.

PRIME FARMLAND- As defined by the Farmland Protection Policy Act of 1981, land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary of Agriculture. Prime farmland includes land with the above characteristics, but is being used to produce livestock and timber. It does not include land already in or committed to urban

development or water storage. Also see **UNIQUE FARMLAND**.

PRIMITIVE RECREATION- Recreation that provides opportunities for isolation from the evidence of humans, a vastness of scale, feeling a part of the natural environment, having a high degree of challenge and risk, and using outdoor skills. Primitive recreation is characterized by meeting nature on its own terms, without comfort or convenience of facilities.

PRIMITIVE ROAD- A Linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.

PROPER FUNCTIONING CONDITION (RIPARIAN-WETLAND AREAS) - The condition where- (1) enough vegetation, landform, or large woody debris is present to dissipate the stream energy of high water flows, thereby reducing erosion and improving water quality; (2) sediments are filtered, bedload is captured, and floodplains develop; (3) flood water retention and ground water recharge are improved, root masses that stabilize streambanks against cutting action develop, and diverse ponding and channel characteristics are created to provide the habitat and the water depth, duration, and temperature needed for fish production, waterfowl breeding, and other uses; and (4) greater biodiversity is supported.

PROSPECTIVELY VALUABLE FOR OIL AND GAS- Known or believed to contain oil and gas deposits that have, or at some time in the future, proven economic value.

PUBLIC DOMAIN LANDS- Lands that are part of the original public domain and have never left federal ownership and lands in federal ownership that were acquired in exchange for public domain lands or for timber on public domain lands.

PUBLIC LAND ORDER - An order effecting, modifying, or canceling a withdrawal

or reservation. Such an order is issued by the Secretary of the Interior pursuant to powers of the President delegated to the Secretary by Executive Order No.9146 of April 24, 1943.

PUBLIC LANDS - As defined by Public Law 94-579 (Federal Land Policy and Management Act of 1976), lands and interest in land owned by the United States and administered by the Secretary of the Interior through BLM, regardless of how the United States acquired possession. In common usage, public lands may refer to all federal land no matter what agency manages it. Also see **ACQUIRED PUBLIC LANDS**.

PUBLIC USE LEVELS- Three sets of proposed management actions for the interpretive use of archaeological sites in the Agua Fria National Monument, varying in the intensity of development and number of facilities. Example actions for each of these levels can be found in the Cultural Resources discussion of the Management Common to the AFNM section of Chapter 2.

PUEBLO- A Spanish word meaning "town" or "village" and used to describe an Indian village of apartment-type building with one or more stories. Pueblos are built of adobe or stone and have flat roofs.

QUARTERNARY PERIOD- The current period of geologic history and second period of the Cenozoic era, which is believed to have covered the last 2 million to 3 million years.

RANGE IMPROVEMENT- Any activity or program on or relating to the public lands designed to improve forage production, change vegetation composition, control use patterns, provide water, stabilize soil and water conditions, or provide habitat for livestock and wildlife. Range improvements may be structural or nonstructural. A structural improvement requires placement or construction to facilitate the management or control the distribution and movement of animals. Such improvements may include fences, wells, troughs, reservoirs,

pipelines, and cattleguards. Nonstructural improvements consist of practices or treatments that improve resource conditions. Such improvements include seedings; chemical, mechanical, and biological plant control; prescribed burning; water spreaders; pitting; chiseling; and contour furrowing.

RANGELAND - A kind of land on which the native vegetation, climax, or natural potential consists predominately of grasses, grasslike plants, forbs, or shrubs. Rangeland includes lands revegetated naturally or artificially to provide a plant cover that is managed like native vegetation. Rangelands may consist of natural grasslands, savannas, shrublands, moist deserts, tundra, alpine communities, coastal marshes, and wet meadows.

RANGELAND ECOLOGICAL SITE- A distinctive kind of land that has specific physical characteristics and that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

RANGE SITE- See **ECOLOGICAL SITE**.

RANGE SITE GUIDE- See **ECOLOGICAL SITE DESCRIPTIONS**.

RAPTORS- Birds of prey.

REACH- A relatively homogeneous section of a stream having a repetitious sequence of physical characteristics and habitat types.

RECHARGE- See **AQUIFER RECHARGE**.

RECLAIMING OR RECLAIMED - See **ROAD AND TRAIL TYPES**.

RECORD OF DECISION - A document signed by a responsible official recording a decision that was preceded by the preparing of an environmental impact statement. Also see **DECISION RECORD**.

RECREATION AND PUBLIC PURPOSES ACT of 1926 (44 Stat. 741, as amended; 43 U.S.C. 869 et seq.) - An act of Congress that allows lease or acquisition of public land to be used for recreation or public purposes by local government entities (county or city governments) and nonprofit organizations.

RECREATION MANAGEMENT ZONES (RMZs) - Areas within special recreation management areas (SRMAs) with a particular recreation management focus or resource challenges. See **SPECIAL RECREATION MANAGEMENT AREAS**.

RECREATION OPPORTUNITY SPECTRUM (ROS) - A planning process that provides a framework for defining classes of outdoor recreation environments, activities, and experience opportunities. In ROS, the setting, activities, and opportunities for experiences are arranged along a spectrum of six classes: primitive; semi-primitive non-motorized; semi-primitive motorized; roaded natural; rural; and urban. The resulting ROS analysis defines specific geographic areas on the ground, each of which encompasses one of the six classes.

RECREATION SETTINGS- Settings described in the recreation opportunity spectrum (ROS) inventory method. Descriptions of the settings follow-

Primitive:

Remoteness: An area designated by a line generally 3 miles from all open roads, railroads, and motorized trails

Evidence of Humans: Setting is essentially an unmodified natural environment. Evidence of humans would be unnoticed by an observer wandering through the area.

Evidence of trails is acceptable but should not exceed standard to carry expected use.

Structures are extremely rare.

Social: Usually less than six parties per day encountered on trails and less than three parties visible at campsites.

Managerial: Onsite regimentation is low with controls primarily offsite.

Semi-primitive Non-motorized:

Remoteness: An area designated by a line generally 1/2 mile from any road, railroad, or trail open to public motorized use. (The guideline for applying the 1/2 mile criterion is to use 1/2 mile except where topographic or physical features closer than 1/2 miles adequately screen out the sights and sounds of humans and make access more difficult and slower. For example, if a ridge is 1/4 mile from the road, use the ridge instead of the 1/2 mile.)

Any roads, railroads, or trails within the semi-primitive non-motorized areas will have the following characteristics:

- Closed to public motorized use, and
- Are reclaimed, or in the process of reclaiming (when reclaiming will harmonize with the natural appearing environment). Some examples are old logging roads, old railroad beds, old access routes to abandoned campsites, temporary roads, and gated roads that are used for occasional administrative access.

Evidence of Humans: Natural setting may have subtle modifications that would be noticed but not draw the attention of an observer wandering through the area.

Little or no evidence of primitive roads and the motorized use of trails and primitive roads.

Structures are rare and isolated.

Social: Usually 6-15 parties per day encountered on trails and six or fewer parties visible from campsite.

Managerial: Onsite regimentation and controls present but subtle.

Semi-Primitive Motorized:

Remoteness: An area designed by a line generally 1/2 mile from open better than primitive roads. (The guideline for applying the 1/2 mile criterion is to consistently use 1/2 mile where topographic or physical features closer than 1/2 mile adequately screen out the sights and sounds of humans, e.g. a ridge 1/4 mile from the road).

Contains open primitive roads that are not maintained for the use of standard passenger-type vehicles, normally OHVs and high-clearance vehicles, e.g. an old pickup with high clearance. These open roads are generally tracks, ruts, or rocky-rough surface and upgraded and not drained. The roadbeds and cuts are mostly vegetated with grass or native material unless they are too rocky for vegetation. The roads harmonize with the natural environment. Examples include old logging roads from before specified road years, old revegetated railroad beds, old access roads to abandoned home-sites, temporary logging roads that are revegetated, and low standard administrative roads (normally used for access to wildlife openings).

Evidence of Humans: Natural setting may have moderately dominant alterations but would not draw the attention of motorized observers on trails and primitive roads within the area. Any closed improved roads must be managed to revegetate and harmonize with the natural environment.

Strong evidence of primitive roads and the motorized use of trails and primitive roads.

Structures are rare and isolated.

Social: Low to moderate contact frequency.

Managerial: Onsite regimentation and controls present but subtle.

Roaded Natural:

Remoteness: No criteria.

Evidence of Humans: Natural setting may have modifications, which range from being easily noticed to strongly dominant to observers within the area. But from sensitive travel routes and use areas these alterations would remain unnoticed or visually subordinate.

There is strong evidence of designed roads, highways, or both.

Structures are generally scattered, remaining visually subordinate or unnoticed to the sensitive travel route observer. Structures may include utility corridors or microwave installations.

Social: Frequency of contact is- Moderate to high on roads; Low to Moderate on trails and away from roads.

Managerial: Onsite regimentation and controls are noticeable but harmonize with the natural environment.

Rural:

Remoteness: No criteria.

Evidence of Humans: Natural setting is culturally modified to the point that it is dominant to the sensitive travel route observer. This setting may include pastoral, agricultural, intensively managed wildland resource landscapes, or utility corridors. Pedestrian or other slow-moving observers are constantly within view of culturally changed landscape.

There is strong evidence of designed roads, highways, or both.

Structures are readily apparent and may range from scattered to small dominant clusters,

including utility corridors, farm buildings, microwave installations, and recreation sites.

Social: Frequency of contact is: Moderate to High developed sites, on roads and trails, and water surfaces; Moderate away from developed sites.

Managerial: Regimentation and controls obvious and numerous, largely in harmony with the human-made environment.

Urban:

Remoteness: No criteria.

Evidence of Humans: Setting is strongly structure dominated. Natural or natural appearing elements may play an important role but be visually subordinate. Pedestrian and other slow moving observers are constantly within view of artificial enclosure of spaces.

There is strong evidence of designed roads and/or highways and streets.

Structures and structure complexes are dominant.

Social: Large numbers of users onsite and in nearby areas.

Managerial: Regimentation and controls obvious and numerous

RECREATION ZONE- A planned and delineated area with designated recreation opportunities, settings, and activities.

RECRUITMENT- The increase in population caused by natural reproduction or immigration.

REFUGIUM- An area that has remained unaffected by adverse environmental changes to the surrounding area, allowing a population to survive where others have perished.

REPLACEMENT DEPOSIT- A mineral deposit formed by a new mineral of partly or wholly differing chemical composition growing in the body of an old mineral or aggregate.

RESEARCH NATURAL AREA (RNA) - An area of critical environmental concern that is a physical or biological unit in which current natural conditions are maintained insofar as possible. In RNAs activities such as grazing and vegetation manipulation are prohibited unless they replace natural processes and contribute to protecting and preserving an area. Moreover, such recreation as camping and gathering plants is discouraged.

RESEARCH DESIGN - A statement of proposed identification, documentation, evaluation, investigation, or other research that identifies the project's goals, methods and techniques, expected results, and the relationship of the expected results to other proposed activities or treatments.

RESISTANCE TO CONTROL (WILDFIRE) - The relative difficulty of building and holding a fire control line as affected by fire behavior, fuel, topography, and soil.

RESOURCE ADVISORY COUNCILS (RACs) - Advisory councils appointed by the Secretary of the Interior and consisting of representatives of major public land interest groups (e.g. commodity industries, recreation, environmental, and local area interests) in a state or smaller area. RACs advise BLM, focusing on a full array of multiple uses public land issues. RACs also help develop fundamentals for rangeland health and guidelines for livestock grazing.

RESOURCE CONSERVATION AREA (RCA) - A land management designation that provides management consideration to areas that have special resources but don't need the protection conferred by an area of critical environmental concern.

RESOURCE MANAGEMENT PLAN (RMP) - (43 CFR 1601.0-5 (k)) "...a land use plan as described by the Federal Land Policy and Management Act. The resource management plan generally establishes in a written document-

1. Land areas for limited, restricted or exclusive use; designation, including ACEC designation; and transfer from Bureau of Land Management Administration;
2. Allowable resource uses (either singly or in combination) and related levels of production or use to be maintained;
3. Resource condition goals and objectives to be attained;
4. Program constraints and general management practices needed to achieve the above items;
5. Need for an area to be covered by more detailed and specific plans;
6. Support action, including such measures as resource protection, access development, realty action, cadastral survey, etc., as necessary to achieve the above;
7. General implementation sequences, where carrying out a planned action is dependent upon prior accomplishment of another planned action; and
8. Intervals and standards for monitoring and evaluating the plan to determine the effectiveness of the plan and the need for amendment or revision.

It is not a final implementation decision on actions which require further specific plans, process steps, or decisions under specific provisions of law and regulations."

REST- See **GRAZING REST**.

RESTORATION (CULTURAL RESOURCE) - The process of accurately reestablishing the form and details of a property

or portion of a property together with its setting, as it appeared in a particular period of time. Restoration may involve removing later work that is not in itself significant and replacing missing original work. Also see **STABILIZATION (CULTURAL RESOURCE)**.

REST-ROTATION GRAZING - A grazing system in which one part of the range is ungrazed for an entire grazing year or longer while other parts are grazed for a portion or all of a growing season.

RIGHT-OF-WAY- A permit or easement that authorizes the use of lands for certain specified purposes, commonly for pipelines, roads, telephone lines, or powerlines.

RILL- A narrow, very shallow (a few centimeters deep), intermittent water course having steep sides and formed as a result of erosion.

RIPARIAN - Pertaining to or situated on or along the bank of streams, lakes, and reservoirs.

RIPARIAN AREA - A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

ROAD - A linear route declared a road by the owner, managed for use by low-cleared vehicles having four or more wheels, and maintained for regular and continuous.

ROADSIDE - a general term denoting the area adjoining the outer edge of the road.

ROAD AND TRAIL TYPES-

Primary Road – A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.

Secondary Road - Paved or unpaved, a regularly maintained one- to two-lane route with routes of lesser quality branching from it. Connects primary roads and major points.

Tertiary Road - Generally a two-track route that may or may not be usable by a two-wheel drive vehicle. Does not receive formal maintenance.

Primitive Road - A linear route managed for use by four-wheel drive or high clearance vehicles. Primitive roads do not normally meet any BLM road design standards.

Single-Track Trail - A route up to 1/2 meter wide upon which all-terrain vehicles or trucks are not allowed.

Spur - A route that exists for a specific purpose, such as access to a specific use or feature. Uses can be recreational or commercial. Features include campsites, mines, or range developments. A spur route is connected to another road or route type.

Reclaiming or Reclaimed - A route that has had very little or no use, so that there is woody vegetation growing in the route that would be damaged by the passage of a vehicle. Erosion or vegetation may block the route and could damage a vehicle or cause it to get stuck.

ROCK CRAWLING - The use of specialized motor vehicles for crossing difficult terrain. Also known as extreme technical trail driving.

ROOT ZONE- The part of the soil that is or can be penetrated by plant roots.

ROUTE- Any motorized, non-motorized, or mechanized transportation corridor. Corridor may either be terrestrial or waterway. “Roads” and “Trails” are considered routes.

RUN - An area of swiftly flowing water that lacks surface agitation or waves and approximates uniform flow, and whose water surface is roughly parallel to the overall gradient of the stream reach.

RUNOFF - The portion of a drainage area’s precipitation that flows from the area.

SAFE YIELD- The rate at which water can be withdrawn from a groundwater basin (aquifer) without depleting the supply so as to cause undesirable effects.

SALABLE MINERALS - Common variety minerals on public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits to local governments.

SCARIFICATION - A method of seedbed preparation that consists of exposing patches of mineral soil through mechanical action; the act or process of breaking up the ground in preparation for regeneration.

SCIENTIFIC DATA RECOVERY- See CULTURAL RESOURCE DATA RECOVERY.

SCOPING- An early and open process for determining the scope of issues to be addressed in an environmental impact statement and the significant issues related to a proposed action.

SEASONAL GRAZING - Grazing restricted to a specific season.

SECONDARY ROAD - See ROAD AND TRAIL TYPES.

SECTION - 640 acres, 1 mile square.

SECTION 404 PERMIT- A permit required by the Clean Water Act, under specified circumstances, when dredge or fill material is placed in the waters of the United States, including wetlands.

SECTION 7 CONSULTATION - The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

SEDIMENT - Solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water. Sediment includes chemical and biochemical precipitates and decomposed organic material such as humus.

SEDIMENTARY ROCKS- Rocks, such as sandstone, limestone, and shale, that are formed from sediments or transported fragments deposited in water.

SEDIMENTATION - The process or action of depositing sediment.

SEDIMENT LOAD (SEDIMENT DISCHARGE) - The amount of sediment, measured in dry weight or by volume, which is transported through a stream cross-section in a given time. Sediment load consists of sediment suspended in water and sediment that moves by sliding, rolling, or bounding on or near the streambed.

SEDIMENT TRANSPORT - The movement of mineral and organic solid materials in a stream.

SEDIMENT YIELD - The amount of sediment removed from a watershed over a specified period, usually expressed as tons, acre-feet, or cubic yards of sediment per unit of drainage area per year.

SEGREGATION- The removal for a limited period, subject to valid existing rights, of a specified area of the public lands from the operation of the public land laws, including the mining laws, pursuant to the exercise by the Secretary of the Interior of regulatory authority to allow for the orderly administration of the public lands. See **WITHDRAWAL**.

SENSITIVE SPECIES- All species that are under status review, have small or declining populations, live in unique habitats, or need special management. Sensitive species include threatened, endangered, and proposed species as classified by the U.S. Fish and Wildlife Service.

SHARED USE TRAIL- A trail shared for a variety of uses such as motorized and non-motorized uses; a combination of non-motorized uses such as hiking, horseback riding, and bicycling; or a combination of motorized uses such as dirt bikes and small and large four-wheel-drive vehicles.

SHRINK-SWELL POTENTIAL- The susceptibility of soil to volume change due to loss or gain in moisture content.

SHOULDER - The portion of the roadway contiguous to the travelway for accommodation of stopped vehicles.

SIKES ACT OF 1974 - A Federal law that promoted federal-state cooperation in managing wildlife habitats on both BLM and Forest Service lands. The act requires BLM to work with State wildlife agencies to plan the development and maintenance of wildlife habitats and has as its main tool the habitat management plan.

SMALL TRACT LANDS - Parcels of public lands of 5 acres or less that have been found to be chiefly valuable for sale or lease as home, cabin, camp, recreational, convalescent, or business sites under the Act of June 1, 1938.

SMOKE PERMIT - In Arizona, a permit that an agency must obtain from the Arizona Department of Environmental Quality in order to conduct a prescribed burn. Also see **PRESCRIBED FIRE**.

SINGLE TRACK TRAIL- See **ROAD AND TRAIL TYPES**.

SOCIAL TRAIL- An unplanned random trail made by first visitors and then followed by others.

SOIL ERODIBILITY- The predisposition of a particular soil to be transported by wind or water if it is disturbed and exposed to the elements.

SOIL INFILTRATION - The ability of soil to absorb moisture that falls on it as precipitation.

SOIL MOISTURE - The water content stored in a soil.

SOIL PIPING - The removal of soil material through subsurface flow channels or “pipes” formed by seepage water.-

SOIL PRODUCTIVITY- The capacity of a soil in its normal environment to produce a specified plant or sequence of plants under a specified system of management.

SOIL STABILITY - A qualitative term used to describe a soil’s resistance to change. Soil stability is determined by intrinsic properties such as aspect, depth, elevation, organic matter content, parent material, slope, structure, texture, and vegetation.

SOIL STRUCTURE - The physical constitution of soil material as expressed by size, shape, and the degree of development of primary soil particles and voids into naturally or artificially formed structural units.

SOLUTION MINING - A mining method by which salt and sulfur are extracted by injecting water (for salt) or superheated water (for sulfur) into deposits in the ground. The water dissolves the salt, and the resulting brine is pumped to the surface. Or the superheated water melts the solid sulfur, and the liquid sulfur is pumped to the surface.

SPECIAL CULTURAL RESOURCE MANAGEMENT AREA (SCRMA) - An area containing cultural resources that are of special importance for public use, scientific use, traditional use or other uses as defined in BLM Manual 8110.4.

SPECIAL LAND USE PERMIT (SLUP)- A permit granted for purposes neither authorized nor forbidden by law.

SPECIAL RECREATION MANAGEMENT AREAS (SRMAs) - Areas of intensive recreation use that will be managed to retain recreation opportunities while protecting other resources and reducing user conflicts. See **RECREATION MANAGEMENT ZONES**.

SPECIAL RECREATION PERMIT (SRP) - An authorization that allows for specific nonexclusive permitted recreational uses of the public lands and related waters. SRPs are issued to control visitor use, protect recreational and natural resources, provide for the health and safety of visitors, and accommodate commercial recreational uses.

SPECIAL STATUS SPECIES- Plant or animal species listed as threatened, endangered, candidate, or sensitive by the Federal Government or State governments.

SPLIT-ESTATE - Land whose surface rights and mineral rights are owned by different entities.

STABILIZATION (CULTURAL RESOURCE) - Protective techniques usually applied to structures and ruins to keep them in their existing condition, prevent further deterioration, and provide structural safety without significant rebuilding. Capping mud-mortared masonry walls with concrete mortar is an example of a stabilization technique. Also see **RESTORATION (CULTURAL RESOURCE)**.

STABILIZATION (SOIL) - Chemical or mechanical treatment to increase or maintain the stability of a mass of soil or otherwise improve its engineering properties.

STANDARDS AND GUIDELINES FOR RANGELAND HEALTH - See **ARIZONA STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR GRAZING ADMINISTRATION**.

STAGING AREA - An area where participants in an activity gather and make final preparations for the activity.

STAMP - A machine for crushing ore, used particularly in gold milling.

STATE HISTORIC PRESERVATION OFFICER (SHPO) - The official within and authorized by each state at the request of the Secretary of the Interior to act as liaison for the National Historic Preservation Act. Also see **NATIONAL HISTORIC PRESERVATION ACT**.

STATE IMPLEMENTATION PLAN (SIP) - A detailed description of the programs a state will use to carry out its responsibilities under the Clean Air Act. SIPs are collections of the regulations used by a state to reduce air pollution. The Clean Air Act requires that the Environmental Protection Agency approve each SIP.

STATE LANDS - See **STATE TRUST LANDS**.

STATE TRUST LANDS - Lands granted to Arizona by the Federal Government at territorial establishment and at statehood. Totalling 9.4 million acres, these lands are managed by the Arizona State Land Department to yield revenue over the long term for the 14 trust beneficiaries. The chief beneficiary consists of the public schools. Whenever Arizona sells or leases these lands and their natural resources, it must pay the beneficiaries. Revenues from land sales are maintained in a permanent fund managed by the State Treasurer, and interest from this fund is paid to the beneficiaries.

STOCKING RATE - The number of specific kinds and classes of animals grazing or using a unit of land for a specific time period. Stocking rates may be expressed as a ratio, such as of animal units/section, acres/animal unit, or acres/animal unit month.

STOCK TANK (POND) - A water impoundment created by building a dam, digging a depression, or both, to provide water for livestock or wildlife.

STREAMBANK - The portion of a stream channel that restricts the sideward movement of water at normal water levels. The streambank's gradient often exceeds 45 ° and exhibits a distinct break in slope from the stream bottom.

STREAMBANK STABILITY - A streambank's relative resistance to erosion, which is measured as a percentage of alteration to streambanks.

SUBMERGENT VEGETATION - Aquatic plants that grow only within water and do not break the water's surface. Also see **EMERGENT VEGETATION**.

SUBSTRATE - (1) Mineral and organic material forming the bottom of a waterway or

water body; (2) The base or substance upon which an organism is growing.

SUBSURFACE - Of or pertaining to rock or mineral deposits which generally are found below the ground surface.

SUBWATERSHED - A watershed subdivision of unspecified size that forms a convenient natural unit.

SUCCESSION - See **PLANT SUCCESSION**.

SUCCULENTS - Plants such as cacti that have fleshy tissues designed to conserve moisture.

SUPPLEMENTAL FEED - Concentrates or harvested feed that is fed to livestock to correct the deficiencies of a range diet.

SUPPLEMENTAL WILDERNESS VALUES- Resources not required for an area to be designated a wilderness but that are considered in assessing an area's wilderness potential. Such values include ecological, geologic, and other features of scientific, educational, scenic, or historical value.

SUSTAINED YIELD - Achieving and maintaining a permanently high level, annual or regular period production of renewable land resources without impairing the productivity of the land and its environmental values.

SWALE - A commonly wet or moist low-lying or depressed land area.

TAILINGS - The waste matter from ore after the extraction of economically recoverable metals and minerals.

TAKE - As defined by the Endangered Species Act, "...to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct..."

TARGET SPECIES - Plant species to be reduced or eliminated by a vegetation treatment. Also see **VEGETATION TREATMENTS**.

TERRESTRIAL SPECIES - Ground-dwelling plants and animals.

TERTIARY PERIOD - The earlier (65 million to 1.8 million years ago) of the two geologic periods in the Cenozoic era of geologic time.

TERTIARY ROAD - See **ROAD AND TRAIL TYPES**.

THREATENED SPECIES - Any plant or animal species likely to become endangered within the foreseeable future throughout all or a part of its range and designated by the U.S. Fish and Wildlife Service under the Endangered Species Act. Also see **ENDANGERED SPECIES**.

TRAIL- A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails not generally managed for use by four-wheel drive or high-clearance vehicles.

TRAILHEAD - The terminus of a hiking, horse, or bicycle trail accessible by motor vehicle and sometimes having parking, signs, a visitor register, and camping and sanitary facilities.

TRANSFER PAYMENT - A government grant to an individual of money that represents a gift without anything being received or required in return. Examples of transfer payments include student scholarship grants, welfare checks, and social security benefits.

TRANSITIONAL PATHWAYS - The processes that cause a shift from one vegetation state to another.

TRAVERTINE - A mineral consisting of calcium carbonate deposited by spring waters.

TREAD LIGHTLY- A not-for-profit organization whose mission is to increase awareness of ways to enjoy the great outdoors while minimizing human impacts.

TRIALS - Off-road competitions in which the rider has to surmount obstacles. Points are deducted if the rider puts his feet on the ground, goes outside the marked course, or fails to clear an obstacle.

TURBIDITY- Cloudiness of water measured by how deeply light can penetrate it from the surface. Highly turbid water is often called “muddy” although all kinds of suspended particles contribute to turbidity.

UNAUTHORIZED USE - Any use of the public lands not authorized or permitted.

UNDERSTORY - Plants growing under the canopy of other plants. Understory usually refers to grasses, forbs, and low shrubs under a tree or brush canopy. Also see **OVERSTORY**.

USABLE FORAGE- That portion of the forage that can be grazed without damage to the basic resources; may vary with season of use, species, and associated species.

UNGULATES - Hoofed animals including ruminants but also horses, tapirs, elephants, rhinoceroses, and swine.

UNIQUE FARMLAND - As defined by the Farmland Protection Policy Act of 1981, land other than prime farmland that is used for producing specific high-value food and fiber crops, as determined by the Secretary of Agriculture. Unique farmland has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables. Also see **PRIME FARMLAND**.

UNIQUE WATER - A water body determined by the Arizona Department of Environmental Quality as an outstanding water resource of the state because of exceptional recreational or ecological significance, such as important geology, flora, fauna, water quality, aesthetic values, or wilderness characteristics.

UPLANDS - Lands at higher elevations than the alluvial plain or low stream terrace; all lands outside the riparian-wetland and aquatic zones.

URBAN INTERFACE (WILDLAND-URBAN INTERFACE) - The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation. This interface creates conflicts and complicates fighting wildfires and conducting prescribed burns, as well as all other natural resource management activities.

UTILIZATION (FORAGE) - The proportion of the current year’s forage consumed or destroyed by grazing animals. Utilization is usually expressed as a percentage.

VALID EXISTING RIGHTS - Locatable mineral development rights that existed when the Federal Land Policy and Management Act (FLPMA) was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located on segregated lands requires BLM to conduct a valid existing rights determination.

VANDALISM (CULTURAL RESOURCE) - Malicious damage or the unauthorized collecting, excavating, or defacing of cultural resources. Section 6 of the Archaeological Resources Protection Act states that "no person may excavate, remove, damage,

or otherwise alter or deface any archaeological resource located on public lands or Indian lands...unless such activity is pursuant to a permit issued under section 4 of this Act."

VASCULAR PLANT- A plant in the phylum Tracheophyta, which includes spermatophytes (seed plants) and pteridophytes (ferns and related plants).

VEGETATION STATES- The different plant communities produced by an ecological site.

VEGETATION STRUCTURE - The composition of an area's vegetation--plant species, growth forms, abundance, vegetation types, and spatial arrangement.

VEGETATION TREATMENTS- Treatments that improve vegetation condition or production. Such treatments may include seedings; prescribed burning; or chemical, mechanical, and biological plant control.

VEGETATION TYPE - A plant community with distinguishable characteristics.

VIABILITY- The capability of living, developing, growing, or germinating under favorable conditions.

VIEWSHED - The entire area visible from a viewpoint.

VISITOR DAY- 12 visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more people.

VISUAL ASPECT- The visual first impression of vegetation at a particular time or seen from a specific point.

VISUAL RESOURCE MANAGEMENT (VRM) - The planning, design, and implementing of management objectives to

provide acceptable levels of visual impacts for all BLM resource management activities.

VISUAL RESOURCE MANAGEMENT

(VRM) CLASSES - Classes with specific objectives for maintaining or enhancing scenic quality including the kinds landscape modifications that are acceptable to meet the objectives.

Class I: (Preservation) provides for natural, ecological changes only. This class includes wilderness areas, some natural areas, some wild and scenic rivers, and other similar sites where landscape modification should be restricted.

Class II: (Retention of the landscape character) includes areas where changes in any of the basic elements (form, line, color, or texture) caused by management activities should not be evident in the characteristic landscape.

Class III: (Partial retention of the landscape character) includes areas where changes in the basic elements caused by management activities may be evident in the characteristic landscape. But the changes should remain subordinate to the existing landscape character.

Class IV: (Modification of the landscape character) includes areas where changes may subordinate the original composition and character. But the changes should reflect what could be a natural occurrence in the characteristic landscape.

VOLATILE ORGANIC COMPOUNDS

(VOCs) - Carbon-containing compounds that with few exceptions evaporate into the air. Often having odors, VOCs contribute to the forming of smog and may themselves be toxic. Some examples of VOCs are gasoline, alcohol, and solvents used in paints.

WARM-SEASON PLANTS - Plants whose major growth occurs during the spring, summer, or fall and that are usually dormant in winter. Also see **COOL-SEASON PLANTS**.

WATER BAR - A low ridge of dirt, rock, or other material placed across a trail or dirt road on a hill to divert flowing water and protect the trail or road from erosion.

WATER DEVELOPMENTS -

Construction of artificial, or modification of natural water sources to provide reliable, accessible water for livestock, wildlife, or people.

WATERSHED (CATCHMENT) - A topographically delineated area that is drained by a stream system, that is, the total land area above some point on a stream or river that drains water past that point. The watershed is a hydrologic unit often used as a physical-biological unit and a socioeconomic-political unit for planning and managing natural resources.

WATERSHED CONDITION

(WATERSHED HEALTH) - The comparison of watershed processes to normal or expected measurements of properties such as soil cover, erosion rate, runoff rate, and groundwater table elevation; an assessment or categorization of an area by erosion conditions, erosion hazards, and the soil moisture/temperature regime.

WATERSHED FUNCTION - The combination of processes attributed to watersheds as part of the hydrologic cycle, including interception of rain by plants, rocks, and litter; surface storage by the soil; groundwater storage; stream channel storage; soil evaporation; plant transpiration; and runoff. These processes affect the following properties of the watershed: runoff rate, water infiltration rate, soil building rate, soil erosion rate, groundwater recharge rate, groundwater discharge rate, water table elevation, and surface water discharge. These properties in turn affect plant communities through soil attributes, including soil parent material, soil moisture, and nutrients; stream and rivers through flooding duration and magnitude, as well as sediment load, which structures the dimension, pattern,

and profile of channels; and lakes and reservoirs through sedimentation and nutrient input.

WEED - Any plant that interferes with management objectives. A weed may be native or non-native, invasive or passive, or non-noxious.

WETLAND - An area that is inundated or saturated by surface or ground water often and long enough to support and that under normal circumstances supports a prevalence of vegetation typically adapted for life in saturated soil. Wetlands include marshes, shallows, swamps, lake shores, bogs, muskegs, wet meadows, estuaries, cienegas, and riparian areas.

WILD AND SCENIC RIVER

CORRIDOR - See **NATIONAL WILD AND SCENIC RIVER SYSTEM**.

WILDERNESS CHARACTERISTICS -

BLM Instruction Memorandum 2003-275 Change 1 defines Wilderness Characteristics as, "Features of the land associated with the concept of wilderness that may be considered in land use planning when BLM determines that those characteristics are reasonably present, of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and are practical to manage.

NATURALNESS - Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable. BLM has authority to inventory, assess, and/or monitor the attributes of the lands and resources on public lands, which, taken together, are an indication of an area's naturalness. These attributes may include the presence or absence of roads and trails, fences and other improvements; the nature and extent of landscape modifications; the presence of native vegetation communities; and the connectivity of habitats.

Solitude and Primitive/Unconfined

Recreation - Visitors may have outstanding opportunities for solitude, or primitive and unconfined types of recreation when the sights, sounds, and evidence of other people are rare or infrequent, where visitors can be isolated, alone or secluded from others, where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered."

WILDCAT ROAD - A nonpermitted road on federally managed land.

WILDFIRE - Any wildland fire that is not meeting management objectives and therefore requires a suppression response.

WILDLAND FIRE - Any nonstructure fire, other than prescribed fire, that occurs in the wildland.

WILDLAND-URBAN INTERFACE

(WUI) - Areas where urban fuels directly meet natural fuels. This interface occurs mainly within 66 to 200 feet of houses, where fire most directly threatens houses and where a defensible zone can be developed.

WILDLIFE - A broad term that includes birds, reptiles, amphibians, and nondomesticated mammals.

WILDLIFE HABITAT AREA:

WILDLIFE MANAGEMENT AREAS

(WMAs) - General areas that are managed to enhance the habitat of one or more wildlife species.

WING FENCE - Fencing extending out from a corral and serving to help funnel livestock into the corral.

WITHDRAWAL- Withholding an area of federal land from settlement, sale, location, or entry under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of federal land, other than *property* governed by the Federal Property and Administrative Services Act, from one department, bureau, or agency to another department, bureau, or agency. Also see **SEGREGATION**.

XERO-RIPARIAN - An area in a drainage that supports plant species more characteristic of uplands than wetlands, but that is more densely vegetated than areas removed from the drainage. Any flows in these channels are characteristically ephemeral but water may also be subsurface and the drainage may not flow.

Additional Tables

From Chapter One:

Table 1-1. Identified Scoping Issues Addressed in the Formulation of Alternatives

Resource Category	Issue	Applicable to Agua Fria National Monument	Applicable to Bradshaw-Harquahala Planning Area
Soil, Air, and Water Resources	Conduct hydrological studies of watershed.	X	X
	Restrict access to surface water from miners.	X	X
	Restrict access to surface water from OHV users.	X	X
Biological Resources	Preserve habitat for bird and wildlife viewing.	X	X
	Reintroduce native fish species to aquatic systems in the area.	X	X
Riparian Resources	Protect the instream flow of the Agua Fria River.	X	X
	Restrict access by livestock.	X	X
Cultural Resources	Prevent grazing in areas having significant cultural resources.	X	X
	Allow only limited access to existing sites, such as through guided tours.	X	X
Visual Resources	Preserve and keep land untouched.	X	X
	Preserve natural beauty.	X	X
Recreation	Allow for recreation use.	X	X
	Establish educational programs for all users of public lands.	X	X
	Restrict shooting.	X	X
	Better maintain trails and encourage users to stay on trails.	X	X
	Build visitor center.	X	
	Develop multiple use areas.		X
Transportation	Create environmentally sensitive transportation system.	X	X
	Close and rehabilitate all vehicle routes that threaten cultural and biological resources.	X	X
	Designate primitive areas and motorized areas.	X	X
	Maintain public access.	X	X
	Limit access to discourage extensive use.	X	

Additional Tables

	Allow public access for non-motorized modes only.	X	X
Off-Highway Vehicles (OHV)	Limit OHV use.	X	X
	Maintain and allow OHV use on existing trails.	X	X
	Develop more OHV trails.	X	
Rangeland Management/Grazing	Limit grazing.	X	X
	Continue leases for grazing.	X	X
Mineral Resources	Reduce and limit mining.	X	
	Continue existing mining leases.		X
	Expand mining.		X
Fire Management	Return natural fire regime to mesa tops.	X	X
	Return natural fire cycles.	X	X
Special Area Designations	Inventory wilderness.	X	X
ACECs	Designate Agua Fria River as an area of critical environmental concern (ACEC).	X	
Lands and Realty	Remove land from the disposal list.		X
	Manage lands to preserve cultural and biological resources.	X	X
	Stop urban sprawl and prohibit new development.		X
	Restrict development to prevent groundwater depletion.		X

Table 1-2. Identified Management Concerns Addressed in the Formulation of Alternatives

Resource Category	Management Concern	Applicable to Agua Fria National Monument	Applicable to Bradshaw-Harquahala Planning Area
Soil, Air, and Water Resources	Identify and recover, where practical, “limited” waters.	X	X
	Identify and implement restoration where needed for Category I watersheds in the planning area.	X	X
	Address activities affecting air quality standards.	X	X
	Ensure availability of water resources; inventory and quantify water resources.	X	X
	Identify surface and groundwater resources, including instream flows, and determine the flows needed to preserve the wild and scenic river segments in their free-flowing condition.	X	
Biological Resources	Assess and minimize impacts that current and future land uses could have on sensitive wildlife habitat areas by fragmentation, land ownership patterns, increased visitor use, and the dewatering of streams and springs on public lands.	X	X
	Maintain existing functional wildlife habitat improvements and adequate water distribution for wildlife populations.	X	X
	Improve plant or wildlife diversity, with human intervention if needed, to increase biological diversity.	X	X
	Assess and manage for invasive plant and wildlife species.	X	X
Cultural Resources	Determine factors that will guide how specific sites, or categories of sites, are allocated to use categories (scientific, traditional, public, and experimental uses).	X	X
	Identify significant cultural resources and protect them from looting, vandalism, natural deterioration, and damage from vehicle traffic and other land uses.	X	X
	Determine how to best provide opportunities in the area for public visitation, education, and commercial tours, while protecting cultural resources.	X	X
	Address exclusion and protection of cultural resources in Recreation and Public Purpose Act leases.		X
	Address measures to protect sites, landmarks, or use areas that have sacred or other traditional importance to tribes.	X	X
	Determine how to protect and allow for proper research or educational uses of significant paleontological resources.	X	X

Additional Tables

	Manage portions of the monument that include Perry Mesa Archaeological District in coordination with Tonto National Forest.	X	
Visual Resources	Evaluate VRM impacts from existing roads, transmission lines, and other structures within the planning area.	X	X
	Complete (or revise) the scenic quality assessment.	X	X
Visual Resources	Develop a strategy to address increasing uses of dispersed camping.	X	X
	Address impacts of wildcat dumping and littering.	X	X
	Designate utility corridors in accordance with the Proclamation	X	
Wild Horses and Burros	Maintain a viable population of burros at the appropriate management level (AML), minimizing impacts to wilderness and wildlife habitat and providing increased recreational opportunities.		X
Recreation	In management plans, balance the consumptive uses of visitors with BLM's requirements to protect resources within the planning area.	X	X
	Consider public opinion and the Proclamation when determining the level of services that will be provided within the monument (e.g. restroom facilities, types of routes, parking areas).	X	
	Determine and address points of administrative and public access.	X	X
	Determine current and future recreational activities (including commercial activities) and associated impacts.	X	X
Off-Highway Vehicles (OHVs)	Address the impacts from increased motorized access to high-value areas with sensitive resources defined in the Proclamation.	X	
	OHV use on public lands has provided for greater motorized access into areas that formerly supported more solitary uses.	X	X
	Address conflict that may exist between motorized and non-motorized users.	X	X
	Determine which roads will remain open, limited, or closed.	X	X
	Evaluate if alternative BLM managed and would better support OHV, or if OHV routes should be "interpretive."	X	
	Establish educational and volunteer opportunities public land users.	X	

Additional Tables

	Determine what zones that will support specific types of use from setting and natural and social attributes.	X	
Transportation Network	Coordinate with public entities to assure continued access and to further determine access issues and concerns.	X	X
	Maintain public access and multiple uses where appropriate.	X	X
	Provide for an environmentally sensitive transportation system.	X	X
Transportation Network	Address the needs of disabled individuals.	X	X
	Increased access may result in recreation sprawl, affect visitor experiences, threaten cultural and biological resources, and degrade values set forth by the Proclamation.	X	X
Rangeland Management	Invasive wildlife species may be harming native wildlife in some areas.	X	X
Invasive Species	Implement efforts to eradicate invasive wildlife species where warranted in cooperation with the Arizona Game and Fish Department (AGFD).		X
	Identify, map, and treat noxious weeds.	X	X
Grazing	Retire grazing from allotments in wilderness areas where there is voluntary opportunity or if BLM acquires the allotment.		X
	Redesignation of public land to other uses may require size and shape adjustments to current grazing allotments.	X	X
	Evaluate currently scheduled range improvements and determine if these will accomplish land management goals.	X	X
	Reevaluate perennial and ephemeral grazing classifications.		X
	Grazing allotments may affect natural or cultural objects.	X	
	Determine if any lessees do not consistently use allotments.	X	
	Determine if unused or abandoned allotments can be retired.	X	
Riparian Habitat	Evaluate impacts from OHV use and improper livestock grazing.	X	X
	Areas may have grazing restrictions established to facilitate proper functioning condition or other vegetation goals.	X	
	Determine current water rights and water needs to maintain existing riparian corridor, both above and	X	

Additional Tables

	below ground.		
	Determine the level of instream flow needed to maintain corridors, and evaluate current instream flow.	X	
Rangeland Management Riparian Habitat (Cont'd)	Maintain surface and subsurface flows in the Agua Fria River, and its tributaries to support riparian and wildlife resources.	X	
	Determine amount of surface and subsurface flows needed to maintain habitat.	X	
Mineral Resources	Develop abandoned mine management policies.	X	X
	Determine what lands have mineral potential, and clarify responsibilities for split-estate lands.		X
	Determine post-mining land uses.	X	X
Fire Management	Assess land use patterns to determine areas where natural fire cycles can be allowed to return.	X	
	Evaluate fuel treatments to reduce threat of catastrophic wildfires and determine proper treatments for local environments.	X	
	Evaluate the current fire plan, and incorporate portions in the RMPs.		X
	Establish guidelines for prescribed burning.	X	
	Evaluate possible impacts on special areas where, in the event of a wildfire, restoration and rehabilitation have a reasonable chance for success and potential resource damage justifies the attempt.	X	
	Balance proposed fuel treatments with authorized activities, the Proclamation, laws, and regulations.	X	X
	Determine special fire management considerations needed for the national monument and the vicinity.		X
	Evaluate constraints for fire activities.	X	
Wilderness Characteristics	Determine if certain public lands have wilderness character.	X	X
	Manage lands with primitive recreation values to preserve those values.	X	X
ACECs	ACEC designations may be warranted to protect sensitive areas or resources, or to address safety hazards.	X	X
	Determine if ACEC designations are suitable, considering criteria outlined in the Proclamation.	X	
	Management prescriptions may require modification to ensure consistency with the Proclamation.	X	
Wild and Scenic Rivers	Assess unique characteristics of the Hassayampa River.		X
	Ensure that the Agua Fria River is managed to preserve its wild and scenic eligibility and associated resources.	X	

Additional Tables

	Consider threats to the remarkable values of the Agua Fria River and determine ways to maintain and protect the river.	X	
Health and Safety <i>Hazardous Materials and Solid Waste</i>	Update management plans for the storage, use, and disposal of hazardous materials either directly by BLM or by lessees of BLM-managed lands.	X	X
	Determine possible hazardous materials used and or stored by BLM or by lessees of BLM-managed lands.	X	X
Health and Safety <i>Hazardous Materials and Solid Waste</i>	Determine if potential illegal hazardous waste sites exist and develop a strategy to improve these sites.	X	X
	List and rank risks at former mining sites, prospector pits, and ore processing sites.	X	X
	Identify, prioritize, and mitigate natural features that might threaten public health and safety.	X	X
Lands and Realty <i>Land Tenure Adjustment</i>	Assess the potential for acquiring and managing lands managed by the Arizona State Land Department (ASLD).		X
	Assess the availability of land for waste disposal facilities.		X
	Determine locations of rights-of-way that will be restricted or prohibited, to protect federal lands and resources.	X	X
	Develop criteria and determine if inholdings and suitable adjacent lands will be acquired from willing sellers.	X	
Utility and Transportation Corridors and Communication Sites	Evaluate routes for major roads and utilities. Determine which lands will be made available for transportation and utility corridors.		X
	Determine which, if any, lands will be made available for communication sites.	X	X
	Assess the placement of the Black Canyon utility corridor and address possibly relocating it. Determine avoidance areas and exclusion areas of rights-of-way corridors in the monument.	X	
	Expansion of the I-17 right-of-way may affect monument values.	X	

From Chapter Two:

Table 2-7. Desired Future Conditions and Land Use Allocations for Vegetation Communities in Arizona

Vegetation Community Type	Desired Future Conditions (DFC)	Land Use Allocation
Upland Sonoran Desert Scrub	DFCs are for an adequate cover and mix of natural plant species that have good vigor. For fire management and fire ecology, DFC are for fire to control or reduce the exotic annual weeds such as red brome and limit woody vegetation to nonhazardous levels.	2
Lower Sonoran Desert Scrub	DFCs are for an adequate cover and a mix of natural plant species that have good vigor. For fire management and fire ecology, DFC are for fire to control or reduce the exotic annual weeds such as red brome and to limit woody vegetation to nonhazardous levels.	2
Great Basin Pinyon-Juniper Woodland	DFCs are for annual weeds such as cheatgrass to be controlled; ladder fuels and downed woody debris to be limited or not present; and juniper and piñon pine tree densities and cover to occur at their historic range of variation.	1
Great Basin Desert Scrub	DFCs are for fire to naturally reduce annual weed densities and cover, limit, or reduce the invasion of juniper. Densities of shrubs, such as big sagebrush, are to be maintained within their historic range of variability.	1
Plains and Great Basin Grasslands	DFCs are for a predominance of perennial grass cover and a reduced cover of annual grasses. DFC are for fire to naturally inhibit the invasion of woody shrubs such as rabbitbrush, snakeweed, and big sagebrush.	1
Semi-desert Grassland	DFCs are for perennial grass to cover its historic range of variability and annual grass cover to be reduced. DFC are for fire to naturally inhibit the invasion of woody plants such as juniper, tarbush, whitethorn, and creosotebush.	1
Interior Chaparral	DFCs are for fire to naturally maintain shrub cover while reducing annual grass cover, control the invasion of wood plants such as juniper and piñon pine, and reduce the average age of chaparral stands through controlled fire or mechanical treatment.	1
Riparian	DFCs are for annual weed cover and density to be controlled and ladder fuels and downed woody debris to be limited or not present. Disturbances such as livestock grazing, mining, and OHV travel, which can potentially reduce natural vegetation cover and vigor, are managed to maintain adequate cover and mix of natural plant species.	2
Land Use Allocation 1:	Wildland Fire Use	Areas suitable for wildland fire use for resource management benefit.
Land Use Allocation 2:	Non-Wildland Fire Use	Areas not suitable for wildland fire use for resource management benefit.

From Chapter Three:

Table 3-5. Population and Household Characteristics

	State	County		Human Resource Unit (HRU)				
	Arizona	Maricopa	Yavapai	Wickenbur	Prescott	Lake Pleasant	Phoenix	Buckeye
<u>Total Population</u>								
1990 Census	3,665,228	2,122,101	107,714	8,363	59,515	117,996	1,952,531	21,794
2000 Census	5,130,632	3,072,149	167,517	10,744	92,826	292,540	2,677,213	40,918
% Change	40	45	56	28	56	148	37	88
<u>Total Households</u>								
1990 Census	1,368,843	807,560	44,778	3,711	24,655	54,220	735,648	6,877
2000 Census	1,901,327	1,132,886	70,171	4,972	38,901	123,327	973,292	12,114
% Change	39	40	57	34	58	127	32	76
<p><i>Note:</i> HRUs represent distinct areas and do not necessarily coincide with jurisdictional boundaries. Source: U.S. Census Bureau and JKA.</p>								

Table 3-6. Comparison of Total Housing Units and Average Value of Homes

	State	County		Human Resource Unit				
	Arizona	Maricopa	Yavapai	Wickenburg	Prescott	Lake Pleasant	Phoenix	Buckeye
<u>Total Housing Units</u>								
1990 Census	1,659,430	952,041	54,805	5,067	59,515	67,391	864,337	9,015
2000 Census	2,189,189	1,250,231	81,730	6,414	92,826	142,337	1,068,075	13,536
<i>% Change</i>	32	31	49	27	56	111	24	50
1990 Avg. Val., Owned Home	\$80,100	\$102,650	\$101,911	\$88,711	\$104,881	\$102,131	\$101,553	\$75,185
2000 Avg. Val., Owned Home	\$121,300	\$166,098	\$170,962	\$151,261	\$168,944	\$197,433	\$158,426	\$143,723
<i>% Change</i>	51	62	68	71	61	93	56	91
<p><i>Note:</i> HRUs represent distinct areas and do not necessarily coincide with jurisdictional boundaries. Source: U.S. Census Bureau and JKA.</p>								

Table 3-12. Ethnic Population Characteristics

% of Total Population (by Race)	County		Human Resource Unit				
	Maricopa	Yavapai	Wickenburg	Prescott	Lake Pleasant	Phoenix	Buckeye
<u>White</u>							
1990 Census	85	96	95	96	92	85	72
2000 Census*	80	94	94	95	93	78	75
% Change	6	-2	1	1	1	9	3
<u>Black or African American</u>							
1990 Census	4	0	0	0	1	4	2
2000 Census*	4	0	0	0	2	4	4
% Change	0	0	0	0	100	0	100
<u>American Indian/Alaska Native</u>							
1990 Census	2	2	1	1	0	2	13
2000 Census*	2	2	1	1	0	2	8
% Change	0	0	0	0	0	0	-38
<u>Asian/Hawaiian/Pac. Island</u>							
1990 Census	2	1	1	0	0	2	1
2000 Census*	2	1	0	1	2	3	1
% Change in Asian Population	0	0	0	100	200	50	0
<u>Hispanic/Latino</u>							
1990 Census	16	6	8	6	10	17	22
2000 Census	25	10	11	8	9	27	26
% Change	56	67	38	33	-10	59	18
<i>Notes:</i> *Race counts exclude those who indicated that they are of two or more races. That is, 2000 race variables only include those who said they are of one race. HRUs represent distinct areas and do not necessarily coincide with jurisdictional boundaries. Source: U.S. Census Bureau and JKA.							

From Chapter Four:

Table 4-2. Population Growth and Emissions Generated by Land Disposal Parcels Inside Air Quality Nonattainment Areas.

Alternative	Emission Factors		Parcels Within Ozone Nonattainment Area			Parcels Within PM ₁₀ Nonattainment Area		
	NO _x ⁽¹⁾ (Tons/year per capita)	PM ₁₀ ⁽²⁾ (Tons/year per acre of developed land)	Land Disposal Acres	2025 Population	NO _x Emissions (tons/yr)	Land Disposal Acres	2025 Population	PM ₁₀ Emissions (tons/yr)
A	0.027	0.0487	980	3,390	92	1,060	4,060	51
B	0.027	0.0487	990	3,415	92	10,870	18,755	529
C (160 acre parcels)	0.027	0.0487	325	1,785	48	405	1,910	20
C (5000 acres or less)	0.027	0.0487	1,925	4,535	122	3,640	5,515	177
D	0.027	0.0487	0	0	0	0	0	0
E	0.027	0.0487	1,290	3,020	82	2,170	4,450	106
			Total Regional NO _x Emissions from All Existing Sources Within Ozone Nonattainment Area (Year 1999)		81,000 ⁽¹⁾	Total Regional PM ₁₀ Emissions from All Existing Sources Within PM ₁₀ Nonattainment Area (Year 2001)		79,500 ⁽³⁾
(1) Based on emission and population data from 1999 Periodic Ozone Emission Inventory (MAG, 2002)								
(2) Based on regional PM ₁₀ modeling data from MAG (Chiou personal communication)								
(3) Regional PM ₁₀ emission estimate from MAG, 2000.								

Example calculation (NO_x Emissions, Alternative A)

NO_x emission factor = 0.027 tpy/capita

Alternative A population increase = 6,100 persons

Annual NO_x emissions = (0.027 tpy/capita) x (6,100 persons) = 165 tons/yr of NO_x

Example calculation (PM₁₀ Emissions, Alternative A)

PM₁₀ emission factor = 0.0487 tpy/acre of developed land

Alternative A land disposal acreage = 1,355 acres converted to developed land

Annual NO_x emissions = (0.0487 tpy/acre) x (1,355 acres) = 66 tons/yr of PM₁₀

Table 4-4. Acres Closed to Mining by Alternative

Alternative A	
Closed to Saleable Minerals	167,720
Closed to Locatable Minerals	171,680
Closed to Leasable Minerals	171,680
Alternative B	
Closed to Saleable Minerals	224,400
Closed to Locatable Minerals	101,000
Closed to Leasable Minerals	101,000
Alternative C	
Closed to Saleable Minerals	330,940
Closed to Locatable Minerals	188,450
Closed to Leasable Minerals	188,190
Alternative D	
Closed to Saleable Minerals	452,000
Closed to Locatable Minerals	457,664
Closed to Leasable Minerals	464,734
Alternative E	
Closed to Saleable Minerals	167,720
Closed to Locatable Minerals	171,940
Closed to Leasable Minerals	171,680

Table 4-7 - Acres of Inventoried Mineral Potential that would be Closed by Alternative.

Alternative	Mineral Type	Mineral Potential	Federal Acres	Federal Acres Closed	% closed
A – No Action	Saleable	Volcanic and Intrusive Rock	278,890	32,750	11.7
		Marble	6,170	0	0.0
		Sand and Gravel	7,060	450	6.4
	Leasable	Geothermal	45,830	370	0.8
		Oil and Gas	790	6	0.8
		Salt Deposit	45,480	1,620	3.6
	Locatable	High Potential	94,100	3,170	3.4
		Moderate Potential	737,400	60,820	8.2
B	Saleable	Volcanic and Intrusive Rock	278,890	48,910	17.5
		Marble	6,170	6,090	98.7
		Sand and Gravel	7,060	350	5.0
	Leasable	Geothermal	45,830	360	0.8
		Oil and Gas	790	0	0.0
		Salt Deposit	45,480	1,670	3.7
	Locatable	High Potential	94,100	3,950	4.2
		Moderate Potential	737,400	120,430	16.3
C	Saleable	Volcanic and Intrusive Rock	278,890	65,220	23.4
		Marble	6,170	5,620	91.1
		Sand and Gravel	7,060	350	5.0
	Leasable	Geothermal	45,830	0	0.0
		Oil and Gas	790	0	0.0
		Salt Deposit	45,480	1,670	3.7
	Locatable	High Potential	94,100	12,920	13.7
		Moderate Potential	737,400	152,510	20.7
D	Saleable	Volcanic and Intrusive Rock	278,890	93,870	33.7
		Marble	6,170	5,620	91.1
		Sand and Gravel	7,060	450	6.4
	Leasable	Geothermal	45,830	2,030	4.4
		Oil and Gas	790	0	0.0
		Salt Deposit	45,480	14,410	31.7
	Locatable	High Potential	94,100	47,000	49.9
		Moderate Potential	737,400	314,990	42.7
E – Agency Proposed Alternative	Saleable	Volcanic and Intrusive Rock	278,890	48,250	17.3
		Marble	6,170	300	4.9
		Sand and Gravel	7,060	630	8.9

Additional Tables

	Leasable	Geothermal	45,830	370	0.8
		Oil and Gas	790	6	0.8
		Salt Deposit	45,480	1,690	3.7
	Locatable	High Potential	94,100	3,950	4.2
		Moderate Potential	737,400	112,070	15.2

Appendix A

Agua Fria National Monument Proclamation

THE WHITE HOUSE

Office of the Press Secretary (Grand Canyon, Arizona)

For Immediate Release, January 11, 2000

ESTABLISHMENT OF THE AGUA FRIA NATIONAL MONUMENT BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

The windswept, grassy mesas and formidable canyons of Agua Fria National Monument embrace an extraordinary array of scientific and historic resources. The ancient ruins within the monument, with their breathtaking vistas and spectacular petroglyphs, provide a link to the past, offering insights into the lives of the peoples who once inhabited this part of the desert Southwest. The area's architectural features and artifacts are tangible objects that can help researchers reconstruct the human past. Such objects and, more importantly, the spatial relationships among them, provide outstanding opportunities for archeologists to study the way humans interacted with one another, neighboring groups, and with the environment that sustained them in prehistoric times.

The monument contains one of the most significant systems of late prehistoric sites in the American Southwest. Between A.D. 1250 and 1450, its pueblo communities were populated by up to several thousand people. During this time, many dwelling locations in the Southwest were abandoned and groups became aggregated in a relatively small number of densely populated areas. The monument encompasses one of the best examples of these areas, containing important archeological evidence that is crucial to understanding the cultural, social, and economic processes that accompanied this period of significant change.

At least 450 prehistoric sites are known to exist within the monument and there are likely many more. There are at least four major settlements within the area, including Pueblo La Plata, Pueblo Pato, the Baby Canyon Ruin group, and the Lousy Canyon group. These consist of clusters of stone-masonry pueblos, some containing at least 100 rooms. These settlements are typically situated at the edges of steep canyons, and offer a panorama of ruins, distinctive rock art panels, and visually spectacular settings.

Many intact petroglyph sites within the monument contain rock art symbols pecked into the surfaces of boulders and cliff faces. The sites range from single designs on boulders to cliffs covered with hundreds of geometric and abstract symbols. Some of the most impressive sites are associated with major pueblos, such as Pueblo Pato.

The monument holds an extraordinary record of prehistoric agricultural features, including extensive terraces bounded by lines of rocks and other types of landscape modifications. The agricultural areas, as well as other sites, reflect the skills of ancient residents at producing and obtaining food supplies sufficient to sustain a population of several thousand people.

The monument also contains historic sites representing early Anglo-American history through the 19th century, including remnants of Basque sheep camps, historic mining features, and military activities.

In addition to its rich record of human history, the monument contains other objects of scientific interest. This expansive mosaic of semi-desert grassland, cut by ribbons of valuable riparian forest, is an outstanding biological resource. The diversity of vegetative communities, topographical features, and relative availability of water provide habitat for a wide array of sensitive wildlife species, including the lowland leopard frog, the Mexican garter snake, the common black hawk, and the desert tortoise. Other wildlife is abundant and diverse, including pronghorn, mule deer, and white-tail deer. Javelina, mountain lions, small mammals, reptiles, amphibians, fish, and neotropical migratory birds also inhabit the area. Elk and black bear are present, but less abundant. Four species of native fish, including the longfin dace, the Gila mountain sucker, the Gila chub, and the speckled dace, exist in the Agua Fria River and its tributaries.

Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431) authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

WHEREAS it appears that it would be in the public interest to reserve such lands as a national monument to be known as the Agua Fria National Monument:

NOW, THEREFORE, I, WILLIAM J. CLINTON, President of the United States of America, by the authority vested in me by section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as the Agua Fria National Monument, for the purpose of protecting the objects identified above, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled "Agua Fria National Monument" attached to and forming a part of this proclamation. The Federal land and interests in land reserved consist of approximately 71,100 acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

For the purpose of protecting the objects identified above, all motorized and mechanized vehicle use off road will be prohibited, except for emergency or authorized administrative purposes.

Nothing in this proclamation shall be deemed to enlarge or diminish the jurisdiction of the State of Arizona with respect to fish and wildlife management.

The establishment of this monument is subject to valid existing rights.

All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument. Lands and interests in lands within the proposed monument not owned by the United States shall be reserved as a part of the monument upon acquisition of title thereto by the United States.

There is hereby reserved, as of the date of this proclamation and subject to valid existing rights, a quantity of water sufficient to fulfill the purposes for which this monument is established. Nothing in this reservation shall be construed as a relinquishment or reduction of any water use or rights reserved or appropriated by the United States on or before the date of this proclamation.

The Secretary of the Interior shall manage the monument through the Bureau of Land Management, pursuant to applicable legal authorities, to implement the purposes of this proclamation.

Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the monument.

Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the national monument shall be the dominant reservation.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this eleventh day of January, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twenty-fourth.

WILLIAM J. CLINTON

Appendix B- Scoping Results

Scoping Process

The formal scoping process began on April 24, 2002 with the publication of a Notice of Intent (NOI) in the *Federal Register*. The NOI initiated solicitation for public comment. A total of 10 public scoping meetings were held during the scoping period.

Public meetings were advertised by a variety of methods. Volume 1 of the “Arizona Planning Bulletin for the Agua Fria National Monument Plan and Bradshaw-Harquahala Management Plan Revision,” available in both English and Spanish, was distributed to a mailing list of more than 1,700 individuals and organizations. The bulletin included a statement of the purpose and need for the project, a description of the public scoping process, information about upcoming meeting times and locations, and stamped, pre-addressed “planning worksheets” for each planning area. Interested parties were encouraged to complete these questionnaires and submit them to BLM to make their concerns known. The public was also invited to submit comments via e-mail or to visit the PD in person to review comments received to date.

Legal notices of the public scoping meetings were published, as required, in six newspapers in the geographic area of the planning efforts. Flyers were prepared in both English and Spanish versions and distributed throughout the planning areas, and a press release was prepared and distributed to hundreds of media outlets throughout Arizona.

The scoping meetings provided an opportunity for the public to receive information, ask questions, and provide input into BLM’s planning effort for the two planning areas. Informative brochures and fact sheets were available to meeting attendees, and planning area maps delineating current land uses were displayed at each meeting. Discussions covered plan development and environmental review processes, in addition to relevant timelines. All comments were transcribed onto a flip chart during the meeting and were recorded via tape recorder.

Collaborative Planning Process

BLM PD contracted with James Kent Associates (JKA) to work with residents and community groups in the planning areas regarding their issues and concerns. JKA staff visited the communities of Wickenburg, Yarnell, Buckeye, Tonopah, Castle Hot Springs, New River, Black Canyon City, Cordes Junction, Mayer, Dewey, Humboldt, and Prescott Valley. They have also been in Phoenix, Flagstaff and Prescott, talking with environmental and recreation groups. Citizens have discussed their concerns with BLM land use management in their areas, as well as suggested ideas for improving current land management practices. Residents in some areas have even conducted community surveys in order to provide input and guidance to BLM in the planning process.

BLM has also focused on internally identifying management concerns and on reviewing their own policies and goals, and contracted with the consulting firm of Jones & Stokes to collect data, conduct meetings, and facilitate the planning process as required by the National Environmental Policy Act.

In the coming months, BLM will conduct workshops in a number of communities to develop alternatives for analysis in the EIS process. Alternatives must reflect citizen interests as well as agency concerns to evaluate how land use decisions will be made in the future. Citizens are encouraged to participate throughout this process.

Cooperating Agencies and Agency Coordination

The PD held a cooperating agency workshop on October 30, 2002 to enable potential cooperators to meet each other, discuss BLM's planning process and the meaning of cooperating agency status, and begin developing the Memoranda of Understanding (MOUs) that are required for entities to become formal cooperators in BLM's planning process.

BLM is currently working with the Arizona State Land Department, Arizona Department of Transportation, Arizona Game and Fish Department, Maricopa County, Yavapai County, City of Phoenix, City of Peoria, and Town of Wickenburg to establish cooperating agency status agreements. Additionally, Tonto National Forest and Prescott National Forest are working together to develop a joint MOU. A cooperating agency status agreement template has been sent to some agencies that have not yet replied.

Agencies were given the opportunity to comment as part of the scoping process. On December 19, 2002, a meeting was held in Phoenix to review the planning process and answer questions of agencies. Representatives from a total of 14 coordinating agencies were present. All agencies were encouraged to provide written comments by the December 30, 2002 deadline. The concerns of responding agencies were then entered into the administrative record and incorporated into the scoping report.

Tribal Consultations

The PD sent letters on May 10, 2002, to initiate the tribal consultation process with tribes who have oral traditions or cultural concerns relating to the planning areas, or who are documented to have occupied or used them during historic times. These tribes include: the Fort McDowell Yavapai Nation, the Yavapai-Prescott Tribe, the Yavapai-Apache Indian Community (Camp Verde), the Hopi Tribe, the Gila River Indian Community, the Colorado River Indian Tribes, the Salt River Pima-Maricopa Indian Community, the Ak-Chin Indian Community, the Tohono O'odham Nation, and the Fort Mojave Indian Tribe. Several interactions with tribal members have been made to solicit comments with regards to the BLM's planning effort. BLM will continue to consult with Indian tribes throughout the planning process.

Collection of Comments

All scoping comments for the two planning areas were received or postmarked by November 15, 2002. BLM received 364 comments recorded from the public meetings and more than 900 written submissions of comments containing a total of 2,712 individual written comments. Of the total 3,076 comments received throughout the scoping process, 38% came in the form of completed planning worksheets, 15% as letters, 12% as oral comments recorded on meeting flip charts, 20% as emails, and 15% that were

recorded as “other.” The “other” category included signed petitions as well as formatted template letters from organized stakeholder groups.

Results of Comments

All comments received for this scoping effort were assigned, based on content, to one of 12 designated issue categories. Comments were further divided into various sub-issues within each category. All comments were read, evaluated, and manually entered into an analytic database. Figures ES-1 and ES-2 below depict the most frequently mentioned issues for each planning area.

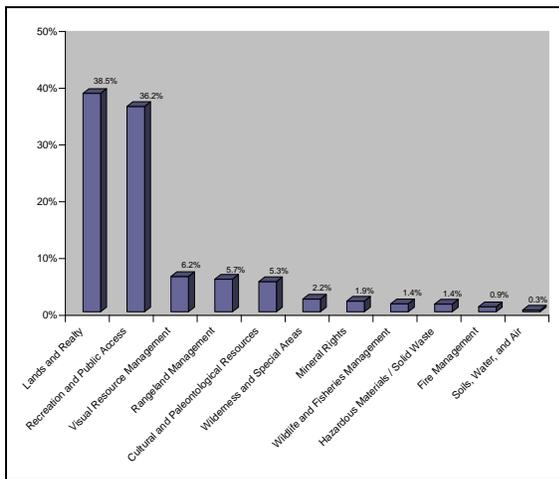


Figure ES-1. Public Response by Issue – Bradshaw-Harquahala Planning Area

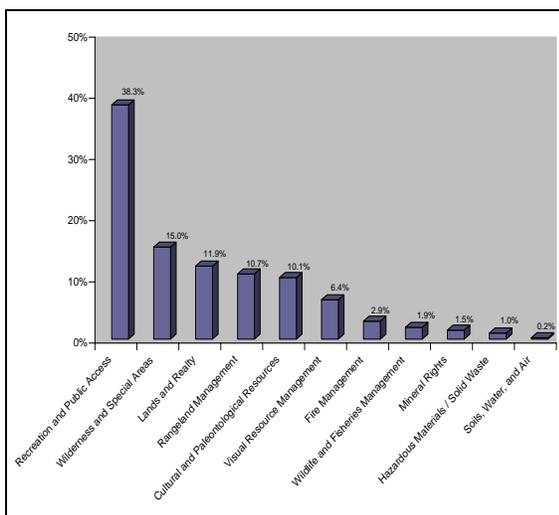


Figure ES-2. Public Response by Issue – Agua Fria National Monument Planning Area

In an effort to relate the analysis and discussion of issues to the community level, the planning areas were divided into six community areas: Phoenix, Buckeye, Wickenburg–Yarnell–Castle Hot Springs, Prescott–Prescott Valley–Chino Valley, Black Canyon City–New River, and Dewey–Humboldt–Spring Valley.

Analysis by specific community area of the comments received led to identification and ranking of the issues of primary concern for each area. These results are presented in tabular form in the scoping report.

Issues Considered but Not Further Addressed

As noted under “Results of Comments” above, all comments received for this scoping effort were assigned, based on content, to one of 12 issue categories. Comments were further divided into various sub-issues within each category. After lengthy consideration, BLM then assigned each sub-issue to a specific planning classification as follows:

- A—will be addressed in the current Resource Management Plan,
- B—will be resolved through policy or administrative actions,
- C—is already being addressed or will be addressed independent of the current planning effort, or
- D—determined to be beyond the scope of current planning.

Table B-1 lists each sub-issue that was assigned to planning classifications B, C, or D.

Table B-1 - Scoping. Classification of Issues Considered but Not Further Addressed

Issue	Planning Classification B	Sub-Issue Planning Classification C	Planning Classification D
General Recreation		Designated open space and trails should be marked/posted as such	
General Recreation		Establish educational programs for all users of public lands	
General Recreation		Trails should be better maintained to encourage users to stay on	

Issue	Planning Classification B	Sub-Issue Planning Classification C	Planning Classification D
Law Enforcement		trails Increase law enforcement efforts	
Law Enforcement		Increase preventative measures for vandalism	
Off-Highway Vehicle		Use volunteer help from OHV-affiliated groups	
Off-Highway Vehicle		Establish rules (and enforce where appropriate) for use of OHVs	
Grazing		Evaluate grazing impacts	
Grazing		Maintain waters for livestock	
Grazing			Reduce grazing fees
Cultural Resources		Increase protection of existing sites and cultural artifacts	
Cultural Resources		Conduct cultural resource inventories	
Cultural Resources		Remedy archeological looting	
Cultural Resources		Establish/increase programs to educate public on cultural resource issues	
Wilderness Characteristics			Expand wilderness designations
Wilderness			Expand Agua

Issue	Planning Classification B	Sub-Issue Planning Classification C	Planning Classification D
Characteristics			Fria to include New River and Tonto National Forest (A/F)
Wilderness Characteristics			Reduce amount of wilderness designation
Wild and Scenic Rivers		Manage Agua Fria River as Wild and Scenic (A/F)	
General Wildlife and Fisheries Management		Maintain waters for wildlife	
Hazardous Materials/Solid Waste		Increase preventative measures for litter/dumping	
Fire Management		Debris and brush clearing programs need to be expanded	
Land Tenure			Stop urban sprawl/No new development (A/F)
Land Tenure			Restrict development to prevent depletion of groundwater (A/F)
Land Tenure	Adjacent landowners should be better		

Issue	Planning Classification B	Sub-Issue Planning Classification C	Planning Classification D
Minerals	informed by BLM of pending changes	Expand mining activities (A/F)	
Minerals		Continue existing mining leases (A/F)	

Tabulations of Comments Received

Additional **Tables B-2** and **B-3**, show the numeric distributions of comments received for the Bradshaw-Harquahala and Agua Fria National Monument planning areas, respectively. Comment tabulations are grouped by issue and sub-issue category.

Tabulation of Comments Received

Table B-2 - Scoping. Bradshaw-Harquahala Planning Area

Tabulation of Comments Received

Tables 2 and 3, below, show the numeric distributions of comments received for the Bradshaw-Harquahala and Agua Fria National Monument planning areas, respectively. Comment tabulations are grouped by issue and sub-issue category.

Table 2. Bradshaw-Harquahala Planning Area

Issue	Sub-Issue/Comment	Total Count
Land Tenure	Remove land from the disposal list	496
	Stop urban sprawl/No new development	133
	Restrict development to prevent depletion of groundwater	62
	Lands should be managed to preserve cultural and biological resources	38
General Recreation	Allow for recreational use	62
	Designated open space and trails should be marked/posted as such	17
	Establish educational programs for all users of public lands	17

<i>Issue</i>	<i>Sub-Issue/Comment</i>	<i>Total Count</i>
<i>Off-Highway Vehicles</i>	<i>Develop multiple use areas</i>	<i>13</i>
	<i>Trails should be better maintained to encourage users to stay on trails</i>	<i>12</i>
	<i>Maintain and allow OHV usage on existing trails</i>	<i>66</i>
	<i>Restrict and limit OHV usage on BLM-managed lands</i>	<i>52</i>
	<i>Establish (or enforce where appropriate) rules for use of OHVs</i>	<i>44</i>
	<i>Establish educational program for OHV users</i>	<i>38</i>
	<i>Use volunteer help from OHV-affiliated groups</i>	<i>32</i>
	<i>Transportation Network</i>	<i>Maintain public access</i>
<i>Designations should also be made for primitive areas & motorized areas</i>		<i>49</i>
<i>Close and rehabilitate all vehicle routes that threaten cultural and biological resources</i>		<i>27</i>
<i>Create environmentally sensitive transportation system</i>		<i>21</i>
<i>Allow public access for non-motorized modes only</i>		<i>16</i>
<i>Law Enforcement</i>	<i>Increase law enforcement efforts</i>	<i>40</i>
	<i>Increase preventative measures for vandalism</i>	<i>10</i>
<i>Visual Resource Management</i>	<i>Land should be preserved and remain untouched</i>	<i>85</i>
<i>Grazing</i>	<i>Preserve natural beauty</i>	<i>34</i>
	<i>Continue leases for grazing</i>	<i>35</i>
<i>Riparian Resources</i>	<i>Limit grazing</i>	<i>28</i>
	<i>Evaluate grazing impacts</i>	<i>27</i>
	<i>Restrict access by livestock</i>	<i>12</i>
	<i>Maintain waters for livestock</i>	<i>3</i>
<i>Cultural and Paleontological Resources</i>	<i>Protect the instream flow of the Agua Fria River</i>	<i>4</i>
	<i>Increase protection of existing sites and cultural artifacts</i>	<i>78</i>
	<i>Prevent grazing in areas having significant cultural resources</i>	<i>7</i>
	<i>Conduct cultural resource inventories</i>	<i>5</i>
	<i>Remedy archeological looting</i>	<i>5</i>
<i>Wilderness Study Areas</i>	<i>Allow only limited access to existing sites, such as through guided tours</i>	<i>4</i>
	<i>Expand wilderness designations</i>	<i>28</i>
	<i>Conduct wilderness inventories</i>	<i>8</i>
<i>Mineral</i>	<i>Reduce amount of wilderness designation</i>	<i>2</i>
	<i>Reduce and limit mining activities</i>	<i>17</i>
	<i>Continue existing mining leases</i>	<i>14</i>

<i>Issue</i>	<i>Sub-Issue/Comment</i>	<i>Total Count</i>
General Wildlife and Fisheries	Expand mining activities	5
	Preserve habitat for birdwatching/wildlife viewing	18
General Wildlife and Fisheries	Maintain waters for wildlife	7
	Reintroduce native fish species to aquatic systems in the area	2
Hazardous Materials / Solid Waste	Increase preventative measures for litter/dumping	26
	Return natural fire cycles	9
	Debris and brush clearing programs need to be expanded	5
Fire Management	Return natural fire regime to mesa tops	3
	Conduct hydrological studies of watershed	3
Soils, Water, and Air	Restrict access to surface water from OHV users	2
	Restrict access to surface water from miners	1

Tabulation of Comments Received

Table B-3 - Scoping. Agua Fria National Monument

Table 3. Agua Fria National Monument

<i>Issue</i>	<i>Sub-Issue/Comment</i>	<i>Total Count</i>
General Recreation	Allow for recreational use	23
	Establish educational programs for all users of public lands	17
	Restrict shooting	11
	Trails should be better maintained to encourage users to stay on trails	11
	Build visitor center	9
	Joint BLM/community land stewardship programs should be enacted	8
Off-Highway Vehicles	Restrict and limit use	68
	Establish rules (and enforce where appropriate) for use of OHVs	35
	Establish educational program for OHV users	35
	Maintain and allow usage on existing trails	32
Transportation Network	Develop additional trails	28
	Create environmentally sensitive transportation system	76
	Close and rehabilitate all vehicle routes that threaten cultural and biological	56

Issue	Sub-Issue/Comment	Total Count
	<i>resources</i>	
	<i>Designations should also be made for primitive areas & motorized areas</i>	34
	<i>Maintain public access</i>	29
	<i>Limit access to discourage extensive use</i>	27
	<i>Allow public access for non-motorized modes only</i>	20
Law Enforcement	<i>Increase law enforcement efforts</i>	34
	<i>Increase preventative measures for vandalism</i>	7
Wilderness Study Areas	<i>Expand wilderness designations</i>	99
	<i>Expand Agua Fria to include New River and Tonto National Forest</i>	41
	<i>Conduct wilderness inventories</i>	22
ACECs	<i>Agua Fria River should be designated Area of Critical Environmental Concern (ACEC)</i>	4
Wild and Scenic Rivers	<i>Manage Agua Fria River as Wild & Scenic</i>	90
Land Tenure	<i>Stop urban sprawl/No new development</i>	85
	<i>Lands should be managed to preserve cultural and biological resources</i>	55
	<i>Restrict development to prevent depletion of groundwater</i>	19
	<i>Adjacent landowners should be better informed by BLM of pending changes</i>	5
Grazing	<i>Evaluate grazing impacts</i>	44
	<i>Limit grazing</i>	39
	<i>Continue leases for grazing</i>	16
	<i>Reduce grazing fees</i>	1
Riparian Resources	<i>Protect the instream flow of the Agua Fria River</i>	55
	<i>Restrict access by livestock</i>	27
Cultural and Paleontological Resources	<i>Increase protection of existing sites and cultural artifacts</i>	105
	<i>Prevent grazing in areas having significant cultural resources</i>	22
	<i>Conduct cultural resource inventories</i>	14
	<i>Allow only limited access to existing sites, such as through guided tours</i>	12
	<i>Establish/increase programs to educate public on cultural resource issues</i>	7
Visual Resource Management	<i>Land should be preserved and remain untouched</i>	86
	<i>Preserve natural beauty</i>	24
Fire Management	<i>Return natural fire regime to mesa tops</i>	27
	<i>Return natural fire cycles</i>	21
	<i>Debris and brush clearing programs need to be expanded</i>	2

Issue	Sub-Issue/Comment	Total Count
General Wildlife and Fisheries Management	Preserve habitat for birdwatching/wildlife viewing	16
	Maintain waters for wildlife	14
	Reintroduce native fish species to aquatic systems in the area	3
Mineral Rights	Reduce and limit mining activities	17
	Continue existing mining leases	4
	Expand mining activities	4
Hazardous Materials / Solid Waste Soils, Water, and Air	Increase preventative measures for litter/dumping	17
	Conduct hydrological studies of watershed	2
	Restrict access to surface water from miners	1
	Restrict access to surface water from OHV users	1

Appendix C – Applicable Laws, Regulations, Policies and Planning Criteria

When considering the affected environment, physical, biological, economic, and social environmental factors must be considered. In addition to NEPA there are other environmental laws as well as Executive Orders (EOs) to be considered when preparing EAs and EISs. These laws are summarized below.

Clean Air Act (CAA) of 1970 and Amendments of 1977 and 1990

The CAA recognizes that increases in air pollution result in danger to public health and welfare. To protect and enhance the quality of the Nation's air resources, the CAA authorizes the Environmental Protection Agency (EPA) to set six National Ambient Air Quality Standards (NAAQSs) which regulate carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter pollution emissions. The CAA seeks to reduce or eliminate the creation of pollutants at their source, and designates this responsibility to State and local governments. States are directed to utilize financial and technical assistance as well as leadership from the Federal government to develop implementation plans to achieve NAAQS. Geographic areas are officially designated by the EPA as being in attainment or nonattainment to pollutants in relation to their compliance with NAAQS. Geographic regions established for air quality planning purposes are designated as Air Quality Control Regions (AQCR). Pollutant concentration levels are measured at designated monitoring stations within the AQCR. An area is designated as unclassifiable where insufficient monitoring data exists. Section 309 of the CAA authorizes the EPA to review and comment on impact statements prepared by other agencies.

An agency should consider what effect an action may have on NAAQS due to short-term increases in air pollution during construction as well as long-term increases resulting from changes in traffic patterns. For actions in attainment areas, a Federal agency may also be subject to EPA's Prevention of Significant Deterioration (PSD) regulations. These regulations apply to new major stationary sources and modifications to such sources. Although few agency facilities will actually emit pollutants, increases in pollution can result from a change in traffic patterns or volume. Section 118 of the CAA waives Federal immunity from complying with the CAA and states all Federal agencies will comply with all Federal and State approved requirements.

Clean Water Act (CWA) of 1977

The CWA, a 1977 amendment to the Federal Water Pollution Control Act of 1972, is administered by the EPA and sets the basic structure for regulating discharges of pollutants into U.S. waters. The CWA requires the EPA to establish water quality standards for specified contaminants in surface waters and

forbids the discharge of pollutants from a point source into navigable waters without a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits are issued by EPA or the appropriate State if it has assumed responsibility. Section 404 of the CWA establishes a Federal program to regulate the discharge of dredged and fills material into waters of the United States. Section 404 permits are issued by the US Army Corps of Engineers (USACE). Waters of the United States include interstate and intrastate lakes, rivers, streams, and wetlands which are used for commerce, recreation, industry, sources of fish, and other purposes. The objective of the Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Each agency should consider the impact on water quality from actions such as the discharge of dredge or fill material into U.S. waters from construction, or the discharge of pollutants as a result of facility occupation.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act of 1986 (SARA)

CERCLA authorizes the EPA to respond to spills and other releases of hazardous substances to the environment, and authorizes the National Oil and Hazardous Substances Pollution Contingency Plan. CERCLA also provides a Federal "Superfund" to respond to emergencies immediately. Although the "Superfund" provides funds for clean up of sites where potentially responsible parties (PRPs) cannot be identified, the EPA is authorized to recover funds through damages collected from responsible parties. This funding process places the economic burden for cleanup on polluters. SARA mandates strong cleanup standards, and authorizes the EPA to use a variety of incentives to encourage settlements. Title III of SARA authorizes the Emergency Planning and Community Right to Know Act (EPCRA), which requires facility operators with "hazardous substances" or "extremely hazardous substances" to prepare comprehensive emergency plans and to report accidental releases. EO 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," requires Federal agencies to comply with the provisions EPCRA. If a Federal agency acquires a contaminated site it can be held liable for clean up as the property owner/operator. A Federal agency can also incur liability if it leases a property, as the courts have found lessees liable as "owners." However, if the agency exercises due diligence by conducting a Phase I Environmental Site Assessment, it may claim the "innocent purchaser" defense under CERCLA. According to Title 42 United States Code (USC) 9601(35), the current owner/operator must show it undertook "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" before buying the property to use this defense.

Resource Conservation and Recovery Act (RCRA) of 1976

RCRA, an amendment to the Solid Waste Disposal Act, authorizes the EPA to provide for "cradle-to-grave" management of hazardous waste, and sets a framework for the management of non-hazardous municipal solid waste. Under RCRA, hazardous waste is controlled from generation to disposal through tracking and permitting systems, and restrictions and controls on the placement of waste on or into the land. Under RCRA, a waste is defined as hazardous if it is ignitable, corrosive, reactive, toxic or listed by the EPA as being hazardous. With the 1984 Hazardous and Solid Waste Amendments (HSWA), Congress targeted stricter standards for waste disposal and encouraged pollution prevention by prohibiting the land disposal of particular wastes. The HSWA amendments strengthen control of both hazardous and nonhazardous waste and emphasize the prevention of pollution of groundwater.

Safe Drinking Water Act (SDWA) of 1974

The SDWA establishes a Federal program to monitor and increase the safety of all commercially and publicly supplied drinking water. Congress amended the SDWA in 1986, mandating dramatic changes in nationwide safeguards for drinking water and establishing new Federal enforcement responsibility on the part of the EPA. The 1986 amendments to the SDWA require the EPA to establish Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs) and Best Available Technology (BAT) treatment techniques for organic, inorganic, radioactive, and microbial contaminants, and turbidity. MCLGs are maximum concentrations below which no negative human health effects are known to exist. The 1996 amendments set current Federal MCLs, MCLGs, and BATs for organic, inorganic, microbiological, and radiological contaminants in public drinking water supplies.

Federal Land Policy and Management Act (FLPMA) of 1976

FLPMA and the regulations contained in 43 CFR Part 1600 govern the Bureau of Land Management planning process. Land Use Plans ensure that public lands are managed in accordance with the intent of Congress as stated in FLPMA, under the principles of multiple use and sustained yield. As required by FLPMA, the public lands must be managed in a manner that protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition, that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use by encouraging collaboration and public participation throughout the planning process. In addition, the public lands must be managed in a manner that recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands.

Taylor Grazing Act of 1934, as amended and supplemented

The Taylor Grazing Act was the Federal government's first effort to regulate grazing on federal public lands. The act established grazing districts of vacant, unappropriated and unreserved land from any parts of the public domain, excluding Alaska, which are not national forests, parks, and monuments, Indian reservations, railroad grant lands, or revested Coos Bay Wagon Road grant lands, and which are valuable chiefly for grazing and raising forage crops. Residents and stock owners pay an annual fee to obtain a grazing permit which is used to manage livestock grazing in established districts. Grazing Administration Regulations (43 CFR 4100) provide for the development of state Standards for Rangeland Health and Guidelines for Grazing Management. The Standards and Guidelines are approved through Bureau of Land Management planning and NEPA processes.

Public Rangelands Improvement Act of 1978

The Public Rangelands Improvement Act was instituted to improve the conditions on public rangelands. Rangelands are defined as lands administered by the Secretary of the Interior through the Bureau of Land Management or the Secretary of Agriculture through the Forest Service in 16 contiguous western states, including Arizona, on which there is domestic livestock grazing or which the appropriate Secretary determines may be suitable for domestic livestock grazing. Rangeland quality is determined by soil quality, forage values, wildlife habitat, watershed and plant communities, the current state of vegetation in a site in relation to its potential, and the relative degree to which the kinds, proportions, and amounts of vegetation in a plant

community resemble the desired plant community. The act requires a national rangelands inventory and consistent federal management policies. In addition, the act provides funding for range improvement projects.

Coastal Zone Management Act (CZMA) of 1972

The CZMA is concerned with the effective management, beneficial use, protection, and development of the Nation's coastal zone. The coastal zone refers to the coastal waters and the adjacent shorelines including islands, transitional and intertidal areas, salt marshes, wetlands, and beaches, and includes the Great Lakes. The CZMA declares a National policy to preserve, protect and develop, and where possible restore or enhance the resources of the Nation's coastal zone. The CZMA encourages states to exercise their full authority over the coastal zone, through the development of land and water use programs in cooperation with Federal and local governments. States may apply for grants to help develop and implement management programs to achieve wise use of the land and water resources of the coastal zone. Development projects affecting land or water use or natural resources of a coastal zone, must ensure the project is, to the maximum extent practicable, consistent with the state's coastal zone management program.

Toxic Substance Control Act (TSCA) of 1976

Title I of the Toxic Substance Control Act established requirements and authorities to identify and control toxic chemical hazards to human health and the environment. TSCA authorized the EPA to gather information on chemical risks, require companies to test chemicals for toxic effects, and regulate chemicals with unreasonable risk. TSCA also singled out polychlorinated bi-phenyls (PCBs) for regulation and as a result are being phased out. TSCA and its regulations govern the manufacture, processing, distribution, use, marking, storage, disposal, clean-up, and release reporting requirements for numerous chemicals like PCBs. PCBs are persistent when released into the environment and accumulate in the tissues of living organisms. They have been shown to cause adverse health effects on laboratory animals and may cause adverse health effects in humans. TSCA Title II provides statutory framework for "Asbestos Hazard Emergency Response," which applies only to schools. TSCA Title III, "Indoor Radon Abatement," states indoor air in buildings of the United States should be as free of radon as the outside ambient air. Federal agencies are required to conduct studies on the extent of radon contamination in buildings they own. TSCA Title IV, "Lead Exposure Reduction," directs Federal agencies to "conduct a comprehensive program to promote safe, effective, and affordable monitoring, detection, and abatement of lead-based paint and other lead exposure hazards." Further, any Federal agency having jurisdiction over a property or facility must comply with all Federal, State, interstate, and local requirements concerning lead-based paint.

Wild and Scenic Rivers Act (WSRA) of 1968

By recognizing the remarkable values of specific rivers of the Nation, the WSRA provides for a wild and scenic river system. These selected rivers and their immediate environment are preserved in a free-flowing condition, without dams or other construction. The policy not only protects the water quality of the selected rivers but also provides for the enjoyment of present and future generations. Any river in a free-flowing condition is eligible for inclusion, and can be authorized as such by an Act of Congress, an act of State legislature, or by the Secretary of Interior upon the recommendation of the Governor of the State(s) through which the river flows.

EO 11988, "Floodplain Management," May 24, 1977

EO 11988 directs agencies to consider alternatives to avoid adverse effects and incompatible development in floodplains. An agency may locate a facility in a floodplain if the head of the agency finds there is no practicable alternative. If it is found there is no practicable alternative, the agency must minimize potential harm to the floodplain, and circulate a notice explaining why the action is to be located in the floodplain prior to taking action. Finally, new construction in a floodplain must apply accepted floodproofing and flood protection to include elevating structures above the base flood level rather than filling in land.

EO 11990, "Protection of Wetlands," May 24, 1977

EO 11990 directs agencies to consider alternatives to avoid adverse effects and incompatible development in wetlands. Federal agencies are to avoid new construction in wetlands, unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland. Agencies should use economic and environmental data, agency mission statements, and any other pertinent information when deciding whether or not to build in wetlands. EO 11990 directs each agency to provide for early public review of plans for construction in wetlands.

Pollution Prevention Act (PPA) of 1990

The PPA encourages manufacturers to avoid the generation of pollution by modifying equipment and processes, redesigning products, substituting raw materials, and making improvements in management techniques, training, and inventory control. EO 12856, "Federal Compliance with Right-to Know Laws and Pollution Prevention Requirements," requires Federal agencies to comply with the provisions of the PPA, and also requires Federal agencies to ensure all necessary actions are taken to prevent pollution. In addition, in Federal Register Volume 58 Number 18 (January 29, 1993), the Council on Environmental Quality provides guidance to Federal agencies on how to "incorporate pollution prevention principles, techniques, and mechanisms into their planning and decision making processes and to evaluate and report those efforts, as appropriate, in documents pursuant to NEPA."

Biological Factors

Endangered Species Act (ESA) of 1973

The ESA establishes a Federal program to conserve, protect and restore threatened and endangered plants and animals and their habitats. The ESA specifically charges Federal agencies with the responsibility of using their authority to conserve threatened and endangered species. All Federal agencies must insure any action they authorize, fund or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species, unless the agency has been granted an exemption. The Secretary of the Interior, using the best available scientific data, determines which species are officially endangered or threatened, and the U.S. Fish and Wildlife Service (FWS) maintains the list. A list of Federal endangered species may be obtained from the Endangered Species Division, U.S. Fish and Wildlife Service (703-358-2171). States may also have their

own lists of threatened and endangered species which may be obtained by calling the appropriate State Fish and Wildlife office. Some species, such as the bald eagle, also have laws specifically for their protection (e.g., Bald Eagle Protection Act).

Migratory Bird Treaty Act of 1918, amended in 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989

The Migratory Bird Treaty Act implements treaties and conventions between the United States, Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless otherwise permitted by regulations, the Act makes it unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. The Act also make it unlawful to ship, transport or carry from one state, territory or district to another, or through a foreign country, any bird, part, nest or egg that was captured, killed, taken, shipped, transported or carried contrary to the laws from where it was obtained; and import from Canada any bird, part, nest or egg obtained contrary to the laws of the province from which it was obtained. The U.S. Department of the Interior has authority to arrest, with or without a warrant, a person violating the Act.

EO 13186, "Conservation of Migratory Birds", January 10, 2001

EO 13186 creates a more comprehensive strategy for the conservation of migratory birds by the Federal Government. The Order provides a specific framework for the Federal government's compliance with its treaty obligations to Canada, Mexico, Russia, and Japan. The Order provides broad guidelines on conservation responsibilities and requires the development of more detailed guidance in Memoranda of Understanding (MOU) within 2 years of its implementation. The Order will be coordinated and implemented by the Fish and Wildlife Service. The MOU will outline how Federal agencies will promote conservation of migratory birds. The Order will requires the support of various conservation planning efforts already in progress; incorporation of bird conservation considerations into agency planning, including NEPA analyses; and reporting annually on the level of take of migratory birds.

EO 11514, "Protection and Enhancement of Environmental Quality," March 5, 1970

EO 11514 states the President, with assistance from the CEQ, will lead a national effort to provide leadership in protecting and enhancing the environment for the purpose of sustaining and enriching human life. Federal agencies are directed to meet national environmental goals through their policies, programs, and plans. Agencies should also continually monitor and evaluate their activities to protect and enhance the quality of the environment. Consistent with NEPA, agencies are directed to share information about existing or potential environmental problems with all interested parties, including the public, in order to obtain their views.

Economic and Social Factors

Environmental Quality Improvement Act (EQIA) of 1970

The EQIA ensures each Federal agency conducting or supporting public works activities affecting the environment implements policies established under existing law. The EQIA also created the Office Environmental Quality to provide professional and administrative staff for the Council on Environmental Quality (CEQ). The Director of the Office of Environmental Quality assists and advises the President on Federal policies and programs affecting environmental quality. The Office of Environmental Quality reviews the adequacy of existing environmental monitoring and predicting systems, and assists Federal agencies in appraising the effectiveness of existing and proposed facilities which affect environmental quality.

National Historic Preservation Act (NHPA) of 1966

The NHPA sets forth national policy to identify and preserve properties of state, local, and national significance. The act establishes the Advisory Council on Historic Preservation (Council), State Historic Preservation Officers, and the National Register of Historic Places (NRHP). The Council advises the President, Congress and Federal agencies on historic preservation issues. Section 106 of the act directs Federal agencies to take into account effects of their undertakings (actions and authorizations) on properties included in or eligible for NRHP. Section 110 sets inventory, nomination, protection and preservation responsibilities for federally owned cultural properties. Section 106 of the act is implemented by regulations of the Council, 36 CFR Part 800. The Bureau of Land Management in Arizona complies with Section 106 according to a national Programmatic Agreement dated March 26, 1997, supplemented by a Protocol between the BLM Arizona State Director and the Arizona State Historic Preservation Officer.

The agency should coordinate studies and documents prepared under Section 106 with NEPA where appropriate. However, NEPA and NHPA are separate statutes and compliance with one does not constitute compliance with the other. For example, actions which qualify for a categorical exclusion under NEPA may still require Section 106 review under NHPA. It is the responsibility of the agency official to identify properties in the area of potential effects, and whether they are included or eligible for inclusion in the National Register of Historic Places. Section 110 of the NHPA requires Federal agencies to identify, evaluate, and nominate historic property under agency control to the National Register of Historic Places.

Archaeological Resource Protection Act (ARPA) of 1979

ARPA protects archaeological resources on public and Indian lands. It provides felony-level penalties for the unauthorized excavation, removal, damage, alteration or defacement of any archaeological resource, defined as material remains of past human life or activities which are at least 100 years old. Before archaeological resources are excavated or removed from public lands, the Federal land manager must issue a permit detailing the time, scope, location and specific purpose of the proposed work. ARPA also fosters the exchange of information about archaeological resources between governmental agencies, the professional archaeological community, and private individuals. ARPA is implemented by regulations found in 43 CFR Part 7.

American Indian Religious Freedom Act of 1978 and Amendments of 1994

The American Indian Religious Freedom Act of 1978 recognizes that freedom of religion for all people is an inherent right, and traditional American Indian religions are an indispensable and irreplaceable part of Indian life. It also recognized the lack of Federal policy on this issue and made it the policy of the United States to protect and preserve the inherent right of religious freedom for Native Americans. The 1994 Amendments provide clear legal protection for the religious use of peyote cactus as a religious sacrament. Federal agencies are responsible for evaluating their actions and policies to determine if changes should be made to protect and preserve the religious cultural rights and practices of Native Americans. These evaluations must be made in consultation with native traditional religious leaders.

Native American Graves Protection and Repatriation Act (NAGPRA) of 1990

NAGPRA establishes rights of Indian tribes to claim ownership of certain “cultural items”, defined as Native American human remains, funerary objects, sacred objects and objects of cultural patrimony, held or controlled by Federal agencies. Cultural items discovered on Federal or tribal lands are, in order of primacy, the property of lineal descendants, if these can be determined, the tribe owning the land where the items were discovered, of the tribe with the closest cultural affiliation with the items. Discoveries of cultural items on Federal or tribal land must be reported to the appropriate Indian tribe and the Federal agency with jurisdiction over the land. If the discovery is made as a result of a land use, activity in the area must stop and the items must be protected pending the outcome of consultation with the affiliated tribe.

EO 11593, "Protection and Enhancement of the Cultural Environment," May 13, 1971

EO 11593 directs the Federal Government to provide leadership in the preservation, restoration, and maintenance of the historic and cultural environment. Federal agencies are required to locate and evaluate all Federal sites under their jurisdiction or control which may qualify for listing on the National Register of Historic Places. Agencies must allow the Advisory Council on Historic Preservation to comment on the alteration, demolition, sale, or transfer of property which is likely to meet the criteria for listing as determined by the Secretary of the Interior in consultation with the State Historic Preservation Officer. Agencies must also initiate procedures to maintain federally owned sites listed on the National Register.

EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," February 11, 1994

EO 12898 directs Federal agencies to make achieving environmental justice part of their mission. Agencies must identify and address adverse human health and/or environmental effects its activities have on minority and low-income populations, and develop agency-wide environmental justice strategies. The strategy must list "programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to promote enforcement of

all health and environmental statutes in areas with minority populations and low-income populations, ensure greater public participation, improve research and data collection relating to the health of and environment of minority populations and low-income populations, and identify differential patterns of consumption of natural resources among minority populations and low-income populations." A copy of the strategy and progress reports must be provided to the Federal Working Group on Environmental Justice. Responsibility for compliance with this EO lies with each Federal agency.

EO 13007, "Indian Sacred Sites", May 24, 1996

EO 13007 provides that agencies managing Federal lands, to the extent practicable, permitted by law, and not inconsistent with agency functions, shall accommodate Indian religious practitioners' access to and ceremonial use of Indian sacred sites, shall avoid adversely affecting the physical integrity of such sites, and shall maintain the confidentiality of such sites. Federal agencies are responsible for informing tribes of proposed actions that could restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

EO 13287, "Preserve America", March 3, 2003

EO 13287 orders the Federal Government to take a leadership role in protection, enhancement, and contemporary use of historic properties owned by the Federal Government, and promote intergovernmental cooperation and partnerships for preservation and use of historic properties. The order established new accountability for agencies with regard to inventories and stewardship.

Planning Criteria

During preparation of the plan, the BLM with input from the public develops planning criteria that serves to:

- constrain and guide the development of the Plan,
- determine how the planning team approaches the development of Alternatives, and
- determine how the planning team approaches selection of the Proposed Alternative.

Additional planning criteria can be added at any point in the planning process. The following are the Draft Planning Criteria as of the printing of this document.

1. The Plans will be completed in compliance with the Federal Land Management and Policy Act, The Endangered Species Act, the National Environmental Policy Act, and all other relevant Federal laws and executive orders (including wilderness legislation), and management policies of the BLM. The National Monument Plan will meet the requirements of the Agua Fria National Monument Proclamation to protect the objects of geological, paleontological, archaeological, historic, and biological value within the monument.
2. Fire Management prescriptions will be consistent with the 2001 Federal Wildland Fire Policy and the National Fire Plan.
3. The planning team will work collaboratively with the State of Arizona, Maricopa and Yavapai Counties, tribal governments, municipal governments, other Federal agencies; and all other interested groups, agencies and individuals.

4. The National Monument Plan will establish the guidance upon which the BLM will manage the Agua Fria National Monument. BLM will rely on the Bradshaw Foothills Resource Management Plan Amendment Plan for management guidance for BLM's lands not covered by the Lower Gila Resource Management Plan Amendment. The Bradshaw Foothills and Agua Fria National Monument Resource Management Plans will replace and supersede all other BLM land use plans for the lands covered by them.
5. The National Monument Plan will determine what quantity of water will be needed for Monument purposes and will work within Arizona appropriate procedures to acquire those water rights.
6. Where planning decisions have previously been made that still apply, those decisions will be carried forward into these Plans.
7. The planning process will include an Environmental Impact Statement which will comply with the National Environmental Policy Act standards. Two Records of Decision will be issued, one for the Agua Fria National Monument and one for the lands in the Bradshaw Harquahala planning area.
8. Due to the desire to maintain the existing natural and cultural landscapes of the Agua Fria National Monument, any visitor facilities will be located near the Monument boundary or in neighboring communities. Facilities may be located within the Monument, but they will be placed in an unobtrusive location near the Monument boundary.
9. The Plans will set forth a framework for managing recreational activities in order to maintain existing natural landscapes and to provide for the enjoyment and safety of the visiting public.
10. The management of grazing is regulated by laws and regulations other than the Monument Proclamation. The Plans will incorporate the statewide standards and guidelines established by the Arizona Bureau of Land Management State Director and approved by the Secretary of the Interior. It will lay out a strategy for ensuring that proper grazing practices are followed while preserving habitats for sensitive plant and wildlife species. Livestock Grazing is permitted, pursuant to the terms and conditions of existing permits and leases. Appropriate best management practices will be followed to protect rangeland resources, and where necessary, to mitigate any conflicts with other uses and values. Administrative actions to assure compliance with existing permit/lease requirements, to modify permits and leases, to monitor and supervise grazing use, and to remedy unauthorized grazing use will continue.
11. Native American tribal consultations will be conducted in accordance with policy and tribal concerns will be given due consideration. The planning process will include the consideration of any impacts on Indian trust assets.
12. Coordination with the Arizona State Historic Preservation Office (SHPO) will be conducted throughout the Plan.
13. The Plans will identify opportunities for using cultural properties for scientific, educational, recreational, or experimental purposes.
14. The lifestyles of area residents, including activities of grazing, hunting, and back country motorized use and recreation, will be recognized in the Plan.
15. The Agua Fria National Monument Plan will not address monument boundary adjustments or proposals to change the proclamation.
16. The Plans will recognize the State's authority to manage wildlife, including hunting and fishing, within the planning area in accordance with the current Memorandum of Understanding (MOU).

17. The Plans will address transportation, route management, and access; and identify which routes/roads should remain open to accommodate resource users, recreationist, protection of resource values and administrative needs.
18. The existing BLM wilderness inventory and vehicle route inventory will provide a basis for consideration of any new wilderness proposals.
19. Lands which will be open to mineral leasing will be identified in the Plan. Lands within the Agua Fria National Monument are closed to mineral development (subject to valid existing right) by the proclamation. Where the plan identifies lands as open to mineral leasing, it will also define any constraints to surface use.
20. Ecological Site Inventory will be conducted consistent with current rangeland management policy.
21. Visual Resource Management classification will be conducted to address the public's concerns about open space and natural vistas.
22. The Plans will designate which acquired lands currently not segregated from mining by overriding actions (i.e., national monument, wilderness) should be opened to mining location.
23. The Bradshaw Foothills Plan Amendment will determine if any lands should be closed to operations under the Mining Laws.
24. Consultations with the Fish and Wildlife Service will take place throughout the Plan process in accordance with the Memorandum of Agreement on Section 7 Programmatic Consultations and Coordination among the Fish and Wildlife Service, Forest Service, Bureau of Land Management, and National Marine Fisheries, August 2000.
25. Minerals management will be consistent with FLPMA and existing policy and regulation including the Mining and Minerals Policy Act of 1970, Section 102 (a) (12) of FLPMA, the National Materials and Minerals Policy, Research and Development Act of 1980, and current BLM Mineral Resources policy.
26. National, State, and local policy on management of noxious weeds will be considered in the plans. Where possible, management practices that control invasive plant species will be emphasized.
27. Management of the wild burros within the Lake Pleasant Herd Management Area will continue to be guided by the existing Herd Management Plan. Appropriate management levels for burros were set based on monitoring studies and are within the limits set by the Arizona Rangeland Health Standards. Monitoring will continue to assure those standards are maintained.
28. Sensitive or special resources in planning and designating utility corridors will be avoided.
29. In February 2003, the Department of Homeland Security (DHS) issued the National Strategy for the Physical Protection of Critical Infrastructures and Key Assets (DHS 2003). This strategy summarized the initial assessment of and plans for protection against vulnerabilities to terrorist threat. BLM must ensure the designation of utility and transportation corridor locations and the planning and maintenance of utilities, railroads, and highways crossing its lands conform to DHS directives, policies, and procedures.
30. In accordance with Executive Order No. 13212, the Energy Project Streamlining Process (signed May 18, 2001), Federal energy-related planning must expedite producing, transmitting, or conserving energy.

Appendix D - Route Evaluation/Designation Decision Tree Process

The route designation process for the Phoenix District is the sum of route and resource inventories, the BLM specialists' input, and the public's input. The process of designating routes is part of a larger effort to use the best management techniques in an ever-changing environment. As the population of Arizona grows, management of the land must reflect trends and in some cases, provide guidance to meet desired goals. Designating and managing a route system is a key component.

Evaluating routes on the merits of their uses, values, and impacts is a difficult task. The method currently directed by the BLM Arizona State Office for evaluating each route is the Route Evaluation/Designation Decision Tree Process. This process uses a flow chart (See below) that systematically guides the evaluator through a series of questions that help assess the relationship of routes to sensitive resources and public access both individually route by route, as well as collectively or cumulatively as a network. Background data from state and federal agency inventories and specialists, as well as the public provides the basis for evaluation. As specified by 43CFR8342.1, this process considers as part of its evaluation, impacts to a number of sensitive resources including but not limited to threatened, endangered and sensitive species, and their habitat, as well as cultural and historic resources. These impacts are jointly evaluated in the context of providing reasonable commercial and recreational public access as provided for by several State and Federal acts. When the questions are answered by taking into account the best information available and RMP objectives, a route designation code is established and recorded. Routes are determined to be Open, Closed, or Limited.

As the evaluation/designation process progresses, specific reasoning on route designation is documented. Mitigation where necessary will be incorporated into an adaptive management plan. Route designation is considered an implementation action rather than a RMP decision. Changes can be made to the designated route network land use plan, Monument Proclamation, NEPA and FLPMA and 43 CFR 8342.1, and any other laws or regulations that may apply.

The process for reviewing inventoried routes, proposing new routes, both motorized and non-motorized and adding routes to route inventory for consideration in the route designation process is outlined below in six steps. Public participation will be requested during the following phases of the route designation process:

Scoping:

- The public identifies proposed and missing routes to be analyzed. Route proposals submitted at this time. See (1) below.

-

Action Alternatives Formulation meetings

- The public reviews agency proposals based on scoping comments and is invited to participate in a structured data gathering
- Session.

Draft Environment Assessment comment period

- Comments will be accepted on the draft plan

All routes, inventoried or proposed, will be integrated and evaluated as follows:

1. Route locations will be mapped or located using accepted Global Positioning System devices and presented to the BLM office for consideration. Locations of route proposals off of existing motorized routes must be located and mapped using non-motorized methods. The route proposal submitted to BLM will include a description of the route including its proposed width, its proposed use(s), and a rationale for its need.
2. The route location will be analyzed for potential conflicts such as, (but not limited to): wildlife habitats, cultural resources, visual resources, other recreation uses, mining claims or leases, grazing facilities, rights-of-way, and proximity to other jurisdictions (such as private land.) A structured process, such as that described above will be used to evaluate and document the known or foreseeable route conditions.
3. If the route has few conflicts identified during the analysis, an on-the-ground review may be initiated. At this stage, the proposed route must be flagged and staked on the ground by the public for BLM review. If a route has irresolvable conflicts, it may be removed from further consideration.
4. Pending favorable on-the-ground review, a conflict assessment would lead to possible mitigation actions or alternative locations or design.
5. An environmental analysis (EA) would be prepared to determine the environmental affects of the proposed route system and any alternatives and mitigation suggested. In the case of new route proposals brought forth during the initial route designation period, all routes will be analyzed together in the same EA.
6. A decision identifying the route system and mitigations will be issued by the authorized officer based on Land Use Plan compliance, resource objectives, and environmental impacts.

Route Evaluation/Designation Decision Tree

Main Features Include:

1. Logical, standardized, balanced and repeatable approach to route designation
2. Systematic questions to assess compliance with a variety of pertinent statutory requirements including:
 - Valid existing rights and other vested rights or permitted uses
 - Degree of potential impact or degradation to specially protected resources, such as species protected by the Federal Endangered Species Act (ESA), cultural, historic and scientific objects protected by the Historic Preservation and Antiquities Acts (e.g. Monument Proclamations, Section 106) and wilderness values as protected by the Wilderness Act.
 - Implementation of the Federal Land Policy & Management Act (FLPMA) and its charge to balance the public's need/desire for access to Federal lands with resource protection through a philosophy of management for "multiple use". Such consideration includes recognizing the value of providing a range of recreational opportunities and treating those opportunities in accordance with FLPMA as a resource worthy of protection.
3. Systematic consideration of access opportunities and resource protection needs on both a narrowly focused route by route assessment, as well as a broad-based cumulative assessment of the total network's effect.
4. Systematic consideration of mitigation and/or limited designation as a means by which to ameliorate resource impacts. Designation options include a range from open to closed, and a number of intermediate actions as a means by which to balance access needs and resource protection.
5. Systematic recordation of data allowing for future retrieval and review/updating of decision information as needed (i.e. "decision pathways" are numerically coded).
6. Systematic ability to assess a route's final recommended designation status based upon the management goals of each individual alternative.

Benefit
Opportunities

How does the Tree Work?

1. The region or management area in which the route is located is thoroughly evaluated. Resource protection, recreation and commercial access concerns pertinent to route designation are identified. The patterns of these identified uses and concerns, as well as their trends are also noted. Other related issues such as law enforcement, route maintenance and user conflicts are further identified.
2. The desired future condition and management goals of each proposed alternative are identified and reviewed.
3. Each route is systematically numbered. This both allows for tracking the designation process and enables the public to make comment on specific routes.



Close 01: A route that is recommended for permanent closure to all use. Physical closure includes restoring the travelway to the degree possible to blend with surrounding landscape, as well as installation of physical barriers and signing at the original departure point, if necessary.



Mitigate/Limit 09: A route that is recommended for limited use by certain parties or entities with valid, vested, or implied rights of access, or to certain vehicle types, seasons of use, etc., following mitigation action(s) aimed at reducing/eliminating certain estimated impacts identified during the route designation process.



Limit 05: A route that is recommended for limited use by certain parties or entities with valid, vested, or implied rights of access, or to certain vehicle types, seasons of use, etc.



Mitigate/Open 05: A route that is recommended open for all uses, following mitigation action(s) aimed at reducing/eliminating certain estimated impacts identified during the route designation process.



Open 02: A route that is recommended open for all uses.

Appendix E: Cultural Resources Use Categories

EXCERPT FROM BLM MANUAL 8110

8110 - IDENTIFYING AND EVALUATING CULTURAL RESOURCES

.4 Categorizing According to Uses. Categorizing cultural resources according to their potential uses is the culmination of the identification process and the bridge to protection and utilization decisions. Use categories establish what needs to be protected, and when or how use should be authorized. All cultural resources have uses, but not all should be used in the same way. Cultural resources can be allocated to the various recognized use categories even before they are individually identified. The clear advantage in doing this is that it allows Field Office managers to know in advance how to respond to conflicts that arise between specific cultural resources and other land uses. Relative to the national Programmatic Agreement, categorizing resources to uses provides a mechanism for the Field Office manager and the SHPO to confer and concur on how to handle most routine cases of conflict in advance, enabling the Field Office manager to put decisions into effect in the most appropriate and most timely manner.

.41 Allocations to Use Categories.

A. Field Office managers shall allocate to appropriate use categories all cultural properties known and projected to occur in a plan area. Allocations are made in land use plans (RMP), and may be applied both to individual properties and to classes of similar properties. Appropriately qualified staff professionals recommend suitable uses for each cultural property or class of properties, considering the properties' characteristics, condition, setting, location, and accessibility, and especially their perceived values and potential uses. A cultural property may be allocated to more than one use category or it may pass from one category to another (e.g., from Scientific Use to Public Use, as when an archaeological property becomes appropriate for in-place interpretation and conservation for future scientific use, upon completion of scientific investigation). During the compliance process for proposed land uses, allocations allow Field Office managers to analyze needs and develop appropriate mitigation and treatment options. Allocations should be consistent with historic context documents and State Historic Preservation Plans.

B. Allocations shall be reevaluated and revised, as appropriate, when circumstances change or new data become available. Conditions and/or criteria for revising allocations must be included in the RMP, or else revisions may require a plan amendment.

C. A Field Office more than 1 year from an RMP start may assign cultural resources to use categories through an implementation plan (e.g., integrated or interdisciplinary plan, coordinated resource management plan, landscape management plan) that implements any commitment in an existing land use plan to manage cultural resources appropriately (even if only a commitment to comply with the National Historic Preservation Act; see next to last sentence in A. above). Assignments made in implementation plans do not become full allocation decisions until incorporated in an approved RMP.

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.42 Use Categories

A. Scientific Use. This category applies to any cultural property determined to be available for consideration as the subject of scientific or historical study at the present time, using currently available research techniques. Study includes methods that would result in the property's physical alteration or destruction. This category applies almost entirely to prehistoric and historic archaeological properties, where the method of use is generally archaeological excavation, controlled surface collection, and/or controlled recordation (data recovery). Recommendations to allocate individual properties to this use must be based on documentation of the kinds of data the property is thought to contain and the data's importance for pursuing specified research topics. Properties in this category need not be conserved in the face of a research or data recovery (mitigation) proposal that would make adequate and appropriate use of the property's research importance.

B. Conservation for Future Use. This category is reserved for any unusual cultural property which, because of scarcity, a research potential that surpasses the current state of the art, singular historic importance, cultural importance, architectural interest, or comparable reasons, is not currently available for consideration as the subject of scientific or historical study that would result in its physical alteration. A cultural property included in this category is deemed worthy of segregation from all other land or resource uses, including cultural resource uses, that would threaten the maintenance of its present condition or setting, as pertinent, and will remain in this use category until specified provisions are met in the future.

C. Traditional Use. This category is to be applied to any cultural resource known to be perceived by a specified social and/or cultural group as important in maintaining the cultural identity, heritage, or well being of the group. Cultural properties assigned to this category are to be managed in ways that recognize the importance ascribed to them and seek to accommodate their continuing traditional use.

D. Public use. This category may be applied to any cultural property found to be appropriate for use as an interpretive exhibit in place, or for related educational and recreational uses by members of the general public. The category may also be applied to buildings suitable for continued use or adaptive use, for example as staff housing or administrative facilities at a visitor contact or interpretive site, or as shelter along a cross-country ski trail.

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E. Experimental Use. This category may be applied to a cultural property judged well-suited for controlled experimental study, to be conducted by BLM or others concerned with the techniques of managing cultural properties, which would result in the property's alteration, possibly including loss of integrity and destruction of physical elements. Committing cultural properties or the data they contain to loss must be justified in terms of specific information that would be gained and how it would aid in the management of other cultural properties. Experimental study should aim toward understanding the kinds and rates of natural or human-caused deterioration, testing the effectiveness of protection measures, or developing new research or interpretation methods and similar kinds of practical management information. It should not be applied to cultural properties with strong research potential, traditional cultural importance, or good public use potential, if it would significantly diminish those uses.

F. Discharged from Management. This category is assigned to cultural properties that have no remaining identifiable use. Most often these are prehistoric and historic archaeological properties, such as small surface scatters of artifacts or debris, whose limited research potential is effectively exhausted as soon as they have been documented. Also, more complex archaeological properties that have had their salient information collected and preserved through mitigation or research may be discharged from management, as should cultural properties destroyed by any natural event or human activity. Properties discharged from management remain in the inventory, but they are removed from further management attention and do not constrain other land uses. Particular classes of unrecorded cultural properties may be named and described in advance as dischargeable upon documentation, but specific cultural properties must be inspected in the field and recorded before they may be discharged from management.

Appendix F: Special Cultural Resource Management Areas

These eight areas, described below from east to west, are defined as Priority Areas for Cultural Resource Management and are common to all plan alternatives. These areas contain significant resources that, in many cases, are at risk of damage. Management actions within priority areas will be incorporated into annual work planning for the Phoenix District cultural heritage program.

Black Mesa/Bumble Bee

This area, west of the Agua Fria National Monument, contains significant prehistoric and historic sites including pueblos, rock art, an Archaic artifact scatter, and historic mining and ranching camps. Many of the prehistoric sites were used during the period immediately prior to the Perry Mesa Tradition (A.D. 1250-1450), which represents the major occupational period on the monument. The sites are threatened by impacts from looting, livestock grazing, off-highway vehicle use, and recreational activities.

Galena Gulch

This area, adjacent to State Route 69 near Humboldt, contains an unusual variety of significant prehistoric and historic sites including pueblo structures, rock art, mines, cabins, cemeteries, and the remnants of an early transmission line. Many of the sites are known to the public and accessible from the highway. They are vulnerable to damage associated with recreational activities and nearby development.

Black Canyon Corridor

This area incorporates the proposed route of the Black Canyon Hiking and Equestrian Trail, which follows the path of the historic Black Canyon Livestock Driveway and other historic routes. The area features a number of significant prehistoric and historic sites, which offer opportunities for interpretive development and public education along the recreational trail. As this area receives a high level of recreational traffic, the sites also need to be documented and protected.

Lake Pleasant/Agua Fria

This area in the foothills of the Bradshaw Mountains, directly north of Lake Pleasant, also incorporates a segment of the Agua Fria River. The area contains significant sites including prehistoric hilltop structures, rock art, and Humbug and other sites associated with historic mining. There are documented occurrences of *Agave murpheyi*, a type of agave that was cultivated in prehistoric times and is frequently associated with Hohokam sites. The integrity of these sites is threatened by the high volume of recreational traffic associated with the proximity of Lake Pleasant. Some sites have been publicized in book, magazine, and newspaper articles.

Wickenburg/Vulture

The area surrounding Wickenburg contains a number of historic sites and roads, associated primarily with the history of mining and settlement. The area also incorporates the Vulture source of obsidian, used for stone tools and traded widely by prehistoric people. Urban expansion and development, as well as recreational and mining activities, represent potential threats to cultural resources. Tourism is a local tradition, and residents have expressed an interest in visiting historical sites and incorporating interpreted sites into trail systems.

Weaver/Octave

This area surrounds Rich Hill, one of the most productive gold mining areas in Arizona's history. The historic settlement of Weaver (AZ N:14:3 (BLM)), other historic sites, roads, mines, and cemeteries offer opportunities to interpret selected sites for public use.

Harcuvar Mountains

This mountain range and surrounding areas contain a variety of significant prehistoric sites, including habitation camps, stone tool manufacturing areas, milling areas, rockshelters, and rock art (petroglyphs and pictographs). The area is near a major historic transportation route and may contain sites associated with mining, transportation, commerce, and military activities during the 1800s. The sites are threatened by off-highway travel and recreational activities associated with the growth of seasonal retirement communities.

Harquahala Mountains

This mountain range includes the Harquahala Mountain Observatory Historic District, which encompasses the Harquahala Smithsonian Observatory, the historic Harquahala Pack Trail, Ellison's Camp, and associated historical features. The Harquahala Mountains also contain significant prehistoric sites including habitation camps, milling areas, and rock art. In 2002, the BLM completed a stabilization project at the historic Harquahala Peak Smithsonian Observatory, which was used by solar researchers during the 1920s. This historic building is a mountaintop destination for both the historic pack trail and the Harquahala Mountain Back Country Byway. The remoteness and wilderness character of the range offer some protection for cultural resources, but sites may be vulnerable to impacts from mining and recreational activities.

Appendix G – Harquahala Herd Area Manageability Analysis

The Harquahala Herd Area is located approximately 18 miles north and 72 miles west of Phoenix, and is 59,405 acres in size. The herd area encompasses 150,561 acres of public land (94.5 percent), 8,060 acres of Arizona State Lands (5 percent), and 782 acres of private land (0.5 percent).

Portions of three wilderness areas, including the Harquahala Mountains Wilderness Area on the north, along with Hummingbird Springs and the Big Horn Mountains Wilderness Areas on the south, are located within the herd area boundaries. Wilderness acres include 20.7 percent, or 33,151 acres of the herd area.

The area, which was first identified as a herd area in the Draft Lower Gila North Grazing Environmental Impact Statement (EIS) in 1982, was based on inventories conducted in 1976 and 1980, utilizing the Lincoln Index Inventory Method. The area was designated as a herd area in the Final Lower Gila North Grazing EIS in September 1982.

In 1999, inventories were jointly conducted by the Arizona Game and Fish Department and the Bureau of Land Management (BLM) utilizing the Simultaneous Double Count Method. The analysis of that data indicates a total herd of less than 50 animals. These were found in two separate groups. One group, representing approximately two-thirds of the current population, was located on the south side of the Harquahala Mountains, and the other one-third was found on the southern end of the Big Horn Mountains. The mountainous areas provide a more dependable source of forage, whereas the areas between these mountains produce only a limited amount of perennial forage. Burros within this herd area are often dependant on forage produced on the privately owned agricultural fields, which are located at the west end of the Harquahala Mountains, especially during periods of drought.

Access to natural occurring water is restricted to two sources of dependable water (except during drought), they're two springs located in Browns Canyon on the south side of the Harquahalas, and Humming Bird Springs in the southern portion of the herd area. Both of these areas are critical to native wildlife species. A proposal to fence Browns Canyon to protect the riparian area from excessive grazing is being considered, and will forwarded as a project as soon as the area has been evaluated via the Arizona Standards for Rangeland Health process. Other water sources in the area are those developed for livestock, including wells, troughs and earthen tanks. The wells and troughs are generally located within livestock handling facilities, such as corrals and traps that are often closed to facilitate livestock management; therefore, not always accessible to wild burros. Also, these wells are only operational during periods of active livestock use, and are not a dependable source of water throughout the year. Earthen tanks are generally accessible, but only contain water during periods of plentiful precipitation.

Field observations confirm that the burros in this area often range far outside the herd area boundary, which indicates the necessity for these animals to seek sustenance (forage and water) in areas other than within the designated herd area.

Although existing research regarding minimum population size varies, it is generally accepted that a population of less than 50 animals is not sufficient to maintain a genetically viable and healthy population over a long-term period.

Therefore, considering all factors, including limited water sources, sparse-foraged vegetation, which resulted in the necessity for the burros to forage outside the herd area and on privately owned farm lands, and grazing damage to riparian areas by a small number of animals - it is recommended that the Harquahala Herd Area not be designated as a Herd Management Area.

Table H-1 – Priority Species List

Priority wildlife species, their status, and occurrence in the planning area are described in the following table:

Common Name	Scientific Name	Status			
		Federal	State	Other	Planning Area Occurrence
Mammals					
Allen's (Mexican) Big-eared Bat	<i>Idionycteris phyllotis</i>	BS	-	-	p
American Pronghorn	<i>Antilocapra americana americana</i>	-	G	-	x
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	BS	-	-	p
Black Bear	<i>Ursus americanus</i>	-	G	-	x
California Leaf-nosed Bat	<i>Macrotus californicus</i>	-	S	-	x
Cave Myotis	<i>Myotis velifer</i>	BS	-	-	x
Desert Bighorn Sheep	<i>Ovis canadensis mexicana</i>	-	G	-	x
Elk	<i>Cervus elaphus</i>	-	G	-	x
Fringed Myotis	<i>Myotis thysanodes</i>	BS	-	-	x
Javelina (Collared Peccary)	<i>Pecari tajacu</i>	-	G	-	x
Long-eared Myotis	<i>Myotis evotis</i>	BS	-	-	p
Long-legged Myotis	<i>Myotis volans</i>	BS	-	-	p
Mountain Lion	<i>Puma concolor</i>	-	G	-	x
Mule Deer	<i>Odocoileus hemionus</i>	-	G	-	x
Occult Little Brown Bat	<i>Myotis lucifugus occultus</i>	BS	-	-	p
Pocketed Free-tailed Bat	<i>Nyctinomops femorosaccus</i>	BS	-	-	p
Red Bat	<i>Lasiurus borealis</i>	-	S	-	p
Small-footed Myotis	<i>Myotis leibii</i>	BS	-	-	p
Southern Yellow Bat	<i>Lasiurus ega</i>	-	S	-	p
Spotted Bat	<i>Euderma maculatum</i>	-	S	-	x
White-tailed Deer	<i>Odocoileus virginianus</i>	-	G	-	x
Birds					
American Kestrel	<i>Falco sparverius</i>	-	-	R	x
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T	S	-	x
Band-tailed Pigeon	<i>Patagioenas fasciata</i>	-	G	-	p
Barn Owl	<i>Tyto alba</i>	-	-	R	x
Bell's Vireo	<i>Vireo bellii</i>	-	-	BCC	x
Belted Kingfisher	<i>Megaceryle alcyon</i>	-	S	-	x
Bendire's Thrasher	<i>Toxostoma bendirei</i>	-	-	BCC	x
Black-chinned Sparrow	<i>Spizella atrogularis</i>	-	-	BCC	x
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	-	-	BCC	p
Broad-billed Hummingbird	<i>Cyanthus latirostris</i>	-	-	BCC	p
Burrowing Owl	<i>Athene cucularia</i>	BS	-	BCC	x
Cactus Ferruginous Pygmy Owl	<i>Glaucidium brasilianum cactorum</i>	E	S	-	h
Chestnut-collared Longspur	<i>Calcarius ornatus</i>	-	-	BCC	p
Common Black-hawk	<i>Buteogallus anthracinus</i>	-	S	BCC	x

Common Name	Scientific Name	Status			
		Federal	State	Other	Planning Area Occurrence
Cooper's Hawk	<i>Accipiter cooperii</i>	-	-	R	x
Costa's Hummingbird	<i>Calypte costae</i>	-	-	BCC	x
Crissal Thrasher	<i>Toxostoma crissale</i>	-	-	BCC	x
Elf Owl	<i>Micrathene whitneyi</i>	-	-	BCC	x
Ferruginous Hawk	<i>Buteo regalis</i>	-	S	BCC	x
Gambel's Quail	<i>Callipepla gambelii</i>	-	G	-	x
Gila Woodpecker	<i>Melanerpes uropygialis</i>	-	-	BCC	x
Gilded Flicker	<i>Colaptes chrysoides</i>	-	-	BCC	x
Golden Eagle	<i>Aquila chrysaetos</i>	-	-	R	x
Grace's Warbler	<i>Dendroica graciae</i>	-	-	BCC	p
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	-	-	BCC	p
Gray Vireo	<i>Vireo vicinior</i>	-	-	BCC	x
Great Egret	<i>Casmerodius albus</i>	-	S	-	x
Greater Pewee	<i>Contopus pertinax</i>	-	-	BCC	x
Great-Horned Owl	<i>Bubo virginianus</i>	-	-	R	x
Harris' Hawk	<i>Parabuteo unicinctus</i>	-	-	R	x
Lark Bunting	<i>Calamospiza melanocorys</i>	-	-	BCC	x
Lawrence's Goldfinch	<i>Carduelis lawrencei</i>	-	-	BCC	x
Le Conte's Thrasher	<i>Toxostoma lecontei</i>	-	-	BCC	x
Loggerhead Shrike	<i>Lanius ludovicianus</i>	BS	-	BCC	x
Long-billed Curlew	<i>Numenius americanus</i>	-	-	BCC	x
Long-eared Owl	<i>Asio otus</i>	-	-	R	x
Merlin	<i>Falco columbarius</i>	-	-	R	x
Mourning Dove	<i>Zenaida macroura</i>	-	G	-	x
Northern Goshawk	<i>Accipiter gentilis</i>	-	S	BCC	p
Northern Harrier	<i>Circus cyaneus</i>	-	-	R	x
Osprey	<i>Pandion haliaetus</i>	-	S	-	x
Peregrine Falcon	<i>Falco peregrinus</i>	-	S	BCC	x
Prairie Falcon	<i>Falco mexicanus</i>	-	-	R	x
Red-tailed Hawk	<i>Buteo jamaicensis</i>	-	-	R	x
Sage Sparrow	<i>Amphispiza belli</i>	-	-	BCC	p
Sharp-shinned Hawk	<i>Accipiter striatus</i>	-	-	R	x
Short-eared Owl	<i>Asio flammeus</i>	-	-	R	x
Snowy Egret	<i>Egretta thula</i>	-	S	-	x
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	S	-	x
Swainson's Hawk	<i>Buteo swainsoni</i>	-	-	R	x
Turkey Vulture	<i>Cathartes aura</i>	-	-	R	x
Western Screech-Owl	<i>Megascops kennicottii</i>	-	-	R	x
White-tailed Kite	<i>Elanus leucurus</i>	-	-	R	x
White-winged Dove	<i>Zenaida asiatica</i>	-	G	-	x
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C	S	BCC	x
Yellow Warbler	<i>Dendroica petechia</i>	-	-	BCC	x
Zone-tailed Hawk	<i>Buteo albonotatus</i>	-	-	R	x

Common Name	Scientific Name	Status			
		Federal	State	Other	Planning Area Occurrence
Amphibians and Reptiles					
Arizona Skink	<i>Eumeces gilberti arizonensis</i>	-	S	-	x
Chuckwalla	<i>Sauromalus ater</i>	BS	-	-	x
Sonoran Desert Tortoise	<i>Gopherus = (Xerobates) agassizii</i>	-	S	-	x
Lowland Leopard Frog	<i>Rana yavapaiensis</i>	-	S	-	x
Mexican Garter Snake	<i>Thamnophis eques</i>	-	S	-	x
Rosy Boa	<i>Charina trivirgata</i>	BS	-	-	x
Fishes					
Desert Pupfish	<i>Cyprinodon macularius macularius</i>	E	S	-	x
Desert Sucker	<i>Catostomus clarkii</i>	BS	-	-	x
Gila Chub	<i>Gila intermedia</i>	PE	S	-	x
Gila Topminnow	<i>Poeciliopsis occidentalis occidentalis</i>	E	S	-	x
Longfin Dace	<i>Agosia chrysogaster</i>	BS	-	-	x
Speckled Dace	<i>Rhinichthys osculus</i>	BS	-	-	x
Spikedace	<i>Meda fulgida</i>	T	S	-	h
Invertebrates					
Maricopa Tiger Beetle	<i>Cicindela oregona maricopa</i>	BS			p
MacNeill Sooty Wing Skipper	<i>Hesperopsis graciellae</i>	BS			p
Plants					
Arizona Giant Sedge	<i>Carex spissa var. ultra</i>	BS	-	-	x
California Flannelbush	<i>Fremontodendron californicum</i>	BS	-	-	x
Murphey (Hohokam) Agave	<i>Agave murpheyi</i>	BS	-	-	x

Federal Status

E- Endangered

T-Threatened

PE-Proposed Endangered

PT-Proposed Threatened

C-Candidate

Other Classifications

BS- BLM Sensitive, Updated BLM Sensitive Species List for Arizona (Instruction Memorandum No. AZ-2000-018, Change 1)

BCC - Birds of Conservation Concern 2002, U.S. Fish and Wildlife Service

S - State Sensitive, Wildlife of Special Concern in Arizona (AGFD, Draft 1996)

R - Raptors

G - Game Species

Occurrence in the Planning Areas

x - occur

p - possible

h - historic

Appendix I: Consideration of Wilderness Characteristics

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

October 23, 2003

In Reply Refer To:
1610 (210) P
Ref. IM No. 2003-195
IM No. 2003-274
IM No. 2003-275

EMS TRANSMISSION 10/23/2003
Instruction Memorandum No. 2003-275 – Change 1
Expires: 09/30/2004

To: All State Directors
From: Assistant Director, Renewable Resources and Planning
Subject: Consideration of Wilderness Characteristics in Land Use Plans (Excluding Alaska)

Program Area: Land Use Planning

Purpose: This Instruction Memorandum corrects the reference to the Code of Federal Regulations (CFR) used twice in the “Reviewing New Information” section of Instruction Memorandum No. 2003-275. No other changes to Instruction Memorandum No. 2003-275 have been made.

This Instruction Memorandum (IM) provides guidance regarding the consideration of wilderness characteristics in the land use planning process. In addition the IM sets forth policy to comply with the settlement in *Utah v. Norton* and the decision to apply the terms of the settlement Bureau-wide, excluding Alaska. The IM applies to all other public lands, except approximately 6.5 million acres of public land designated by Congress as wilderness, 15.5 million acres of wilderness study areas (WSAs) already established by the Bureau of Land Management (BLM) or Congress, and any other lands not designated by Congress but subject to specific provisions of law that direct BLM to manage those lands as if they were congressionally designated wilderness or WSAs. The IM also modifies the Land Use Planning Handbook (H-1601-1) to delete a statement that land use plan decisions include designation of WSAs.

Background: The BLM submitted wilderness suitability recommendations to Congress pursuant to Section 603 of the Federal Land Policy and Management Act (FLPMA) by October 21, 1993. BLM, however, continued to inventory for wilderness characteristics under the authority of Section 201 of FLPMA and made formal determinations regarding wilderness character consistent with the definition of wilderness as described in Section 2 (c) of the Wilderness Act of 1964. The BLM assumed that Section 202 of FLPMA authorized designation, through the land use planning process, of additional WSAs.

These Section 202 WSAs, according to the BLM's Interim Management Policy (IMP), as modified in 1995, would be managed to retain their suitability as wilderness (non-impairment provision) until Congress designated them as wilderness or they were made available for other land uses by the decisions resulting from a new land use planning process.

In *Utah v Norton*, the State of Utah, Utah School and Institutional Trust Land Administration, and the Utah Association of Counties filed suit challenging the authority of the BLM to conduct wilderness inventories after completion of the Section 603 identification, study, and recommendation processes. The Department of the Interior and the plaintiffs agreed to a settlement in April 2003.

The settlement acknowledges: (1) that the BLM's authority to conduct wilderness reviews, including the establishment of new WSAs, expired no later than October 21, 1993, with the submission of the wilderness suitability recommendations to Congress pursuant to Section 603 of the FLPMA; and (2) that the BLM is without authority to establish new WSAs. The settlement did not, however, diminish the BLM's authority under Section 201 of the FLPMA to inventory public land resources and other values, including characteristics associated with the concept of wilderness, and to consider such information during land use planning.

Consistent with the settlement, the BLM rescinded the Wilderness Inventory and Study Procedures Handbook (H-1630-1). See IM-2003-195, dated June 20, 2003. It is, therefore, no longer BLM policy to continue to make formal determinations regarding wilderness character, designate new WSAs through the land use planning process, or manage any lands – except WSAs established under Section 603 of the FLPMA and other existing WSAs – in accordance with the non-impairment standard prescribed in the IMP.

Refer to IM 2003- 274 for general guidance regarding interpretation of the *Utah v. Norton* wilderness lawsuit settlement.

Policy/Action:

Nothing in this guidance changes current policy on the management of designated wilderness and existing WSAs. The BLM will continue to protect and manage congressionally designated wilderness and existing WSAs according to the provisions of applicable laws and the BLM's wilderness program policies. Those lands designated as WSAs in the BLM's land use plans after October 21, 1993, may continue to be managed consistent with the decisions contained in the approved land use plan.

The BLM will not designate new WSAs through the land use planning process. In addition, the BLM will not allocate any additional lands to be managed under the non-impairment standard prescribed in the IMP. Instead, the BLM may consider information on wilderness characteristics, along with information on other uses and values, when preparing land use plans. Wilderness characteristics are features associated with the concept of wilderness that may be considered in land use planning (see Attachment #1).

The BLM will involve the public in the planning process to determine the best mix of resource use and protection consistent with the multiple-use and other criteria established in the FLPMA and other applicable laws, regulations and policies. Lands with wilderness characteristics may be managed to protect and/or preserve some or all of those characteristics. This may include protecting certain lands in their natural condition and/or providing opportunities for solitude, or primitive and unconfined types of recreation.

The BLM can make a variety of land use plan decisions to protect wilderness characteristics, such as establishing Visual Resource Management (VRM) class objectives to guide the placement of roads, trails, and other facilities; establishing conditions of use to be attached to permits, leases, and other authorizations to achieve the desired level of resource protection; and designating lands as open, closed, or limited to Off Highway Vehicles (OHV) to achieve a desired visitor experience.

The BLM also has authority to designate Areas of Critical Environmental Concern (ACEC) where special management attention is required to protect and prevent irreparable damage to important cultural, historic, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards. To qualify for consideration of the ACEC designation, such values must have substantial significance and value, with qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. Where ACEC values and wilderness characteristics coincide, the special management associated with an ACEC, if designated, may also protect wilderness characteristics. See BLM Manual 1613, Areas of Critical Environmental Concern, for more information.

See the Land Use Planning Handbook, H-1601-1, Section II, Land Use Plan Decisions and Attachment #1 of this IM for more information about making land use plan decisions to accomplish goals and objectives for resource management.

Considering wilderness characteristics in the land use planning process may result in several outcomes, including, but not limited to: 1) emphasizing other multiple uses as a priority over protecting wilderness characteristics; 2) emphasizing other multiple uses while applying management restrictions (conditions of use, mitigation measures) to reduce impacts to some or all of the wilderness characteristics; 3) emphasizing the protection of some or all of the wilderness characteristics as a priority over other multiple uses (though the area will not be designated a WSA).

The BLM is authorized to implement current land use plans until those plans are revised or amended (if appropriate), provided the implementation actions conform to the approved plans and are supported by adequate National Environmental Policy Act (NEPA) documentation, usually an environmental assessment (EA), environmental impact statement (EIS), or Categorical Exclusion (CE).

If the BLM determines that an area has wilderness characteristics that warrant consideration in the land use planning process, the BLM may initiate a plan amendment (or revision) with an accompanying NEPA document (EIS or EA) to consider changes to the current land use plan decisions. A decision regarding the timing of the plan amendment (or revision) is at the discretion of the State Director, and depends on the level of public interest, the position of State and local governments and cooperators, the adequacy of available information, funding, and other factors.

BLM Wilderness Inventories and Public Wilderness Proposals

Typically, the resource information contained in the BLM wilderness inventories was collected to support a land use planning process. Public wilderness proposals represent a land use proposal. In either case, the BLM is authorized to consider such information during preparation of a land use plan amendment or revision. For example, information contained in BLM wilderness inventories and public wilderness proposals may be considered when developing the affected environment section of the NEPA document that accompanies the land use plan. The information may also be used to develop the range of alternatives or to analyze the environmental impacts to the various natural, biological, and cultural resources – such as air, soil, water, vegetation, cultural, paleontological, visual, special status species, fish and wildlife – as well as resource uses – such as forestry, livestock grazing, recreation, lands and realty, coal, and fluid minerals. Refer to the Land Use Planning Handbook, H-1601-1, Appendix C, for guidance concerning the resources and resource uses to be considered in land use plans.

Alternatives are developed to reflect a reasonable range of management options considering all applicable information sources, such as the results of scoping, coordination with cooperating agencies, and practicality of management. The boundary of an area being considered in the land use plan for management of wilderness characteristics, therefore, is dependent on many factors and may or may not exactly follow the boundary of previous inventory areas.

Reviewing New Information

When implementing land use plans, the BLM must, as with any new information, determine if the BLM wilderness inventories or public wilderness proposals contain significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or impacts that have not previously been analyzed. Since every land use plan and supporting NEPA document is different, this determination will need to be done on a case-by-case basis. New information or changed circumstances alone, however, or the failure to consider a factor or matter of little consequence, is not a sufficient basis to require additional NEPA consideration prior to implementing a previously approved decision.

If the new information is sufficient to show that the action will affect the quality of the human environment in a significant manner or to a significant extent not already considered, then a supplemental NEPA document shall be prepared (40 CFR 1502.9).

To help determine whether the new information or circumstances is significant, the BLM should look at the definition of “significantly” at 40 CFR 1508.27, which requires consideration of both context and intensity. See Attachment #2 for more information regarding the review of new wilderness information during plan implementation.

The analysis of new information and the BLM’s determination regarding its significance should be documented, using, as an example, the Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA) worksheet.

It is important to note that the BLM must review the new information only when it is relevant to a pending decision or its environmental effects. When no action is being considered, the BLM may defer the reviews until a more appropriate time, such as when preparing a land use plan amendment or revision. .

Using New Information on Lands with Wilderness Characteristics to Implement Approved Land Use Plans

The BLM wilderness inventories and public wilderness proposals may contain new information on land and resource conditions that can be used in a variety of day-to-day operations. Examples of using the new information in day-to-day operations include applying new mitigation measures to on-the-ground projects; establishing reclamation standards; updating the BLM's resource databases; refining previously approved plan decisions (plan maintenance) to correct data, typographical, or mapping errors in the planning records; or implementing the decisions of the land use plan, such as when selecting routes in areas designated as limited to OHV travel.

When preparing NEPA documents for actions that implement the approved plan, the BLM may also use the information on lands and resources contained in BLM wilderness inventories and public wilderness proposals to describe the affected environment, and environmental impacts to the various natural, biological, and cultural resources. For example, information on naturalness may help describe the condition and trend of important wildlife habitat and could be included in the affected environment discussion if applicable. Similarly, information on the presence of roads and other facilities may be used to describe the current status of visual resources as well as the potential for the proposed action to affect those resources. Provided relevant new information is considered in the NEPA document in this fashion, it is not necessary to analyze impacts to the area identified by BLM wilderness inventories or public wilderness proposals as having wilderness characteristics.

If a NEPA document is being prepared for an action affecting lands with wilderness characteristics, and those characteristics are currently being considered in an on-going land use planning process, the BLM may acknowledge the status of the planning process and describe how the proposed action might affect future management considerations.

This may be accomplished in the discussion of the no action alternative or in the section of the NEPA document on plan conformance. The fact that the BLM is considering alternative management goals for the affected lands in a pending land use plan revision or amendment, however, does not change the management or use of those lands during the interim. The BLM is authorized to implement current land use plans until those plans are revised or amended, if appropriate, and may acknowledge on-going planning efforts to ensure that the decision-maker and the public are fully informed of the consequences of the proposed action.

Effect on On-going plans

This policy may require some BLM Field Offices to modify current Resource Management Plan (RMP) efforts. For RMPs where a Draft RMP/EIS has not been issued, Field Offices must ensure that the Draft RMP/EIS is consistent with this IM. If the BLM has already discussed or identified possible WSA designations with the public, BLM must explain the change in policy. There is no requirement, however, to reinitiate scoping or provide an additional comment period before releasing the Draft RMP/EIS since the public will be provided an opportunity to comment on the draft, including the range of alternatives and proposed management prescriptions.

For Draft RMP/EISs already issued that include designation of new WSAs in an alternative, it will be necessary to modify the Proposed RMP/Final EIS. If the effects of an alternative modified to comply with this policy are within the range of alternatives already analyzed in the Draft RMP/EIS, preparing a supplement to the Draft RMP/EIS is not necessary. Each affected Field Office must determine the need for a supplement in consultation with WO-210.

After receiving this guidance, State and Field Offices have 45 days to consider the implications of this IM in coordination with WO-210. In addition, within 45 days, State Directors will review and update their existing State and field office policies and other guidance and make necessary modifications to comply with the terms of this IM.

Timeframes: This policy is in effect immediately.

Budget Impact: This policy is expected to increase slightly the costs of ongoing planning efforts as modifications are made to planning documents to comply with this IM. For all other land use plans the policy should result in diminished costs.

Manual/Handbook Sections Affected: That sentence in the Land Use Planning Handbook (H-1601-1, Appendix C, Part III.B.1.a, Page 18) that directs BLM to “Designate WSAs to be managed under the interim management policy (H-8550-1),” is hereby deleted. No other portions of H-1601-1 are affected.

The Wilderness Inventory and Study Procedures Handbook (H-6310-1) was rescinded in “Rescission of National Level Policy Guidance on Wilderness Review and Land Use Planning” (IM-2003-195).

Coordination: This guidance was coordinated with WO-170, WO-200 and WO-300.

Contact: For further information, contact Mike Mottice at (202) 452-0362 or Geoff Middaugh at (202) 785-6592

Signed by:
James G. Kenna
Acting Assistant Director
Renewable Resources and Planning

Authenticated by:
Barbara J. Brown
Policy & Records Group, WO-560

2 Attachments

- 1- Definitions of Wilderness Characteristics for the Purpose of Land Use Planning and Management Considerations to Accomplish Plan Goals and Objectives (1 p)
- 2- Review of New Wilderness Information During Plan Implementation (2 pp)

Attachment 1

Definitions of Wilderness Characteristics for the Purpose of Land Use Planning and Management Considerations to Accomplish Plan Goals and Objectives

Definitions:

Wilderness Characteristics. Features of the land associated with the concept of wilderness that may be considered in land use planning when BLM determines that those characteristics are reasonably present, of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and are practical to manage.

Naturalness. Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable. BLM has authority to inventory, assess, and/or monitor the attributes of the lands and resources on public lands, which, taken together, are an indication of an area’s naturalness. These attributes may include the

presence or absence of roads and trails, fences and other improvements; the nature and extent of landscape modifications; the presence of native vegetation communities; and the connectivity of habitats.

Solitude and Primitive/Unconfined Recreation. Visitors may have outstanding opportunities for solitude, or primitive and unconfined types of recreation when the sights, sounds, and evidence of other people are rare or infrequent, where visitors can be isolated, alone or secluded from others, where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered.

Management Considerations:

A decision to protect or preserve certain lands in their natural condition, if appropriate, or provide outstanding opportunities for solitude, or primitive and unconfined types of recreation may be made at the conclusion of the land use planning process. Land use plan decisions may include establishing goals and objectives that describe the desired future condition of the land and resources, desired outcome of the recreation experience, and allowable uses. BLM may also identify the management actions necessary to achieve the intended goals and objectives, including the conditions of use that would be attached to permits, leases, and other authorizations to avoid or minimize impacts to the affected natural, biological, and cultural resources and other land uses. In some cases, when BLM determines that certain uses of the land could be incompatible with the achievement of other desired goals and objectives, those uses could be conditioned to the extent necessary to reach the necessary level of resource protection.

Attachment 2

Review of New Wilderness Information During Plan Implementation

The Land Use Planning Handbook (H-1601-1) provides some criteria to use when reviewing new information. Other factors to consider when reviewing new information contained in BLM wilderness inventories or public wilderness proposals that may be relevant to an implementation action are:

1. Was the information on land and resource conditions available to the BLM and adequately considered within the range, scope and analysis of the alternatives in the plan/EIS or other NEPA document, and is there adequate documentation to that affect?
2. Does the new information suggest significant changes in land and resource conditions have occurred since the plan/EIS or other NEPA document was completed?
3. Though BLM may not have formally disclosed in existing NEPA documents the impacts to the wilderness characteristics that have been identified in new inventories or public wilderness proposals, did BLM reasonably consider the environmental effects to the lands and resources that contribute to the wilderness characteristics in relevant NEPA documents?
4. Does the new information suggest that the impacts to those lands, if analyzed today, would be significantly different than the impacts already disclosed in the plan EIS or other NEPA document(s)?
5. Can BLM condition use of the lands for which new information exists in such a way that the effects of the action would not be significantly different from the effects already described?
6. Is the information at such a scale that BLM would ordinarily use the new information to make land use plan level decisions or is it more appropriate to consider for implementation level decisions?

New information or changed circumstances alone, however, or the failure to consider a factor or matter of little consequence, may not be sufficient basis to require additional NEPA consideration prior to implementing a previously approved decision. For example, the fact that roads and trails have become

overgrown since previous inventories were completed represents a changed circumstance. Such change is most likely the result of natural environmental processes and, alone, may not be sufficient to require the preparation of additional NEPA documentation. The fact that BLM did not specifically analyze impacts of the proposed action on wilderness characteristics identified since the current land use plan or NEPA document was prepared is not an omission that, alone, would indicate that additional NEPA consideration is required. In all cases then, BLM should evaluate: 1) the extent to which the new information presents potential significant environmental consequences associated with the proposed action that were not analyzed in the previous NEPA analysis; and 2) whether those consequences are of significant gravity in context or intensity.

Case Law on Supplementation of NEPA

The lead case from the United States Supreme Court on supplementation is Marsh v Oregon Natural Resources Council, 490 U.S. 360 (1989). It provides that “an agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decision-making intractable, always awaiting updated information only to find the new information outdated by the time the decision is made.” Id. at 373.

Rather, to trigger supplementation obligations, the new information must be sufficient to show that the proposed action will affect the quality of the human environment “in a significant manner or to a significant extent not already considered.” Id. at 374.

The following is Arizona guidance issued in and excerpted from IM AZ-2005-007, Attachment 1:

State Director Guidance Specific to Wilderness Characteristics Land Use Allocations

Consistent with policy, the BLM has the authority to address wilderness characteristics and prescribe goals, objectives, and management actions in land use plans. Given the flexibility in how to consider wilderness characteristics in land use plans that is provided in Instruction Memorandum No. 2003-275 - Change 1 and recognizing the controversial nature of this topic, both in public and agency eyes, a consistent approach to addressing wilderness characteristics in Arizona land use plans is provided below. Key elements of the planning process are identified and the approach to be applied is addressed within each of these basic components of the plan.

Terminology – Use the term “wilderness characteristics” appropriately in the plan, including for plan section headings. Wilderness characteristics are features of the land and are specifically identified in Instruction Memorandum (IM) No. 2003-275 – Change 1 as naturalness, solitude and primitive/unconfined recreation. Definitions are provided in IM No. 2003-275 – Change 1, Attachment 1. The IM guidance makes consistent reference to the term wilderness characteristics. Wilderness characteristics are the resource that the citizen groups have identified, as validated by BLM, and where present on any additional lands, that the BLM is recognizing in the planning process. In the short term of completing the plan, this clarifies to the public that wilderness characteristics are being considered and proposed for management in the plan. Over the long term of implementing the plan, the wilderness resource remains recognizable for management and maintenance of the characteristics as intended when the plan was completed.

Desired Future Conditions – Describe Desired Future Conditions for wilderness characteristics using the verbs “maintain or manage.” The FLPMA Section 603 “non-impairment standard” (Interim Management Policy for Wilderness Study Areas) **will not** be applied to management of wilderness characteristics. Additionally, wilderness characteristics **will not** be managed as designated wilderness under the Wilderness Act of 1964.

Land Use Allocation – The land use plan will make an allocation for maintaining wilderness characteristics on certain lands where they exist. The term “Manage for Wilderness Characteristics” as a title for such an allocation **will not** be used. Instead, more general references to these allocations, such as lands with wilderness characteristics or areas having wilderness characteristics, will be used. Do not develop or use acronyms.

Management Actions – List one set of management prescriptions for all wilderness characteristics allocated lands in an alternative as a whole as uniformly as possible. In uncommon circumstances, a grouping of units or an individual area may have described management that differs from other lands in the alternative to recognize specific management situations.

Identification – Wilderness characteristics will be a GIS theme depicted on maps in Chapters 2 (Alternatives) and 3 (Affected Environment) of the plan. Maps may have a descriptive phrase to distinguish Chapter 2 maps (“Lands managed to maintain wilderness characteristics”) from Chapter 3 maps (“Lands identified as having wilderness characteristics”). Polygons depicting areas of wilderness characteristics will be shown on the maps. Individual place names for identified lands and allocated areas **will not** be listed in the land use plan. Total acreage of lands allocated to maintaining wilderness characteristics will be presented by alternative rather than listing the separate acreages of individual areas.

Summary – Use of this approach shows the BLM’s intent to clearly address citizen proposals and allows citizen groups to track whether their individually proposed areas are included within the lands that would be allocated by alternative. Wilderness characteristics and the management direction to maintain them would be apparent in the plan contributing to the long-term maintenance of the resource.

Appendix J - Vegetation Communities Related to Fire

Related to Fire

The following vegetative communities are present in the Agua Fria National Monument and the Bradshaw-Harquahala planning areas. The vegetative communities' descriptions are found in the Arizona Statewide land Use Plan Amendment for Fire, Fuels and Air Quality Management, Appendix C.

Each vegetation community is fully described by Brown (1982a, 1994). The Brown classification for the American Southwest is based on biogeography delineators such as climate, vegetation physiognomy, and plant dominants.

Upland Sonoran Desert Scrub

The Upland Sonoran Desert Scrub vegetation is at times referred to as the Arizona Desert or Paloverde-Cacti Desert. This vegetation is mainly associated with the Lower Sonoran Desert Scrub. It occurs on BLM land in the western part of the state and is the largest vegetation community at 3,280,602 acres. Cacti plants are characteristic of this desert scrub and include buckhorn cholla, cane cholla, chain fruit cholla, teddy bear cholla, desert Christmas cactus, pencil cholla, Klein cholla, Devil's club ground cholla, fishhook pincushion, Thornber pincushion, fish-horn barrel cactus, compass barrel cactus, and saguaro. Non-cactus dominant woody plants are blue palo verde, foothill palo verde, ironwood, creosotebush, white bursage, whitethorn acacia, limber bush, ocotillo, jojoba, little-leaved ratany, crucifixion thorn, and bush buckwheat. Fire is not common in this vegetation community. The Desired Future Conditions are for an adequate cover and mix of natural plant species that have good vigor. In terms of fire management and fire ecology, the Desired Future Conditions are for fire to control or reduce the exotic annual weeds such as red brome and to limit woody vegetation to non-hazardous levels.

A great majority of this vegetation occurs on slopes and broken ground giving it the name of Upland Sonoran Desert Scrub. Elevations range between 984-3,280 ft. Average annual precipitation is unreliable and bi-seasonal which averages 12-16 inches with approximately 30–60% occurring during summer months. Temperatures are warm and characteristic of subtropical deserts with a winter temperature range of 9–19 °C and summer range of 22–27 °C. Soils are variable but predominately sand characteristically covered with desert pavement. Historic fire had a return interval of decades to hundreds of years and was probably not common in this vegetation community (Rogers and Steele 1980). However, today the risk of wildfire may increase after abnormally high annual precipitation which encourages abundant growth of red brome and buffelgrass (McAuliffe 1995).

Numerous mammals occupy this prevalent vegetation community, including mule deer (*Odocoileus hemionus*), desert bighorn sheep (*Ovis Canadensis*), javelina (*Tayassu tajacu*), mountain lion (*Felis concolor*), ringtail cat (*Bassariscus astutes*), bobcat (*Felis rufus*), California leaf-nosed bat (*Macrotus californicus*), California myotis (*Myotis californicus*), black-tailed jack-rabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), spotted skunk (*Spilogale gracilis*), striped skunk (*Mephitis mephitis*), Arizona pocket mouse (*Perognathus amplus*), Bailey's pocket mouse (*Chaetodipus baileyi*), cactus mouse (*Peromyscus eremicus*), white-throated wood rat (*Neotoma albigula*), gray fox (*Urocyon*

cinereoargenteus), the endemic Harris antelope squirrel (*Ammospermophilus harrisi*), and mesquite mouse (*Peromyscus merriami*). This paloverde-cacti-mixed scrub series supports diverse bird communities, including many species associated with other vegetation communities that extend into suitable habitats in the Arizona Upland Sonoran Desert Scrub. These species include typical thornscrub species such as Harris' hawk (*Parabuteo unicinctus*), white-winged dove (*Zenaida asiatica*), elf owl (*Micrathene whitneyi*), pyrrhuloxia (*Cardinalis sinuatus*), the "cactus" woodpeckers (gila woodpecker (***Melanerpes uropygialis***), northern flicker (*Colaptes auratus*), and ladder-backed woodpecker (*Picoides scalaris*), curve-billed thrasher (*Toxostoma curvirostre*), cactus wren (*Campylorhynchus brunneicapillus*), lack-throated sparrow (*Amphispiza bilineata*), red-tailed hawk (*Buteo jamaicensis*), Gambel's quail (*Lophortyx gambelii*), gilded flicker (*Colaptes chrysoides*), ash-throated flycatcher (*Myiarchus cinerascens*), house finch (*Carpodacus mexicanus*), and black-tailed gnatcatcher (*Poliophtila melanura*). Many Sonoran and other desert reptiles also add to the wildlife diversity of this vegetation community, including species with more limited ranges such as western whiptail (*Cnemidophorus tigris*), gila monster (*Heloderma suspectum*), Arizona Sonoran coral snake (*Micruroides euryxanthus*), tiger rattlesnake (*Crotalus tigris*), desert tortoise (*Gopherus agassizii*), Mojave green rattlesnake (*Crotalus scutulatus scutulatus*), western rattlesnake (*Crotalus viridis*), western diamondback rattlesnake (*Crotalus atrox*), regal horned lizard (*Phrynosoma solare*), desert horned lizard (*Phrynosoma platyrhinos*), and ornate tree lizard (*Urosaurus ornatus*) (Brown 1994).

Lower Sonoran Desert Scrub

The Lower Sonoran Desert Scrub vegetation on BLM land occurs mainly in western Arizona. It is the second most common vegetation type on BLM land as it occupies 2,727,540 acres. This vegetation type is relatively species rich in comparison with the Great Basin Desert Scrub as there is a mixture of different shrub species throughout this type. The Sonoran Desert Scrub vegetation is associated with Mohave Desert Scrub and Upland Sonoran Desert Scrub. Characteristic shrubs are creosotebush, whitebursage, octillo, brittlebrush, foothill palo verde, fourwing saltbush, and Ironwood. Saguaro is a characteristic cactus. Western honey mesquite, ironwood, catclaw acacia, blue palo verde, desert willow, and smoketree are usually associated with washes. Big galleta grass is an important grass species. Invasive weedy species include exotic species such as buffelgrass, red brome, filaree, prickley lettuce, Russian thistle, and London rocket. Fire is not common in this vegetation community. The Desired Future Conditions are for an adequate cover and mix of natural plant species that have good vigor. In terms of fire management and fire ecology, the Desired Future Conditions are for fire to control or reduce the exotic annual weeds such as red brome and buffelgrass, and to limit woody vegetation to non-hazardous levels.

As a result of high temperatures and low precipitation, plant growth is typically opened and simple reflecting intense competition for soil water among individuals. Annual precipitation varies between 2 and 9 inches. Winter temperatures are mild but summer months are hot, and desert pavement is common. Vegetation tends to occur along washes and small drainages. Sand dunes are common in some areas. Historic fire had a return interval of decades to hundreds of years and was probably not common in this vegetation community (Rogers and Steele 1980). However, today the risk of wildfire may increase after abnormally high annual precipitation which encourages abundant growth of red brome and buffelgrass (McAuliffe 1995).

Mammals typical to this arid region are generally small burrowing mammals, such as mule deer (*Odocoileus hemionus*), desert bighorn sheep (*Ovis Canadensis*), javelina (*Tayassu tajacu*), mountain lion (*Felis concolor*), ringtail cat (*Bassariscus astutes*), bobcat (*Felis rufu*), grey fox (*Urocyon cinereoargenteus*), kit fox (*Vulpes velox*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), black-tailed jack rabbit (*Lepus californicus*), desert pocket mouse (*Chaetodipus penicillatus*), and desert

and Merriam Kangaroo rats (*Dipodomys deserti* and *D. merriami*), as well as the ubiquitous coyote (*Canis latrans*). This vegetation community is the poorest of the Sonoran Desert for birds, because of its sparsely vegetated and structurally shorter habitats. Typical bird species include lesser numbers of arid-adapted species, such as the LeConte's thrasher (*Toxostoma lecontei*), white-winged dove (*Zenaida asiatica*), elf owl (*Micrathene whitneyi*), black-throated sparrow (*Amphispiza bilineata*), loggerhead shrike (*Lanius ludovicianus*), cactus wren (*Campylorhynchus brunneicapillus*), red-tailed hawk (*Buteo jamaicensis*), ash-throated flycatcher (*Myiarchus cinerascens*), gilded flicker (*Colaptes chrysoides*), mourning dove (*Zenaida macroura*), Gambel's quail (*Lophortyx gambelii*), and verdin (*Auriparus flaviceps*). Amphibians include Couch's spadefoot toad (*Scaphiopus cochii*), western green toad (*Bufo debilis* insidiator), and Woodhouse's toad (*Bufo woodhousii*). This vegetation community supports a diverse and productive community of reptiles. The sandy plains and dunes of the Lower Colorado River Sonoran Desert Scrub support a number of unique sand-adapted lizards and snakes, such as fringe-toed lizards (*Uma inornata*), banded sand snake (*Chilomeniscus cinctus*), and sidewinder (*Crotalus cerastes*). Rocky outcrops, bajadas, talus slopes, washes, and gravel plains each support varied and often different herpetofauna communities – chuckwalla (*Sauromalus ater*), desert spiny lizard (*Sceloporus magister*), western whiptail (*Cnemidophorus tigris*), desert glossy snake (*Arizona elegans eburnata*), western rattlesnake (*Crotalus viridis*), regal horned lizard (*Phrynosoma solare*), desert horned lizard (*Phrynosoma platyrhinos*), gopher snake (*Pituophis catenifer*), and desert tortoise (*Gopherus agassizii*) (Brown 1994).

Great Basin Pinyon-Juniper Woodland

Great Basin Pinyon-Juniper Woodland vegetation is wide spread throughout Arizona and grows on 1,533,012 acres of BLM land. It is associated with Upland Sonoran Desert Scrub and Great Basin Pinyon-Juniper Woodland vegetation. The Great Basin Conifer community is a cold-desert, evergreen woodland that is characterized by juniper and pinyon pine trees. Juniper trees tend to dominate at elevations below 6,560 ft, while pinyon pine dominates at the higher elevations. These trees are short-growing and rarely exceed 12 m in height. The canopy cover is mostly opened except on higher elevations or mesic sites where tree limbs may interlock. Understory shrubs, forbs, and grasses are usually sparse due to aridity and intense competition for soil water from the juniper and pinyon pine trees. Important juniper species are Rocky Mountain juniper and Great Basin juniper. The Rocky Mountain pinyon pine dominates in Arizona. Associated grasses may include blue gramma, galleta grass, Indian ricegrass, western wheatgrass, Junegrass, and several muhleys or dropseeds. Dominant shrubs are big sagebrush, snakeweed, rabbitbrush, winterfat, black sagebrush, blackbrush, cliffrose, Apache plume, Mormon-tea, fourwing saltbrush, antelope bitterbrush, and yucca. Forbs include several gilia, buckwheat, penstemon, lupine, and globemallow species. The mixtures of grasses, shrubs, and forbs depend on soil, precipitation, temperature, and disturbance. Cacti include several different species of hedgehog, pricklypear, and cholla.

The Great Basin Pinyon-Juniper Woodland is cold-temperate woodland characterized by cold winter temperatures with freezing temperatures occurring approximately 150 days per year. Summer temperatures are warm. Annual precipitation ranges between 10 and 22 inches, is distributed evenly throughout the year, and mainly occurs as snow in winter months. Soils are characteristically shallow and rocky. Juniper trees have invaded large areas of former grasslands and sagebrush dominated rangelands. Several factors, including fire suppression, climate change, and livestock grazing, may be responsible for the juniper invasion. Efforts to remove the invading trees have not been successful. Historic wildfire was not common. The sparse understory and openness of the pinyon–juniper woodlands did not support the spread of fire except on mesic areas where fuel was sufficient (Paysen et al. 2000). However, in modern times, many of these woodlands have sufficient fuel loads to support fire because of increased tree densities and the establishment of cheatgrass, red brome, buffelgrass and other annual weeds. The Desired Future Conditions are that annual weeds such as cheatgrass are controlled, ladder fuels and

downed woody debris are limited or not present, and juniper and piñon pine tree densities and cover occur at their historic range of variation.

Only a few vertebrate species are closely tied to or centered within this vegetation community, such as mountain lion (*Felis concolor*), coyote (*Canis latrans*), grey fox (*Urocyon cinereoargenteus*), ringtail cat (*Bassariscus astutus*), mule deer (*Odocoileus hemionus*), pinyon mouse (*Peromyscus truei*), bushy-tailed woodrat (*Neotoma cinerea*), Hualapai Mexican vole (*Microtus mexicanus hualpaiensis*), pinyon jay (*Gymnorhinus cyanocephalus*), gray flycatcher (*Empidonax wrightii*) Gray vireo (*Vireo vicinior*), black-throated gray warbler (*Dendroica nigrescens*), Scott's oriole (*Icterus parisorum*), wild turkey (*Meleagris gallopavo*), long-eared owl (*Asio otus*), Cassin's kingbird (*Tyrannus vociferans*), chipping sparrow (*Spizella passerina*), juniper titmouse (*Baeolophus ridgwayi*), ash-throated flycatcher (*Myiarchus cinerascens*), Bewick's wren (*Thryomanes bewickii*), bushtit (*Psaltriparus minimus*), western scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), gray vireo (*Vireo vicinior*), mountain bluebird (*Sialia currucoides*), Woodhouse's toad (*Bufo woodhousii*), Great Basin spadefoot toad (*Spea intermontana*), and the Striped whiptail (*Cnemidophorus velox*). A somewhat larger number of the more adaptable, and therefore, more widely distributed species also may be found in these habitats year-round or seasonally (Brown 1994).

Great Basin Desert Scrub

Great Basin Desert Scrub vegetation occurs on 1,058,401 acres of BLM land in the Arizona Strip, Phoenix, Kingman, and Safford Field Offices. The Painted Desert is predominately Great Basin Desert Scrub vegetation. It is associated with Upland Sonoran Desert Scrub and Great Basin Pinyon-Juniper Woodland vegetation. Species diversity is low with dominant shrubs occupying vast tracts of land. Characteristic vegetation is low-growing, widely spaced hemispherical, non-sprouting shrubs with widely spaced bunchgrasses. Dominant shrubs include big sagebrush, black sagebrush, Bigelow sagebrush, shadscale, fourwing saltbush, rabbitbrush, winterfat, hopsage, horsebrush, blackbrush, and greasewood. Associated grasses may include blue gramma, galleta grass, Indian ricegrass, western wheatgrass, Junegrass, and several muhleys or dropseeds. Forbs include several gilia, buckwheat, penstemon, lupine, and globemallow species. Cacti number and species in Great Basin Desertscrub are relatively few in comparison to those found in warm deserts. Cactus plants are small in stature or prostrate and include several species of prickly pear, hedge hog, and cholla. The mixtures of the different plants depend on soil, precipitation, temperature, and disturbance. Introduced weeds such as cheatgrass, medusahead, red brome, Russian thistle, halogeton, filaree, tumble mustard occur on disturbed sites. The introduced woody plants, Russian olive and saltcedar are commonly found present in riparian corridors. Historic fire intervals range between 5–100 years depending on the shrub community type and fuel build-up (Paysen et al. 2000). Annual weeds such as cheatgrass and red brome have caused an increase in fire re-occurrence and fuel flammability. The Desired Future Conditions are for fire to naturally reduce annual weed densities and cover, limit or reduce the invasion of juniper, and for the densities of shrubs, such as big sagebrush, to be maintained within their historic range of variability.

The Great Basin Desert Scrub is part of the Great Basin Desert which is a cold desert characterized by cold, harsh winters, hot summers, and low precipitation. Elevation ranges between 3,930 and 7,220 ft. Average annual precipitation is approximately less than 10 inches with the majority occurring during the winter months as snow. Maximum daily temperature values may remain below freezing during many days of December, January and February—the three coldest months of the year. For much of the area, increasing spring and summer temperatures coincide with decreasing soil water supplies which limits plant growth.

A distinct fauna is centered in this vegetation community. Mule deer (*Odocoileus hemionus*), bighorn sheep (*Ovis canadensis*), Townsend's ground squirrel (*Spermophilus townsendi*), badger (*Taxidea taxus*),

long-tailed pocket mouse (*Perognathus formosus*), and northern grasshopper mouse (*Onychomys leucogaster*) are associated with sagebrush communities of the Great Basin Desert Scrub. Large ungulates are poorly represented here, however several birds such as the golden eagle (*Aquila chrysaeos*), burrowing owl (*Athene cunicularia*), Sage thrasher (*Oreoscoptes montanus*), Sage sparrow (*Amphispiza belli*), Vesper sparrow (*Pooecetes gramineus*), common raven (*Corvus corax*), rock wren (*Salpinctes obsoletus*), horned lark (*Erempphila alpestris*), Say's phoebe (*Sayornis saya*), western meadowlark (*Sturnella neglecta*), and Brewer's sparrow (*Spizella breweri*) are characteristic of sagebrush communities. The Sagebrush lizard (*Sceloporus graciosus*) and Great Basin spadefoot toad (*Scophiopus intermontanus*) are common representative species. A number of reptilian subspecies such as Desert horned lizard (*Phrynosomo platyrhinos platyrhinos*), and Great Basin and Plateau tiger whiptails (*Cnemidophorus tigris tigris* and *C. Tigris septentrionalis*) are indicative of Great Basin Desert Scrub and a history of evolutionary separation (Brown 1994).

Semidesert Grassland

The Semidesert Grassland is located on 757,668 acres of BLM land mainly in east-central and southeast Arizona. This vegetation type is associated with Plains and Great Basin grassland, Madrean Evergreen Woodland, and Chihuahuan Desert Scrub. Originally the grasses were perennial bunchgrasses but grazing has encouraged the increased growth of sod grasses on areas with deep soil and heavy to moderate rainfall. The bunchgrasses have been replaced by annual grasses in areas with low precipitation. In some areas with deep soils and well protected from erosion bunchgrasses still cover large areas in association with a few shrubs and cacti. However, there are areas where grass cover has been reduced as a result of woody plant and cacti colonization. Fire with moderate return intervals was important in the ecology of these grasslands (Paysen et al. 2000). However, grazing and fire suppression has altered the historic natural fire regime. The Desired Future Conditions are for perennial grasses to cover its historic range of variability, annual grass cover is reduced, and fire naturally inhibits the invasion of woody plants such as juniper, tarbush, whitethorn, and creosotebush.

Tobosa grass and black grama are the most dominant species in the Semidesert Grassland. Tobosa grass is generally found growing on heavy soils that are subject to flooding. Black grama is usually found of gravelly, upland soils. The other grasses are numerous and include black grama, sideoats grama, black grama, slender grama, chino grama, bush muhly, threeawn species, Arizona cottontop, vine grass, plains bristlegrass, plains lovegrass, wolftail, and little bluestem. Lehmann lovegrass was introduced for its forage value but has expanded at the expense of more palatable grass species. The assorted shrubs that are intermixed among the grasses include mesquite, one-seed juniper, lotebush, all-thorn, Mormon tea, false mesquite, catclaw acacia, desert hackberry, barberry, and ocotillo. Tarbush, whitethorn, and creosotebush have invaded extensive areas. Cacti and other succulents are important in this vegetation type and they include several yucca species, sotols, beargrass, several agrave species, barrel cactus, Turk's head, cane cholla, desert Christmas cholla, rainbow cactus, and several pricklypear and hedgehog species. The important forbs include mallow, lupine, buckwheat, filaree, spiderling, white-mat, amaranth, and devils claw. Invasive grasses include red brome, bristlegrass, foxtail barley, and wild oats which are increasing as a result of past grazing practices.

The Semidesert grassland is a warm temperate grassland ranging in elevation from 2,300-4,920 ft. Most of this grassland receives an annual precipitation between 8-12 inches with the majority coming during the spring and summer. Winters are mild and freezing temperatures occur generally less than 100 days during the year. Summers are warm with several days over 38 °C.

The Pronghorn antelope (*Antilocapra americana*) and White-tailed deer (*Odocoileus virginianus*) are the primary large grazing mammals associated with the Semidesert Grassland. The Javelina (*Dicotyles*

tajacu), also known as the Collared peccary, can be found in the Semidesert Grassland. Small burrowing mammals are primarily represented by the Black-tailed jackrabbit (*Lepus californicus*) and various burrowing rodents, including the Spotted ground squirrel (*Spermophilus spilosoma*), Hispid pocket mouse (*Perognathus hispidus*), antelope jack rabbit (*Lepus alleni*), and northern grasshopper mouse (*Onychomys leucogaster*). Numerous bird species include Swainson's hawk (*Buteo swainsoni*), Mourning dove (*Zenaido macroura*), greater roadrunner (*Geococcyx californianus*), Say's phoebe (*Sayornis saya*) Cactus wren (*Campylorhynchus brunneicapillus*), Gambel's quail (*Lophortyx gambelii*), Black-throated sparrow (*Amphispiza bilineata*), Cassin's sparrow (*Aimophila cassinii*), Botteri's sparrow (*Aimophila botterri*), brown-headed cowbird (*Molothrus ater*), Chihushuan raven (*Corvus cryptoleucus*), scaled quail (*Callipepla squamata*), and burrowing owl (*Athene cunicularia*). The amphibian Woodhouse's toad (*Bufo woodhousii*) is found within this vegetation community. Reptiles include the Desert box turtle (*Terrapene ornate luteola*), Mexican (western) hognose snake (*Heterodon nasicus kennerlyi*), the all-female Desert-grassland whiptail (*Cnemidophorus uniparens*), and common earless lizard (*Holbrookia texana scitula*) (Brown 1994).

Interior Chaparral

Interior Chaparral vegetation represents 425,287 acres of BLM land mainly in western Arizona. It is associated with Upland Sonoran Desert Scrub, Lower Sonoran Desert Scrub, Mohave Desert Scrub, and Great Basin Pinyon-Juniper Woodland vegetation. The vegetation is dominated by shrubs with small, thick, evergreen leaves and wide-spreading, deep root systems. Historic fire was an important component of the ecosystem (Pase and Brown 1982a). As such, the shrubs are well adapted to fire and reproduce readily from heat-scarified seed that is stored in soil for decades. Some species readily sprout from root crowns after fire. The dense compacted leafy growth of the shrubs are naturally flammable which leads to a high fire hazard. The dominant plant is shrub live oak. Other shrubs are birchleaf mountain mahogany, skunkbush sumac, silktassel, desert ceanothus, hollyleaf buckthorn, cliffrose, desert olive, sophora, and Arizona rosewood. Shrub cover is approximately 60–70% which allows grasses such as sideoats grama, hairy grama, cane bluestem, plains lovegrass, wolftail, and threeawn to grow in the inter-shrub spaces. Forbs are not common except after fire and include penstemon species, Wright's verbena, goldenrod, purple nightshade, hoarhound, and scarlet morning glory. Occasionally, one-seed juniper, emory oak, or pinyon pine may occur. Weedy species include filaree and red brome which are increasing because of disturbances such as grazing and fire. The Desired Future Conditions are that fire naturally maintains shrub cover while reducing annual grass cover, the invasion of woody plants such as juniper and piñon pine are controlled, and the average age of chaparral stands is reduced through controlled fire or mechanical treatment.

Interior Chaparral vegetation is considered a warm-temperate scrubland with elevations mainly between 3,445-6,070 ft but higher sites occur on drier and warmer slopes. The climate is characterized by cool, moist winters and hot, dry summers. The majority of precipitation occurs during winter months when plants are dormant or nearly so.

Small mammals associated with the Interior Chaparral include the Cliff chipmunk (*Eutamias dorsalis*), White-footed mouse (*Peromyscus leucopus*), White-throated woodrat (*Neotoma albiguld*), and eastern cottontail (*Sylvilagus floridanus*). Nesting birds include the Spotted towhee (*Pipilo maculatus*), Virginia's warbler (*Vermivora virginiae*), western scrub jay (*Aphelocoma californica*), Crissal thrasher (*Toxostoma dorsale*), black-chinned sparrow (*Spizella atrogularis*), rufous-crowned sparrow (*Aimophila ruficeps*), bushtit (*Psaltiriparus minimus*), blue-gray gnatcatcher (*Polioptila caerulea*), Scott's oriole (*Icterus parisorum*), rock wren (*Salpinctes obsoletus*), and canyon wren (*Catherpes mexicanus*). Amphibians common to this vegetation community include Woodhouse's toad (*Bufo woodhousii*) and Arizona toad (*Bufo microscaphus*). Reptiles common to the Interior Chaparral include the Western threadsnake

(*Leptotyphlops humilis*), Glossy snake (*Arizona elegans*), Smith's black-headed snake (*Tantilla hobartsmithi*), Western rattlesnake (*Crotalus viridis*), Western fence lizard (*S. occidentalis*), Arizona alligator lizard (*Gerrhonorus kingi*), and Sonora mountain kingsnake (*Lampropeltis pyromelana*) (Brown 1994).

Riparian

Riparian vegetation is found on 176,927 acres of BLM land in association with streams and rivers. The area occupied by riparian vegetation is relatively small in relationship with other vegetation types but their biological and ecological importance is larger than their limited geographic occurrence. Riparian vegetation is important to wildlife as forage, cover, breeding, and migration corridors. Riparian corridors have been greatly disturbed by a variety of activity such as grazing, mining, tree harvesting, and stream flow alteration. The Desired Future Conditions are that annual weed cover and density is controlled and ladder fuels and downed woody debris are limited or not present. Disturbances such as livestock grazing, mining, and off road vehicle travel, that can potentially reduce natural vegetation cover and vigor, are managed to maintain adequate cover and mix of natural plant species.

The nature and species composition of the riparian vegetation changes depending on elevation and associated upland vegetation community. For example, at high elevation stream gradients are steep with relatively high precipitation and cool temperatures, while at low elevations stream gradients are gentle, low precipitation, and warm temperatures. At the higher elevations Pacific willow, bigtooth maple, narrowleaf cottonwood, box elder, black cherry, sycamore, Arizona walnut, velvet ash and western soapberry and red willow are the woody plants. At lower elevations mesquite, Gooddings willow, netleaf hackberry, western soapberry, velvet ash, Wright's Sycamore, and black cherry characterize riparian vegetation. Russian olive and saltcedar are two invasive woody plants that have colonized large expanses of low- to mid-elevation riparian corridors.

Large mammals characteristic of riparian woodlands include White-tailed deer and Black bear (*Ursus americanus*). Small rodents include Arizona gray squirrel (*Sciurus arizonensis*). The River otter (*Lutra canadensis*) is a rare species found in woodlands adjacent to streams. Small carnivores such as Ringtailed cat (*Bassaricus astutus*) and Skunk (*Mephitis spp, spilogale putorius*) are also found in woodlands containing streams. Red bats (*Lasiurus borealis*) are found in riparian woodlands. Riparian habitats typically host the greatest variety, and often numbers, of birds in Arizona, with many being riparian-obligate species. Examples of bird species inhabiting riparian woodlands include the Zone-tailed hawk (*buteo albonotatus*), Northern (Bullock's) oriole (*Icterus galbula*), Yellow-billed cuckoo (*Coccyzus americanus*), Black phoebe (*Sayornix nigricans*), the Federally endangered Southwestern willow flycatcher (*Empidonax traillii extimus*), brown-crested flycatcher (*Myiarchus tyrannulus*), yellow warbler (*Dendroica petechia*), Bell's vireo (*Vireo bellii*), Lucy's warbler (*Vermivora luciae*), black-chinned hummingbird (*Archilochus alexandri*), summer tanager (*Piranga rubra*), lesser goldfinch (*Carduelis psaltria*), yellow-breasted chat (*Icteria virens*), hooded oriole (*Icterus curullatus*), Abert's towhee (*Pipilo aberti*), western screech-owl (*Otus asio*), ash-throated flycatcher (*Myiarchus cinerascens*), Gambel's quail (*Lophortyx gambellii*), Costa's hummingbird (*Calypte costae*), and Pyrrhuloxia (*Cardinalis sinuatus*). Arizona treefrog (*H. Wringtonum*), canyon treefrog (*Hyla arenicolor*), Woodhouse's toad (*Bufo woodhousii*), tiger salamander (*Ambystoma tigrinum*), and leopard frogs (*Rana spp.*) are found more in interior forest. Ringnecked snake (*Diadophis punctatus*), black-necked gartersnake (*Thamnophis cyrtopsis cyrtopsis*), Mexican gartersnake (*Thamnophis eques megalops*), Checkered gartersnake (*Thamnophis marcianus marcianus*), narrow-headed gartersnake (*Thamnophis rufipunctatus*), Arizona mud turtle (*Kinosternon*), yellow mud turtle (*Kinosternon*), and Sonora mud turtle (*Kinosternon sonoriensei*) are often found in riparian woodlands.

Cotton rat (*Sigmodon hispidus*), White-footed mouse (*peromyscus leucopus*), Desert pocket mouse (*Perognathus penicillatus*), and Arizona shrew (*Sorex arizonae*) are commonly found in the Riparian Scrub, as well as in other communities. Phainopepla (*Phainopepla nitens*), Crissal thrasher (*Toxostoma dorsale*), Verdin (*Auriparus flaviceps*) and Black-tailed gnatcatcher (*Poliopitila melanura*) are representative of nesting birds. Red-spotted toad (*Bufo punctatus*), though found in various communities, is quite common to the Riparian Scrub.

Appendix K – Special Stipulations for Special Recreation Permits

In addition to the conditions and stipulations listed on the Special Recreation Application and Permit form, the Arizona and Phoenix District BLM have established the following additional stipulations designed to protect the lands and resources involved, reduce user conflicts, and/or minimize health and safety hazards. The stipulations will be made part of the permit. Failure to comply with these stipulations may result in the loss of permit privileges.

General Administrative:

Estimated fee payments, or the minimum non-refundable annual fee, whichever is applicable, will be submitted in advance to the BLM authorized officer prior to issuance or validation of the permit. Any additional use fees will be due at the end of the six month reporting period in which the fees were accrued. Overpayment of fees will be applied to the following year=s estimated use fees. Use fees for commercial permits are 3% of gross revenue or the minimum annual fee of \$80, whichever is greater.

Post-use reports and estimated fee payments for annual and multi-year permits will be submitted to the BLM on a fiscal year semi-annual basis. They are due within 15 days after the six month use period (April 15 and October 15).

The permittee is required to contact private landowners and other governmental agencies whose property is affected by the use associated with the permit (this includes the Arizona State Land Department for state trust lands). Evidence that authorization has been obtained must be available to the BLM authorized officer upon request.

Any changes to the approved Plan of Operations must first be approved by the BLM authorized officer. This includes the use of subcontractors.

The permit does not authorize exclusive use and shall not be construed in any way so as to prevent public use or access on any public lands except as expressly allowed under the permit.

The permittee is required to provide the BLM authorized officer with a copy of a valid Certificate of Insurance covering the periods of use. The U.S. Government must be named as a co-insured party on the policy. Minimum general liability limits are: \$300,000 per occurrence and \$500,000 annual aggregate for bodily injury, and \$30,000 property damage per occurrence and \$50,000 annual aggregate, if the policy specifies aggregate limits.

It is the responsibility of the permittee to ensure valid insurance coverage, including general public liability, with the limits listed above, is provided for all equipment and services supplied by subcontractors. A copy of the valid insurance coverage must be made available to the BLM authorized officer upon request.

A copy of this permit and the stipulations must be carried by guides during all tours conducted on BLM-administered lands, and must be made available to any BLM employee or client upon request.

Any violation of the permit terms, conditions and stipulations may be subject to penalties prescribed in 43 CFR 8372.0-7, which may include fines up to \$1,000 and/or imprisonment up to 12 months. Additionally, any such violation may result in permit probation, suspension or revocation. Examples which can lead to permit violations include, but are not limited to; delinquent post use reports and/or payments, deviations to operating plan not approved by authorized official, violation of laws and regulations, significant resource damage and public endangerment.

All signs on public lands must be authorized by the BLM in writing.

The permittee is responsible for ensuring the safety of all clients and support personnel, assuring that all permit actions are in conformance with local, state and federal health and safety standards and providing for appropriate emergency attention.

All injuries requiring emergency hospital care will be reported to the BLM authorized officer within two days of the occurrence and a Death and Injury Report submitted to the BLM authorized officer within 10 days of the occurrence.

The BLM reserves the right to alter the terms, conditions or stipulations of a permit at any time for reasons such as significant policy, administrative procedure or stipulation change.

Annual permits remain valid if the permittee is in good standing by complying with all terms, conditions and stipulations including timely submission of post use reports, and applicable use fee payments. For multi-year permits, an annual review is done at the beginning of each fiscal year (October 1) and permits are validated for the upcoming fiscal year. For a permit to be validated, the permittee must be in good standing by complying with all terms, conditions and stipulations including timely submission of post use reports, and applicable use fee payments. In addition, certificates of insurance shall be current, and operating plans must be reviewed and updated with any changes before a permit will be validated for the upcoming fiscal year.

Resource Protection:

All activities are to remain on the approved roads, trails, washes and/or staging areas. No deviation to these routes is permitted without prior approval from the BLM authorized officer. Motorized vehicles are not permitted in riparian areas or in running washes except at road crossings.

Employees and clients will be instructed that it is unlawful to disturb, deface, excavate or remove any archaeological or paleontological objects or structures. Simply, look but don=t touch! Rock art may be photographed but not touched. Collection of prehistoric or historic artifacts is not allowed. Any prehistoric or historic cultural site or human remains discovered by the permittee, employees or clients will be left undisturbed and reported as soon as possible to the BLM authorized officer.

Permittee must notify the BLM authorized officer of any specific archaeological sites proposed for inclusion on tours. Tours to sites are subject to BLM approval and protective stipulations.

Historical mine sites should not be disturbed. Collecting artifacts from these sites is strictly prohibited.

All persons operating under this SRP, including subcontractors, are prohibited from entering abandoned mines.

Proposed activities will be conducted in a manner that will not interfere with mining or exploration operations. No minerals are to be collected from areas encumbered by active mining claims unless authorized by the claimant(s).

Harassment of livestock, wildlife, wild horses or burros, or destruction of private and public

improvements such as fences and gates is prohibited. All gates and fences shall be left as found. The taking of any threatened or endangered plant or animal is prohibited.

8. Collection, harassment and disturbance of desert tortoises and Gila monsters is prohibited by

Arizona State Law. If encountered on roads or trails they should be avoided. If a desert tortoise is encountered and cannot be avoided, it should be carefully moved to safety by carrying it horizontal to the ground, not tilted, and placed in the shade the minimum distance needed to remove it from harm's way. Gila monsters should be avoided and not handled. They are venomous and can inflict a serious and painful bite.

9. Vegetation clearing, trimming or removal is not permitted without prior approval from the BLM authorized official.

10. If the volume of use is determined to be adversely impacting soils or riparian condition through erosion, bank alteration or other means, the BLM may restrict use of affected areas or routes to allow restoration and recovery of degraded areas. During wet periods, certain road and trail segments may be closed to all traffic. The BLM will consider the applicant's needs when designing and implementing restrictions or watershed restoration efforts that could influence the operation.

12. In order to minimize the importation or spread of noxious weeds, before entering public land, all vehicles are to be washed thoroughly (including the undercarriage and engine compartment) to remove all soil and vegetation debris (including seeds and seed heads) acquired from previous use. This washing should occur at the home base of operations of the permittee before traveling to public lands. All vehicles used for activities approved by this permit are subject to inspection by the BLM.

The permittee will be committed to preserving and protecting the public lands by learning, practicing and promoting the *Leave No Trace* principles listed below:

- < Plan ahead and prepare.
- < Travel and camp on durable surfaces.
- < Dispose of waste properly.
- < Leave what you find.

- < Minimize campfire impacts.
- < Respect wildlife.
- < Be considerate of other visitors.

Motorized Vehicle Use:

No motorized vehicles are permitted in riparian areas or in running washes except at road crossings. Substantiated reports of unauthorized use in these areas will result in immediate probation and possible suspension or revocation of permit privileges.

All motor vehicle use will comply with existing BLM and state motorized vehicle laws and regulations on public lands relating to use, standards, registration, operation and inspection. These regulations include, but are not limited to, the following:

No person shall operate an off-road vehicle on public lands:

In a reckless, careless or negligent manner;

In excess of established speed limits;

While under the influence of alcohol, narcotics or drugs;

In a manner causing, or likely to cause, significant undue damage to or disturbance of the soil, wildlife, wildlife habitat, improvements, cultural, or vegetative resources.

Drivers shall yield the right-of-way to pedestrians, saddle horses, pack trains, and animal drawn vehicles.

Drivers are prohibited from operating a motor vehicle, unless the driver and each front seat passenger are restrained by a properly fastened safety belt.

Permittee will be committed to preserving and protecting the public lands by learning, practicing and promoting the *Tread Lightly!* principles listed below.

- < Travel and recreate with minimal impact,
- < Respect the environment and the rights of others,
- < Educate yourself, plan and prepare before you go,

< Allow for future use of the outdoors, leave it better than you found it, and
Discover the rewards of responsible recreation.

Appendix L – Fire Management Units

Description of Wildland Fire Management Strategies by Fire Management Unit

The Phoenix/Kingman Fire Management Zone field offices will provide an appropriate management response (AMR) on all wildland fires, with emphasis on fire fighter and public safety, minimizing suppression costs, considering benefits and values to be protected consistent with resource objectives, standards and guidelines. Responses to each wildland will be initiated in a timely manner with a force mix, that is based upon established fire management direction as documented in the approved RMPs. The use of appropriate management response will allow land managers to tailor preplanned wildland fire responses to meet objectives established in resource management plans and their associated implementation plans.

The appropriate management response concept will be applied for all public lands. Responses range from full fire suppression to managing fires for resource benefits (fire use). Management responses applied to a fire will be based on objectives derived from the land use allocations; relative risk to resources, the public and firefighters; potential complexity; and the ability to defend management boundaries. Any wildland fire can be aggressively suppressed and any fire that occurs in an area designated for fire use can be managed for resource benefits, when it meets the prescribed criteria identified in the approved fire management plan and fire use plan.

All fire management actions will adhere to the standards outline in the “Interagency Standards for Fire and Aviation Operations.”

The Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management assigned all BLM-administered lands in Arizona one of the two following land use allocations. The best science available was used to determine the allocations and response to fire.

Identification of fire management units/zones and strategies within the units/zones is the cornerstone for planning the management of the wildland fire program. This section must tie directly to the decisions made in the land and resource management planning process by management area, aggregated into FMUs. This section identifies objectives, standards, guidelines, and/or future desired conditions within the FMU and the wildland fire management strategies that will be used to accomplish them. The first priority in all Wildland Fire Management Strategies is firefighter and public safety.

An FMU is any land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, major fire regime groups, and so on, that set it apart from the management characteristics of an adjacent FMU. The FMUs may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. The development of FMUs should avoid redundancy. Each FMU should be unique as evidenced by management strategies, objectives and attributes.

The Fire Management Unit (FMU) designation was used instead of Fire Management Zone (FMZ). FMZ development is a key step in the Interagency Initial Attack Analysis (IIAA) that describes protection and suppression capabilities within the context of historical fire occurrence as it relates to land use planning. FMU development focuses on key multi-resource management objectives as outlined in land use planning.

Suppression Criteria.

Fire suppression actions taken will be appropriate management response which is defined as those fire suppression strategies and tactics that provide for firefighter and public safety first, result in the least impact and disturbances to the landscape, least acreage burned and least suppression cost. Fires that escape initial attack will have a Wildland Fire Situation Analysis completed that will document the selected preferred suppression alternative and guide the management of the fire.

Under the Proposed Action, identified in the Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management (Section 2.0 Description of Alternatives), BLM-administered public lands would be assigned to one of the following two land use allocations for fire management. Refer to Map 3-17 for a depiction of the two land use allocations for fire.

Allocation 1 – Wildland Fire Use: Areas suitable for wildland fire use for resource management benefit.

This allocation includes areas where wildland fire is desired, and there are few or no constraints for its use. Where conditions are suitable, unplanned and planned wildfire may be used to achieve desired objectives, such as to improve vegetation, wildlife habitat or watershed conditions, maintain non-hazardous levels of fuels, reduce the hazardous effects of unplanned wildland fires and meet resource objectives. Where fuel loading is high but conditions are not initially suitable for wildland fire, fuel loads are reduced by mechanical, chemical or biological means to reduce hazardous fuels levels and meet resource objectives (includes WUI areas).

Allocation 2 – Non Wildland Fire Use: Areas not suitable for wildland fire use for resource benefit.

This allocation includes areas where mitigation and suppression are required to prevent direct threats life or property. It includes areas where fire never played a large role, historically, in the development and maintenance of the ecosystem, and some areas where fire return intervals were very long. It also includes areas (including some WUI areas) where unplanned ignition could have negative effects to ecosystem unless some form of mitigation takes place. Mitigation may include mechanical, biological, chemical, or prescribed fire means to maintain non-hazardous levels of fuels, reduce the hazardous effects of unplanned wildland fires and meet resource objectives. The allocation of lands is based on the desired future condition of vegetation communities, ecological conditions and ecological risks. The allocation of lands is determined by contrasting current and historical conditions and ecological risks associated with any changes (Figure 2.1). The condition class concept helps describe alterations in key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. BLM Fire Management Plans, will include the two allocations and identify areas for including fire use, mechanical, biological or chemical means to maintain non-hazardous levels of fuels, reduce the hazardous

effects of unplanned wildland fires and meet resource objectives. They will also identify areas for exclusion from fire (through fire suppression), chemical, mechanical, and/or biological treatments.

Fire Management Objectives Common to All FMUs

Specific suppression actions will be common to all FMUs and will be hereafter referenced as such in the following FMU descriptions. The full range of responses are available to implement protection objectives for unplanned ignitions:

Fires will be contained at the minimal acres possible. Washes, roads, natural breaks will be utilized when possible for fire lines. Burn out operations will be conducted that burn the least acreage possible and what is necessary to establish a safe containment/control line. Unburned islands will not be intentional burned unless they pose a risk to the fire line.

Heavy equipment will only be used in consultation with the field office manager or designated resource advisor. Fire engines and support vehicles will minimize off road travel and remain on existing roads when possible depending on the fire situation.

Utilize Minimum Impact Suppression Tactics “MIST” where applicable (ACECs, wilderness areas, fragile desert ecosystems etc). “MIST” Guidelines are found in the 2004 “Interagency Standards for Fire and Fire Aviation Operations,” Chapter 11, Incident Management, Appendix 11-5 on page 11-31.

In established waterways, stock ponds, creeks, etc. the use of fire retardants (slurry, foam, etc.) is to be minimized as they may harm this sensitive environment. Avoid aerial or ground application of retardant or foam within 300 feet of waterways. Guidance on the use of retardants and foam can be found in the 2004 “Interagency Standards for Fire and Fire Aviation Operations,” Chapter 12, Suppression Chemicals & Delivery Systems, Section E, Environmental Guidelines for Delivery of Retardant or Foam near Waterways.

Surface disturbing fire/fuels suppression activities should be minimized for archaeological sites.

Camps, staging areas etc will be located in areas that will provide for the least disturbance of the landscape.

A resource advisor will be assigned to coordinate resource concerns with the incident commander. Management strategies and action points will be based on fire activity and location. Normally, specific actions or combinations of actions will be determined on site by the incident commander or fire use manager. These actions could include:

- Monitoring and holding actions to check or confine spread
- Monitoring with pre-planned contingency actions
- Monitoring actions
- Control and extinguishment

Criteria to use for developing a management response:

Risk to firefighters and public health and safety
Land and Resource Management Objectives
Weather

Fuel Conditions
Threats and values to be protected
Cost efficiencies

FMU #2 Description- PD Desert North of Interstate 10

a) Characteristics

This FMU consists of approximately 718,229 acres of public lands; the landscapes are typical of Sonoran Desert section of the Basin and Range Physiographic Province. The area is characterized by flood plains, basin floors, stream terraces, alluvial fans, fan terraces and steep, rocky mountains that rise abruptly from the fans. Elevation ranges from 420 feet to more than 4000 feet on the higher mountains.

Winters are mild and summers are hot and dry, the two main periods of rainfall are during the last half of summer and in early winter. Most of the area is desert rangeland, and farming is an important industry on the private lands found in the area, the main crops are cotton, alfalfa and vegetables and grains.

Vegetation is typical of the Sonoran Desert with a great diversity of plants including creosote bush, palo verde, ironwood and a variety of cacti. Grasses and forbs do not constitute a large volume of the plant community but there are many species that may be present, including, threeawn, galleta, bush muhly. Many of the drainages associated with the Gila River are dominated or are invaded by tamarisk or commonly known as salt cedar.

Prehistoric and historic aboriginal groups generally used desert mountains for wild food procurement, and there is evidence of archaeological sites.

Many species of wildlife inhabit the area including mule deer, bighorn sheep, javelina, cottontail and jack rabbits, and a variety of songbirds and raptors.

b) Fire History

Historical fire frequency is greater than 250-year return interval. Between 1980 and 2003, 255 fires started on BLM-administered public lands. These fires burned an estimated 17,876 acres. Most of the area burned was Sonoran Desert ecosystem. The largest fire burned 6200 acres. Average fire size was 71.5 acres. There have been 27 large fires (100-plus acres) during this time period.

c) Fire Regime/Condition Class

This unit is vegetated with Sonoran Desert scrub and is classified in Fire Regime III (35-100+ year frequency, mixed severity). Low elevation (below 2000') areas within this unit are primarily in condition class 1. Most areas above 2000' in elevation are now in condition class 2 due to the presence of exotic annual grasses in upland areas and saltcedar/tamarisk along riparian corridors.

d) Values at Risk

Air Quality – The metropolitan area of Phoenix is a PM₁₀, Carbon Monoxide, and Ozone non-attainment area. Smoke from wildfire and prescribed fire within a sixty mile radius can contribute to the degradation of this air shed.

ACECs – Tule Creek.

T&E, Sensitive, Wildlife/Plant Species – includes Gila topminnow (Tule Creek), yellow-billed cuckoo, lowland leopard frog, BLM Sensitive species (Native fishes), Category 2 & 3 Sonoran desert tortoise habitat, desert bighorn sheep.

Recreation – Important recreation sites in this FMU include: the Harquahala Mountain Summit Road National Backcountry Byway and Staging Area; the Smithsonian Harquahala Peak Smithsonian Solar Observation Interpretative Area; the Harquahala Peak Pack Trail (a state and national historic trail); the Vulture Peak trail and two trailheads; the Hassayampa River Riparian Area (on ADOT property), OHV in Vulture Mountains, Hieroglyphic Mountains and Black Canyon areas; and, the Black Canyon Trail and Emery Henderson Trailhead. Dispersed and unstructured recreation resource opportunities dependent on natural resources such as hunting, OHV driving, sightseeing, hiking, camping, etc. Outstanding primitive recreation and solitude opportunities within the Harquahala Mountains, Big Horn Mountains, Hummingbird Springs, Hassayampa River Canyon and Hells Canyon Wilderness Areas.

Cultural Resources – Sites include the historic Harquahala Peak Observatory; the Monte Cristo Mine north of Wickenburg; the historic Vulture City cemetery; the historic cemetery and stone structures (with wooden components) at Weaver; other historic mines in the various mountain ranges; homesteads and ranching features (i.e., line shacks); prehistoric trails and artifact scatters; prehistoric stone quarries; rock rings and alignments; and rock art, including painted designs in canyons of the Harcuvar Mountains.

Standard mitigation measures:

- Use Minimum Impact Suppression Tactics.
- Utilize resource advisor and use extreme caution around historic mines, prehistoric pueblos, and other structures.
- Heavy equipment use is to be coordinated with the resource advisor.
- Use of retardant on wooden and stone structures is discouraged, but is permissible under extreme conditions.
- Fire engines should be used on established roads only.

Specific FMU mitigation measures:

- Protect interpretive facilities at Harquahala Peak.
- Prior to suppression actions, identify and avoid vulnerable rock art and other sites in canyons of the Harcuvar and Harquahala mountain ranges.
- Avoid driving over rock rings and rock alignments.

Wild Horse and Burro – Within the Lake Pleasant Herd Management Area, burros are present.

Riparian – Agua Fria River, Hassayampa River and tributaries.

Forage production – Livestock grazing is authorized for public lands within this FMU with the exception of Tule Creek ACEC.

e) Communities at Risk

FMU #2 has several communities within the unit boundaries. Some of the communities are located in the Phoenix metropolitan area, while others are located in remote isolated areas. There are multiple areas with subdivided, residential properties that are not associated with a specific community. There are also recreation sites, range improvements, railways, roadways, utility lines, substations and communication sites within the FMU that may be at risk. Prevention, education and mitigation efforts for most of the subdivided areas can be made through local fire departments but many will require outreach by direct contact. The risk level to each community is based upon fuels, topography, the current state of fire prevention preparedness and unique aspects of each. Above- or below-average precipitation can greatly affect the risk to each community and individual areas by increasing or decreasing the amount of fuel available to a fire. Special considerations will be made for communities with increased risk. The communities listed below lie within the boundaries of FMU #2 and are categorized by their individual average risk level.

Low Risk:

- | | |
|----------------|-----------------|
| 1) Aguila | 6) Phoenix |
| 2) Circle City | 7) Skull Valley |
| 3) Gila Bend | 8) Wickenburg |
| 4) Hillside | 9) Wittmann |
| 5) Morristown | |

Moderate Risk:

- | | |
|--------------|------------|
| 1) Congress | 3) Stanton |
| 2) New River | |

High Risk:

- | | |
|----------------------|-----------------|
| 1) Black Canyon City | 2) Rock Springs |
|----------------------|-----------------|

Fire Management Objectives

The desired Fire Management Objective is to limit the number of burned acres and to suppress all fires 90% of the time at or below 150 acres. Sonoran Desert vegetation types are not considered dependent or adapted to fire. Fires within this vegetation type can significantly alter vegetation composition and the ecosystem as a whole. Desert vegetation such as saguaro cactus, palo verde, organ pipe cactus, and creosote are very susceptible to fire and may take as long as a century to reestablish. Recurring fires would totally eliminate these species from the vegetative community. Sonoran Desert vegetation is more susceptible to larger and more frequent fires due to increasing human starts and naturalized exotic vegetation such as red brome.

Fire in the Sonoran Desert vegetation type may negatively impact threatened or endangered wildlife plant species such as cactus ferruginous pygmy owls and lesser long-nosed bats. Other sensitive species such as desert tortoise and Acuna Valley pineapple cactus may also be negatively impacted.

Fire Management Strategies

a) Suppression

Firefighter and public safety is the first priority in all fire management strategies and suppression actions. All other applicable suppression strategies are included in section III-D, Fire Management Strategies Common to All FMUs.

Health and Safety

Safety hazards to firefighters are extreme temperatures (daytime 115 to 130 degrees; nighttime temperatures range from 90 to 100 degrees, and relative humidity runs 5 to 10 percent), open and hidden mine shafts and pits are present, hazardous materials dump sites, chemical and pesticide dumping. Venomous animals/insects, low-level military aircraft training routes, recreational shooting and OHV use is common and presents a safety concern.

Access

Access by vehicles into this FMU is good off of numerous dirt roads. Depending on the fire location crews may have short hikes to reach the fire.

Fire Behavior

The Sonoran Desert is mostly barren and wildfire fuels types consists of grass, annuals and perennials with little to no brush cover. Fuels in the desert depend on heavy winter and early spring moisture or fuels that carry over from the previous year's growing season. Above-average moisture usually results in an abundance of annual fuels.

Fires in the desert usually do not go beyond the first burning period due to non continuous fuels, fuel size, terrain features such as washes and rocky outcroppings. In years of heavy precipitation, and where fuels are continuous, fires can spread rapidly through the grass and associated material. The grass fuels are also easily influenced by change in relative humidity. A significant increase in relative humidity and a decrease in temperature can quickly slow or extinguish a fire.

Desert Fuel types are represented by NFDRS fuel model A and NFFL fuel model 1.

Suppression tactics

Suppression strategies and tactics in this fuel type are usually direct attack using hand crews, engines where possible and helicopter dropping water to knock down the fire edge, patrol and mop up. Fires in the desert usually are quickly contained in the first burning period.

Rate of spread	- Low to high (depending on fuel continuity)
Flame length	- Depending on wind, one to four feet
Resistance to control	- low to moderate

Acceptable wildfire size is up to 300 acres at Fire Intensity Level (FIL) 1 and 150 acres for all others FILs.

FIL 1- 0-2 ft FL, FIL 2 - 2-4 ft FL, FIL 3 - 4-6 ft FL, FIL 4 - 6-8 ft FL, FIL 5 - 8-12 ft FL,

FIL 6 -12 + ft FL,

b) Wildland Fire Use

Wildland fire use is not desired. Statewide Land Use Plan Amendment Allocation 2 – Non Wildland Fire Use: Areas not suitable for wildland fire use for resource benefit. Reference pages 13-15 of this FMP.

c) Prescribed Fire

Native vegetation in this Fire Management Unit is not fire dependant or fire adapted. In limited instances prescribed fire may be used to reduce hazardous fuel accumulations along riparian corridors where the presence of saltcedar/tamarisk and other undesirable species poses a significant risk to improvements or critical habitat. Prescribed fire may be used as a means of fuel reduction following mechanical treatments.

d) Non-Fire Fuels Treatments

Mechanical thinning or vegetation removal may be conducted to reduce the presence of tamarisk and other undesirable hazardous vegetation along riparian corridors. Mechanical treatment of upland areas will be limited to treating WUI areas at risk during years of high annual grass production.

e) Post Fire Restoration and Rehabilitation

Rehabilitation and restoration efforts may be needed for ecological sites other than Sonoran Desert.

f) Community Protection/Community Assistance

Prevention, education and mitigation efforts for FMU #2 include utilizing the local news media to provide fire prevention information and updates to the public, building strong collaborative relationships with local governments and fire departments, performing school presentations, attending events/parades and develop partnerships with home owner organizations, permittees and other groups to assist communities in reducing the risk from wildfire.

FMU # 3 Description- PD Wilderness Areas

a) Characteristics

This FMU consists of approximately 346,833 acres of public lands; the landscapes are typical of Sonoran Desert section of the Basin and Range Physiographic Province. The area is characterized by flood plains, basin floors, stream terraces, alluvial fans, fan terraces and steep, rocky mountains that rise abruptly from the fans. Elevation ranges from 420 feet to more than 4000 feet on the higher mountains.

The wilderness areas provide a standard of solitude and naturalness that ranges from good to outstanding. They contain little to no surface disturbance other than former vehicle ways, and provide visitors with an excellent opportunity to provide solitude experience.

Winters are mild and summers are hot and dry, the two main periods of rainfall are during the last half of summer and in early winter. Most of the area is desert rangeland, and farming is an important industry on the private lands found in the area, the main crops are cotton, alfalfa and vegetables and grains.

Vegetation is typical of the Sonoran Desert with a great diversity of plants including creosote bush, palo verde, ironwood and variety of cacti. Grasses and forbs do not constitute a large volume of the community but there are many species that may be present including, threeawn, galleta, bush muhly.

Prehistoric and historic aboriginal groups generally used desert mountains for wild food procurement, and there is evidence of archaeological sites.

Many species of wildlife inhabit the area including mule deer, bighorn sheep, javelina, cottontail and jack rabbits, and a variety of songbirds and raptors.

Phoenix District Wilderness Areas

Big Horn Mountains Wilderness 21,000 ac
Harquahala Mountains Wilderness 22,880 ac
Hassayampa River Canyon Wilderness*11,840 ac
Hells Canyon Wilderness* 9,900 ac
Hummingbird Springs Wilderness 31,200 ac

b) Fire History

Historical fire frequency is greater than 250-year return interval. Between 1980 and 2003, 11 fires started on BLM-administered public lands. These fires burned an estimated 7800 acres. Most of the area burned was Sonoran Desert ecosystem. The largest fire burned 4824 acres. Average fire size was 650 acres. There have been three large fires of 1000-plus acres during this time period

c) Fire Regime/Condition Class

Wilderness areas managed by the Phoenix District are vegetated with Sonoran desert scrub and are classified in Fire Regime III (35-100+ year frequency, mixed severity). Low elevation (below 2000') areas within this unit are primarily in condition class 1. Most areas above 2000' in elevation are now in condition class 2 due to the presence of exotic annual grasses in upland areas. Small portions of the Harquahala Mountains and Hassayampa River Canyon wilderness areas are vegetated with interior chaparral. These areas would be classified in Fire Regime IV (35-100+ year frequency, stand replacement severity), and condition class 2.

d) Values at Risk

Air Quality - Wilderness areas have Class II air quality designation.

ACECs - None

T&E, Sensitive, Wildlife/Plant Species – includes lesser long-nosed bat foraging habitat, yellow-billed cuckoo, cactus ferruginous pygmy-owl (Wilderness South of I-10), lowland leopard frog, BLM Sensitive species (bats), Category 1, 2 & 3 Sonoran desert tortoise habitat, desert bighorn sheep, mule deer.

Recreation – Natural landscapes and functioning Sonoran Desert ecosystems. Outstanding riparian areas within the Hells Canyon, Hassayampa River Canyon and Harquahala Mountains wildernesses.

Cultural Resources – Sites include prehistoric and historic artifact scatters, prehistoric camps, rock art, roasting pits, homesteads, ranching features, and mines.

Standard mitigation measures:

- Use Minimum Impact Suppression Tactics.
- Utilize resource advisor and use extreme caution around historic mines, prehistoric pueblos, and other structures.
- Bulldozers or heavy equipment use will be coordinated with the resource advisor and approved by the Field Office Manager.
- Use of retardant on wooden and stone structures is discouraged, but is permissible under extreme conditions.

Specific FMU mitigation measures:

- Exercise extra caution near springs, where there tends to be a higher density of cultural resources.

Riparian – Hassayampa River drainage.

Forage production – Livestock grazing is authorized for public lands within this FMU.

e) Communities at Risk

There are no communities located within the boundaries of FMU #3. There are communities located in FMUs adjacent to FMU #3. Those communities are addressed within the appropriate FMU descriptions.

Fire Management Objectives

The desired Fire Management Objective within the wilderness areas is to limit the number of burned acres and to suppress all fires 90% of the time at or below 150 acres. These wilderness areas are typically Sonoran Desert vegetation types and are not considered dependent or adapted to fire. Fires within this vegetation type can significantly alter vegetation composition and the ecosystem as a whole. Desert vegetation such as saguaro cactus, palo verdes, organ pipe cactus, and creosote are very susceptible to fire and may take as long as a century to reestablish. Recurring fires would totally eliminate these species from the vegetative community. Sonoran Desert vegetation is more susceptible to larger and more frequent fires due to increasing human starts and naturalized exotic vegetation such as red brome.

Wilderness Fire Guidance

Phoenix District Interim Guidance for Fire Suppression in Wilderness 1991, modified 2001. This plan provides interim guidance for fire suppression actions in Phoenix/Kingman fire management zone wilderness areas. This plan provides guidance on special legal and administrative constraints, resource management considerations, fire suppression measures, and coordination with BLM management. This interim suppression guidance will be followed until wilderness management plans are completed for each wilderness areas.

This interim guidance follows BLM management Policy for Management of Designated Wilderness Areas; 43 CFR Part 8560; Handbooks 8560-1; WO IM 90-221 – Revisions to the 8560 Manual

Management of Designated Wilderness Areas Relating to Fire Management Policy; 910 DM 1 – Wildland Fire Suppression and Management.

Wilderness Management Plans (General Management Section).

The interim suppression guidance will be followed until wilderness management plans are completed for these wilderness areas. Big Horn Mountains Wilderness 21,000 ac, Harquahala Mountains Wilderness 22,880 ac and Hummingbird Springs Wilderness 31,200 ac.

Hassayampa River Canyon Wilderness*11,840 ac

Hassayampa River WMP 1996

Fire - The six recorded fires in the wilderness since 1980 burned more than 4000 acres. The Hassayampa River Canyon consists primarily of desert scrub, oak chaparral and riparian fuel. Annual fuel accumulation in the desert scrub is generated by winter season precipitation. During years of high precipitation, the annual fuels can be abundant and significantly increase the fuel loading and fire potential. Fires are best characterized as fast-moving fires of medium intensity. Arizona chaparral either burns fiercely or does not burn at all; there seems to be no gradation in between. Conditions must be suitable for generating rapid spread before fire will propagate. Resistance to control is moderate to very high.

Hells Canyon Wilderness* 9900 ac

Hells Canyon WMP 1995

Fire - Historically, fires within the wilderness areas are rare. Hells Canyon consists of primarily desert shrub fuels. Annual fuel accumulation is generated by winter season precipitation. During years of high precipitation, the annual fuels can be abundant and significantly increase the fuel loading and fire potential. Fires are best characterized as fast moving fires of medium intensity. Since 1980 two fires have been known to have occurred within the wilderness

Fire Management Strategies

a) Suppression

Firefighter and public safety is the first priority in all fire management strategies and suppression actions. In wilderness areas, fire management strategies and tactics will be utilized that will limit impacts on wilderness values and minimize any surface disturbance. Wilderness suppression objectives are to minimize acres burned, the damage done to wilderness resource values by utilizing “light hands on the land.” All other applicable suppression strategies are included in section III-D, Fire Management Strategies Common to All FMUs.

Health and Safety

Safety hazard to firefighters are extreme temperatures (daytime 115 to 130 degrees; nighttime temperatures range from 90 to 100 degrees, and relative humidity runs 5 to 10 percent), venomous animals/insects, low-level military aircraft training routes, etc.

Access

Access by vehicles into this FMU is only on approved cherry-stemmed roads. Depending on the fire location crews may have long hikes to reach the fire. If the field office manager cannot be contacted within a 15-minute notification window after arrival of the incident commander at the fire, the incident

commander has the discretion to authorize, helicopter landings in wilderness for transporting crews, the use of airtankers and helicopter water bucket drops.

Fire Behavior

The Sonoran Desert is mostly barren and wildfire fuels types consists of grass, annuals and perennials with little to no brush cover. Fuels in the desert depend on heavy winter and early spring moisture or fuels that carry over from the previous year's growing season. Above-average moisture usually results in an abundance of annual fuels.

Fires in the desert usually do not go beyond the first burning period due to non continuous fuels, fuel size, terrain features such as washes and rocky outcroppings. In of heavy precipitation and where fuels are continuous fires can spread rapidly through the grass and associated material. The grass fuels are also easily influenced by change in relative humidity. A significant increase in relative humidity and a decrease in temperature can quickly slow or extinguish a fire.

Desert Fuel types are represented by NFDRS fuel model A and NFFL fuel model 1.

Suppression tactics

Suppression strategies and tactics in this fuel type are usually direct attack using hand crews, engines where possible and helicopter water drops to knock down the fire edge, patrolling and mop up. Fires in the desert usually are quickly contained in the first burning period.

- Rate of spread - Low to high (depending on fuel continuity)
- Flame length - Depending on wind, one to four feet
- Resistance to control - low to moderate

Acceptable wildfire size is up to 300 acres at Fire Intensity Level (FIL) 1 and 150 acres for all others FIL.

FIL 1- 0-2 ft FL, FIL 2 - 2-4 ft FL, FIL 3 - 4-6 ft FL, FIL 4 - 6-8 ft FL, FIL 5 - 8-12 ft FL, FIL 6 -12 + ft FL

b) Wildland Fire Use

Fire use is not a desired management use in these wilderness areas. Minimum impact suppression tactics and appropriate management response will be used to ensure for firefighter and public safety first and minimize impacts to natural resources.

Statewide Land Use Plan Amendment Allocation 2 – Non Wildland Fire Use: Areas not suitable for wildland fire use for resource benefit. Reference pages 13-15 of this FMP. The Phoenix District has completed all Wilderness Management Plans except for Big Horn Mountains, Harquahala Mountains Wilderness and Hummingbird Springs Wilderness Areas.

c) Prescribed Fire

Prescribed fire treatments are not anticipated within these wilderness areas, as most areas are dominated by non-fire adapted native vegetation.

d) Non-Fire Fuels Treatments

Fuels treatments are not anticipated for these areas. However, special circumstances that threaten the integrity of the wilderness environment could facilitate the need for future fuels treatment as deemed necessary by resource specialists.

e) Post Fire Restoration and Rehabilitation

Post Fire Restoration and Rehabilitation is not applicable in this type of ecosystem. Restoration and rehabilitation efforts may result in more damage to the landscape

f) Community Protection/Community Assistance

Prevention and mitigation efforts for FMU #3 include public education by utilizing local media outlets, educational signing, outreach to public land use groups, prevention patrols and contacts.

FMU # 4 Description- PD Bradshaws 3500' North

a) Characteristics

This FMU consists of approximately 104,807 acres of public lands; the landscapes are typical of the Mexican Highlands and Sonoran Desert sections of the Basin and Range Physiographic Province. The area is characterized by a series of moderately steep and steep soils on hills and mountains and nearly level to strongly sloping soils on alluvial plains. Elevation ranges from 3500 feet to more than 8000 feet on the higher mountains near Crown King.

Winters are mild and summers are hot and dry, the two main periods of rainfall are during the last half of summer and in early winter. Most of the area is desert rangeland, and much of the area is used for livestock grazing, although annual authorizations have declined in the past few years due to economic reasons compounded by extensive drought. The area is popular with recreationists, including hikers and off-highway vehicle enthusiasts.

Vegetation varies from a sparse cover of desert shrubs at lower elevations to a chaparral, grass or pinyon-pine cover in the intermediate areas. Marked differences in vegetation occur within short distances because of the wide variance in soils, elevation, precipitation, and temperature.

Prehistoric and historic aboriginal groups generally used desert mountains for wild food procurement, and there is evidence of archaeological sites.

Many species of wildlife inhabit the area including mule deer, bear, mountain lion, javelina, cottontail and jack rabbits, squirrels and a variety of songbirds and raptors.

b) Fire History

Historical fire frequency 35 to 100-plus-year return interval, Between 1980 and 2003, 146 fires started on BLM-administered public lands. These fires burned an estimated 14,735 acres. Most of the area burned was chaparral plant communities. The largest fire burned 5000 acres. Average fire size was 99.6 acres. There have been 18 large fires (100-plus acres) during this time period.

c) Fire Regime/Condition Class

The chaparral vegetative community that dominates this fire management unit is represented by fire regime 4 (35-100+ year frequency, stand replacement). Current fire condition class is 2, due to the lack of fires having occurred in this area in the recent past. The current condition is overrepresentation of old-age-class chaparral and lack of mixed age class mosaic.

d) Values at Risk

Air Quality - No non-attainment or special status areas occur within this FMU.

ACECs – None

T&E, Sensitive, Wildlife/Plant Species – includes BLM Sensitive species (Native fishes, bats), lowland leopard frog, Category 2 & 3 Sonoran desert tortoise habitat.

Recreation – OHV use, hunting and camping uses.

Cultural Resources– Sites include historic mines and associated features, which could include “ghost towns,” historic homestead and ranching features; prehistoric artifact scatters; rock art; roasting pits; and prehistoric stone structures on hilltops.

Standard mitigation measures:

- Use Minimum Impact Suppression Tactics.
- Utilize resource advisor, use extreme caution around historic mines, prehistoric pueblos, and other structures.
- Bulldozers or heavy equipment use is to be coordinated with the resource advisor.
- Use of retardant on wooden and stone structures is discouraged, but is permissible under extreme conditions.
- Fire engines should be used on established roads only.

Specific FMU mitigation measures:

- Identify the locations of flammable structures through ground or aerial reconnaissance surveys.
- Exercise extra caution near springs, which tend to be associated with a higher density of cultural resources.

Riparian – Tributaries of the Hassayampa and Agua Fria rivers.

Forage production – Livestock grazing is authorized for public lands within this FMU.

e) Communities at Risk

FMU #4 has several communities within the unit boundaries. There are multiple areas with sub-divided, residential properties that are not associated with a specific community. There are also recreation sites, range improvements, railways, roadways, utility lines, substations and communication sites within the FMU that may be at risk. Prevention, education and mitigation efforts for most of the subdivided areas can be made through local fire departments but many will require outreach by direct contact. The risk level to each community is based upon fuels, topography, the current state of fire prevention preparedness and unique aspects of each. Above- or below-average precipitation can greatly affect the risk to each

community and individual areas by increasing or decreasing the amount of fuel available to a fire. Special considerations will be made for communities with increased risk.

The communities listed below lie within the boundaries of FMU #4 and are categorized by their individual average risk level.

Moderate Risk:

- | | |
|----------------------|-------------------|
| 1) Dewey | 4) Peeples Valley |
| 2) Humboldt | 5) Wilhoit |
| 3) Kirkland Junction | |

High Risk:

- | | |
|--------------------|------------------|
| 1) Cordes Junction | 3) Spring Valley |
| 2) Mayer | 4) Yarnell |

Fire Management Objectives

In chaparral vegetative type the desired Fire Management Objective is to suppress all fire 90% of the time at or below 100 acres. No more than 2,000 acres per year or 20,000 acres per decade in this polygon from wildfire or prescribed fire. The chaparral on the north side of the Bradshaw's is more typical of interior chaparral and probably has a natural fire cycle of once every 25 years or less. Fires in this area should not exceed an average of 2,000 acres of BLM-administered land per year.

Chaparral as a general vegetation type evolved with fire as a natural component of the ecosystem and is maintained in a healthy state by regular burning. The chaparral in the Phoenix District area is more open and has a mixture of upper Sonoran Desert vegetation. Natural fires in these areas were probably less common than typically occur in chaparral vegetation in general.

Desert tortoise habitat extends in to the chaparral vegetation type. Depending on the season and weather tortoise and their habitat can be very susceptible to fires. Small cool fires during the right season and under the right weather conditions would reduce fuel loads, and help alleviate the risk of large hot fires that would severely impact tortoise and their habitat. Any prescribed burn or let-burn situation would have to be carefully considered to prevent negative impacts to desert tortoise and Sonoran Desert vegetation.

Although there are no federally listed species associated with chaparral vegetation type, if a fire was to burn out of the chaparral into Sonoran Desert vegetation it could impact lesser long-nosed bats and cactus ferruginous pygmy owls.

Resource constraints during fire suppression actions are: Suppression tactics and use of heavy equipment (dozers) will be utilized that limit damage or disturbance to the habitat and landscape.

A portion of this FMU also includes the urban interface near Cordes Junction; this area is a full suppression area. The desired Fire Management Objective is to suppress all fire 90% of the time at or below 150 acres.

Other grassland vegetation exists in the Phoenix District area most notably in the vicinity of Cordes Junction and Congress. However, due to concerns, such as intermingled ownership patterns, association with Sonoran Desert vegetation in the vicinity of Congress, desert tortoise habitat; any action other than full suppression would have to be carefully considered.

Fire Management Strategies

a) Suppression

Firefighter and public safety is the first priority in all fire management strategies and suppression actions. In the grasslands and lower elevations of the FMU that transactions with association with Sonoran Desert vegetation types Minimum Impact Suppression Tactics “MIST” will be utilized that limit damage or disturbance to the habitat and landscape.

In the area above 3500 feet, fires will be contained at the minimal acres possible. Washes, roads, natural breaks will be utilized when possible for fire lines. Burn out operations will be conducted that burn the least acreage possible to establish a safe containment/control line. Unburned islands will not be intentionally burned unless they pose a risk to the fire line. Heavy equipment such as dozers can be used if necessary in the chaparral vegetation with resource advisor consultation. In the Cordes Junction and Congress grasslands heavy equipment use should be in consultation with the resource advisor. Fire engines and support vehicles should stay as much as possible on existing roads and paths.

All other applicable suppression strategies are included in section III-D, Fire Management Strategies Common to All FMUs.

Health and Safety

Safety hazards to firefighters are extreme temperatures (daytime 90 to 100 degrees; nighttime temperatures range from 60 to 75 degrees, and relative humidity runs 5 to 15 percent), open and hidden mine shafts and pits are present, venomous animals/insects, as well as hazardous materials and dump sites containing hazardous chemicals, pesticide, and tires. Low-level military aircraft training routes, recreational shooting, and OHV use is prevalent and presents a safety concern. In the Bradshaw Mountains, steep terrain is a hazard, slopes average 30 to 40 percent and increase up to 60 percent. The thick chaparral fuel type limits escape routes and safety zones.

Access

Access by vehicles into this FMU is limited due to steepness of grade and road conditions. The number of existing roads into this FMU is few. Travel time into this FMU can exceed one and one-half hours. Depending on the fire location crews may either have a long hike or require helicopter shuttle (if helispots are available) to reach fire location.

Fire Behavior

The Bradshaw Mountains above 3500 feet are dominated by Arizona interior oak chaparral (scrub oak, ceanothus, manzanita, sumac and mahogany). Fire behavior in Arizona oak chaparral should not be underestimated. Under certain conditions, it can burn as intensely as California chaparral.

Arizona chaparral either burns fiercely or does not burn at all; there seems to be no graduation. The critical rate of spread threshold in chaparral to sustain itself is 20 or more feet per minute. Conditions must be suitable for generating spread at or above this rate before fire will spread.

In very high to extreme burning conditions, flame lengths up to 50 feet are common. Spotting up to 1/4 mile and erratic fire behavior may occur. At times, firestorms, firewhirls and major blow-ups could occur instantaneously. High rates of spread of 45 feet per minute would not be unusual. Extreme fire behavior can occur with live fuel moistures below 90%,

Grass fuel types are represented by NFDRS fuel model A and NFFL fuel model 1.

Chaparral fuel types are represented by NFDRS fuel model F and NFFL fuel model 4 and 6.

Suppression strategies and tactics in grass fuel type are usually direct attack using hand crews, engines where possible and helicopter dropping water to knock down the fire edge. Fires in the grass usually are quickly contained. Occasional fires in this fuel type can go into multiple burning periods.

Suppression tactics

Suppression strategies and tactics in chaparral fuel type are dependent on fire intensity. Low intensity fires; allow for direct attack. High intensity fires; suppression strategies and tactics in chaparral fuel type are usually indirect. Fires in the chaparral fuel type usually go into multiple burning periods.

Grass Fuel

Rate of spread - Low to high
Flame length - Depending on wind, one to four feet
Resistance to control - low to moderate

Chaparral Fuel

Rate of spread - moderate to very high
Flame length - 20 to 50 ft plus
Resistance to control - moderate to very high

Bradshaw/Yarnell - Acceptable wildfire size is up to 2000 acres at Fire Intensity Level (FIL) 1 and 100 acres for all others FIL 2-6.

Cordes Junction - Acceptable wildfire size is up to 300 acres at Fire Intensity Level (FIL) 1 and 150 acres for all others FIL 2-6.

FIL 1 - 0-2 ft FL, FIL 2 - 2-4 ft FL, FIL 3 - 4-6 ft FL, FIL 4 - 6-8 ft FL, FIL 5 - 8-12 ft FL,
FIL 6 - 12 + ft FL

b) Wildland Fire Use

Portions of the Weaver and Bradshaw mountains may be analyzed for wildland fire use at a future date. Wildland fire use is a viable management consideration for the chaparral vegetative community that covers much of this fire management zone. Statewide Land Use Plan Amendment Allocation 1 – Wildland Fire Use: Areas suitable for wildland fire use for resource benefit. Reference pages 13-15 of this FMP.

c) Prescribed Fire

Prescribed fire will be used to treat hazardous fuel accumulations in chaparral vegetation in the Weaver and Bradshaw mountains.

The prescribed fire resource objectives in the chaparral community would be to use fire to remove decadent chaparral and stimulate regrowth for both wildlife and livestock. Prescribed fire in the Bradshaws would be limited to 2000 acres per year. This is due to adjacent landownership (ie National Forest) and topography features.

d) Non-Fire Fuels Treatments

Mechanical, biological, or chemical treatments may be applied where approved to meet resource and fire management objectives. Non-fire fuels treatments will be utilized in WUI areas or those areas where prescribed fire is not a safe and viable means of treatment.

e) Post Fire Restoration and Rehabilitation

Potential exists for emergency restoration and stabilization efforts.

f) Community Protection/Community Assistance

Prevention, education and mitigation efforts for FMU #4 include utilizing the local news media to provide fire prevention information and updates to the public, building strong collaborative relationships with local governments and fire departments, performing school presentations, attending events/parades and develop partnerships with home owner organizations, permittees and other groups to assist communities in reducing the risk from wildfire.

FMU # 5 Description- PD Agua Fria National Monument

a) Characteristics

This FMU consists of approximately 71,000 acres of public lands; the landscapes are typical of the Mexican Highlands and Sonoran Desert sections of the Basin and Range Physiographic Province. The area is characterized by three landforms: the relatively narrow river channel and associated drainages, broad benches that border the river and drainages, and low hills and mountains found within short proximity of the drainage. Elevation ranges from 2000 feet to 4000 feet at the top of Joe's Hill.

The Agua Fria National Monument is one of the most significant systems of prehistoric sites in the American Southwest. It contains more than 400 archaeological sites, spanning some 2,000 years of human history. Remnants of stone pueblos, some containing more than 100 rooms represent a system of communities with economic and social ties. There are numerous petroglyphs commonly called rock art located on the monument with many wildlife and human figures. Networks of hilltop structures may have acted as a communication system and structures sitting at the edges of steep canyons are thought to have provided defense against invaders.

Vegetation varies from a large cover of desert shrubs at lower elevations on the south end of the monuments to some of the best examples of a tobosa grassland found in the Southwest. Lush riparian forests are along the Agua Fria River and its tributaries and include cottonwood, black walnut, and sycamore. Marked differences in vegetation occur within short distances because of the wide variance in soils, elevation, precipitation, and temperature.

Many species of wildlife inhabit the area including pronghorn antelope, mule deer, bear, mountain lion, javelina, cottontail and jack rabbits, squirrels. The river corridor is one of the best habitats for songbirds and raptors within this part of Arizona.

Winters are mild and summers are hot and dry, the two main periods of rainfall are during the last half of summer and in early winter.

b) Fire History

Historical fire frequency is zero to 35-year return interval, between 1980 and 2003, 101 fires started on BLM-administered public lands. These fires burned an estimated 26,728 acres. Most of the area burned was tobosa grasslands. The largest fire burned 6000 acres. Average fire size was 245.2 acres. There have been 12 large (100-plus acres) fires during this time period.

c) Fire Regime/Condition Class

Tobosa grasslands can be classified as a fire regime 2 (zero to 35-year frequency, stand replacement severity). Grasslands on the Agua Fria National Monument are currently classified as condition class 2. This rating is due primarily to the invasion of woody plant species (juniper, mesquite, snakeweed, prickly pear) and the presence of introduced annuals and noxious weeds.

d) Values at Risk

Air Quality – No non-attainment or special status areas occur in this FMU.

ACECs - Larry Canyon, Lousy Canyon

T&E, Sensitive, Wildlife/Plant Species—includes Gila topminnow, desert pupfish, Gila chub, yellow-billed cuckoo, BLM Sensitive species (Native fishes), pronghorn.

Recreation - Proposed Wild and Scenic River corridor ¼ mile wide on the Agua Fria River north and south of Bloody Basin Road. Hiking and equestrian use at Badger Springs Wash. Dispersed and unstructured recreation resource opportunities dependent on natural resources such as hunting, OHV driving, sightseeing, hiking, camping, etc. Outstanding primitive recreation opportunities within the Agua Fria River canyon.

Cultural Resources:

- Sites include prehistoric stone pueblos and structures, including from one to more than a hundred rooms.
- stone structures on hilltops.
- artifact scatters roasting pits;
- agricultural features, such as terraces bordered by rock alignments;
- rock art sites;
- and historic mines and ranching-related sites.

Standard mitigation measures:

- Use Minimum Impact Suppression Tactics.
- Utilize resource advisor and use extreme caution near historic mines, prehistoric pueblos, and other structures.
- Bulldozers or heavy equipment use is to be coordinated with the resource advisor.
- The use of retardant on wooden and stone structures is discouraged, but is permissible under extreme conditions.
- Fire engines should be used on established roads only.

Specific FMU mitigation measures:

- Minimize surface disturbing activities and off-road driving.
- Implement measures to protect rock art, if needed, in areas of relatively dense vegetation. Avoid igniting prescribed burns within sites.
- If it is necessary to extract water from the Agua Fria River, avoid damage to the rock flume structure that transmitted water to the historic Richinbar Mine; this site is situated in the river canyon, between Badger Springs and Perry Tank Canyon.
- Given the importance of the monument's cultural resources, an archaeologist should play a key role in the development of fire and fuels management plans.

Riparian – Agua Fria River and tributaries.

Forage production – Livestock grazing is authorized for public lands within this FMU with the exception of Larry and Lousy Canyons ACEC.

e) Communities at Risk

There are no communities located within the boundaries of FMU #5. There are communities located in adjacent FMUs. Those communities are addressed within the appropriate FMU descriptions.

Fire Management Objectives

Agua Fria Grasslands is a area where fire is desired to manage the ecosystem. Suppress wildfires at Fire Intensity Level (FIL) 1-6 to 1000 acres or less 90% of the time. Size is limited to assist in creating a mosaic pattern within the grasslands. Allow for up to 8,000 acres per year or 80,000 per decade of burned acres through wildfire or prescribed fire at any fire intensity level.

The Agua Fria Grassland is one area where fire has been recognized as a primary tool in natural resource management and has an interagency cooperative burn plan in place and functioning. . The BLM plan was written and approved in 1994, the three agencies that manage the Agua Fria Grasslands (167,000

acres) are the BLM Phoenix (42,000 acres), Tonto (10,000 acres) and Prescott National Forests (115,000 acres). The resource objectives is to use prescribed fire as a management tool to: increase forage quality for pronghorn antelope and livestock, increase antelope fawn survival, reduce the risk of resource damaging wildfires and maintain the grassland component of the Agua Fria Grassland ecosystem. Burn cycle rotation on BLM land is five to 10 years. The grassland vegetation is Tobosa grass, Side Oats, and Black Gramma. The grasslands have been invaded by mesquite, Snakeweed and Juniper. The shrub component in the vegetation is being reduced and a serial mosaic within the grassland is being created, benefiting pronghorn and other wildlife species. All known and potential conflicts with this burn plan have been addressed and mitigated.

Fire Management Strategies

a) Suppression

Firefighter and public safety is the first priority in all fire management strategies and suppression actions. All other applicable suppression strategies are included in section III-D, Fire Management Strategies Common to All FMUs.

Health and Safety

Safety hazards to firefighters are extreme temperatures (daytime 90 to 105 degrees; nighttime temperatures range from 70 to 90 degrees, and relative humidity runs 5 to 15 percent), open mine shafts and pits are present, venomous animals/insects, low-level military aircraft training routes. When fires are located around mesa edges, steep drop offs and rocky canyon walls are safety hazards. Recreational shooting, and OHV use is common and presents a safety concern. Powerlines adjacent to I-17 present a major concern for aviation resources and for firefighters safety. Interstate I-17 runs on the west side of the monument. Fires adjacent to I-17 presents a traffic concern and safety for the public and firefighters. Smoke obscures visibility and with traffic traveling at high speeds of 70 to 80 mph, this is a hazard to firefighters working in and around the Interstate.

Access

Access by vehicles into this FMU is good off of numerous dirt roads. Depending on the fire location crews may have to hike to reach the fire.

Fire Behavior

Fuels on the monument are predominantly tobosa grass intermixed with small shrubs, cactus, snake weed some mesquite and junipers. The tobosa grasslands depend on heavy winter and early spring moisture or fuels that carry over from the previous year's growing season. Above average moisture usually results in an abundance of annual fuels and a continuous fuel bed. Tobosa grass can grow to above two feet in height.

In years of heavy precipitation and where fuels are continuous fires can spread rapidly through the grass and associated material. The grass fuels are also easily influenced by change in relative humidity. A significant increase in relative humidity and a decrease in temperature can quickly slow or extinguish a fire.

Fuels Grass fuel types are represented by NFDRS fuel model A and NFFL fuel model 1.

Suppression tactics

Suppression strategies and tactics in grass fuel type are usually direct attack using hand crews, engines where possible, airtankers and helicopters dropping water to knock down the fire edge, patrol and mop up. Fires in the grass usually are quickly contained. In years of abundant grass, fires on the monument usually go into multiple burning periods.

Rate of spread - Low to high (depending on fuel continuity)
 Flame length - Depending on wind, one to ten feet
 Resistance to control - Moderate to high

Acceptable wildfire size is up to 1000 acres at Fire Intensity Level (FIL) 1- 6.

FIL 1- 0-2 ft FL, FIL 2 - 2-4 ft FL, FIL 3 - 4-6 ft FL, FIL 4 - 6-8 ft FL, FIL 5 - 8-12 ft FL,
 FIL 6 -12 + ft FL

b) Wildland Fire Use

Wildland Fire Use is a desired future condition on the Monument. Fire is recognized as a natural process in fire-adapted ecosystems and is used to achieve objectives for other resources and to maintain grasslands on the Agua Fria National Monument. Wildland Fire Use would be allowed from natural ignitions under specific prescribed criteria. Statewide Land Use Plan Amendment Allocation 1 – Wildland Fire Use: Areas suitable for wildland fire use for resource benefit. Reference pages 13-15 of this FMP.

c) Prescribed Fire

Prescribed broadcast burning will be the primary method used to maintain native grasslands located on the Agua Fria National Monument. Pile burning of juniper may occur following hand thinning in some areas. Total treatment will not exceed 10,000 acres per year.

d) Non-Fire Fuels Treatments

Hand thinning of juniper may occur in areas where grass cover is not sufficient to support broadcast burning. Management of the Agua Fria National Monument will limit the possibility of off-road mechanical treatments. Chemical and biological methods would need monument and field office manager approval prior to implementation.

e) Post Fire Restoration and Rehabilitation

Historically suppression activities have followed “MIST” guidelines with little surface disturbance. In the event of surface disturbance implementation of appropriate suppression damage rehabilitation will occur.

f) Community Protection/Community Assistance

There are two ranch headquarters located within the Agua Fria National Monument: Box Bar and Horseshoe. Typically these ranches are maintained, leaving minimal threat from wildfire.

Prevention and mitigation efforts for FMU #5 include public education by utilizing local media outlets, educational signing, outreach to public land use groups, prevention patrols and contacts.

Appendix M – Population Growth Model

Spatial Growth Model

Spatial Growth Modeling is accomplished using a contractor developed ArcView extension and can be done at the parcel level, or by the use of any size-assigned grid cells. The Spatial Growth Model (SGM) may be constructed as a set of “nested” models moving from the County to the community and potentially the neighborhood level. The following steps are involved in the creation of an SGM, which will generate GIS maps for the growth study area by decade (or other preferred time step):

1. Determine the growth study area; ensure the data available spatially matches this region.
2. Determine the land available for growth with the study area. This process will create an initial “land bank” which can exclude areas such as those designated for open space, agriculture, riparian preserves, etc. (This land bank can be adjusted to meet the needs of different groups or values, and several land banks may be created to test different policies.) This creates a grid file in Arc View using Spatial Analyst. Land may be assigned as a “zoning” category specifying that the model, “assign this land sub-area to a particular type of growth.”
3. Input the anticipated population growth rate, by housing type; including commercial and industrial allocations. A “Growth Calculator” has been developed to accomplish this in a Graphical User Interface (GUI) venue. This Growth Calculator allows the user to adjust the percentage of population assigned to different housing types (i.e., Single Family 35%, Multi-family 30%, Rural 25%, etc. – this may also be more specific zoning), as well as adding/deleting or changing these values/types for each scenario run. This also allows the user to calculate the amount of land required to accommodate different choices for each land use type, reflecting demand in term of total land, lot size, people per household, units/lot, etc.
4. Develop a set of “Growth Rules” (this can be specific zoning) by which this growing number of people and businesses will be housed and distributed. Conversely, growth rules can specify land *not to be developed*. For instance:
 - Place new multi-family within one mile of existing multifamily
 - Place new multi-family within 2 miles of existing commercial
 - Keep all low density (perhaps 1/2 acre or more...) 2 miles away from existing intersections
 - Cluster all development around nodes on a new/existing transportation corridor.
 - Notably, there may be any number of rules, and
 - Each rule may be assigned a priority weight in relation to the other rules used in that scenario “run” to reflect the values of the user.
 - The addition of rules will add to the “run times” of the model, however the output will reflect the complex aggregation of these rules.

These rules can be developed as a separate set for each type of land use being assessed in the model. These various rules sets can then be run consecutively in a comprehensive model run, letting each rule set allocate land based on available area and priority in the run. Essentially, this allows the user to assess various differences based on which types of development have priority. When a scenario is generating, once land is used up by one type of development, it becomes unavailable to any other land use type. The model also notifies the user if there is insufficient land to meet the demand of a particular rule set. There is no limit on the number of rules in rule set or the number of rule sets run for a given scenario.

5. Run the model; this will take anywhere from a few minutes to several hours, based on the number of rules used, the size of the land bank and the scale of the grid, lot or parcel resolution to be utilized.
 - The model will generate a grid for each rule, which can be displayed to show where the rule applied.
 - The resultant rule grids are then combined to create a Composite Suitability Grid. This grid is used to allocate growth for that particular rule set.
 - Finally, a grid is created for each time step and rule set. For example if there was a set of 4 rules for Single Family Growth growing in ten year intervals to 2050, the model would generate:
 - i. 4 grids representing each rule
 - ii. 1 Composite Suitability Grid
 - iii. Grids that represent Single Family Growth 2010, Single Family Growth 2020, Single Family Growth 2030, Single Family Growth 2040 and Single Family Growth 2050
 - These sets of grids are created for each rule set run for a given Scenario. These grids can then be merged by land use type, year of growth, etc., to display different scenario data for assessment.
6. Rerun the model with different population, land bank and growth rule scenarios. This accommodates a variety of values and opinions regarding community growth options.
7. These scenarios may be overlaid or otherwise compared for similarities and differences.

Appendix N – Bradshaw-Harquahala Route Model

The following table is an estimate of the effect of the management decisions described in the Alternatives Chapter of this document on the vehicle route network. The table is simply a possible outcome based on a set of conditions that represents a way to compare alternatives and to estimate environmental impacts. *This table is a tool for RMP level analysis and not an RMP decision.* The methodology for estimating the percentage of open, closed and new routes in the planning area was derived by interpreting land use allocations and the specific prescriptions that come with these allocations and making an estimate of the effects on the route system. This table is only an estimate of possible foreseeable outcomes of how the range of alternatives could affect route designation scenarios. Since actual route designation is likely to take several years to complete, detailed route-by-route analysis was not done. Instead, the potential affect of alternative decisions on the overall vehicle route network is displayed as estimated percentages of open, closed, and new routes. It was felt by the planning team that this was the most informative way to convey the possible effects of management actions in the alternatives.

Table N-1. Route Models

Special Area Designations and Allocations	Alternative A		Alternative B		Alternative C		Alternative D		Alternative E	
	mi	%	mi	%	mi	%	mi	%	mi	%
ACECs										
Total Routes	0.0		2.0	0.09	189	8.44	299	13.35	166.0	7.41
open	N/A	N/A	0.2	10	18.9	10	0.0	0	143.5	86
closed	N/A	N/A	1.8	90	170.1	90	299.0	100	22.5	14
new ²	N/A	N/A	0.0	0	0.0	0	0.0	0	0	0
subtotal open			0.2		18.9		0.0		143.5	
Areas Allocated to Maintain Wilderness Characteristics										
Total routes	0		158.0	7.05	92.0	4.11	113.5	5.07	126.5	5.65
open	N/A	N/A	47.4	30	9.2	10	0.0	0	35.0	28
closed	N/A	N/A	110.6	70	82.8	90	113.5	100	91.5	72
new ²	N/A	N/A	0.0	0	0.0	0	0.0	0	0	0
subtotal open			47.4		9.2		0.0		35.0	
SRMA										
Total routes	0.0		667.0	29.78	664.0	29.64	277.0	12.37	1277.0	57.01
open	0.0	100	653.7	98	630.8	95	249.3	90	1213.2	95
closed	0.0		28.3	2	64.8	5	155.1	10	63.9	5
new ²	0.0		7.1	0.5	13.0	1	31.0	2	26	2
subtotal open	0.0		660.7		643.8		280.3		1238.7	
ERMA										
Total routes	0.0		1413.0	63.08	1295.0	57.81	1550.5	69.22	670.5	29.93
open	0.0	100	1384.7	98	1230.3	95	1395.5	90	637.0	95
closed	0.0		28.3	2	64.8	5	155.1	10	33.5	5

Special Area Designations and Allocations	Alternative A		Alternative B		Alternative C		Alternative D		Alternative E	
New ²	0.0		7.1	0.5	13.0	1	31.0	2	13.4	2
subtotal open	0.0		1391.8		1243.2		1426.5		650.4	
Total ¹	2240.0		2240.0		2240.0		2240.0		2240.0	
Total open	2240.0		2086.0		1889.2		1644.8		2028.6	
Total closed	0.0		168.9		382.4		722.6		211.4	
Total new*	0.0		14.1		25.9		62.0		39.0	
Net Route Mi. Closed ³	0.0		154.8		356.5		660.6		172.4	
% Closed (of exist. 2240)	0.0		6.9%		15.9%		29.5%		7.7%	

1. Total routes in Bradshaw-Harquahala – 2,240 miles

Route total based on GPS route inventory data where complete and Arizona Land Resource Information System data where GPS data collection has not yet been collected. Total miles excludes state and county highways.

2. New routes (as % of total within management areas) developed to maintain connectivity of network as mitigation for closures for resource protection

3. Total closed, less new routes

The following lists explain some of the conditions that were considered in developing the percentages in the table of open, closed, and new routes:

Within SRMA/RMZ - Intent is to manage, at a higher level, specific activities and uses such as motorized/mechanized/equestrian use.

Factors that were considered:

1. Routes that meet Land Health Standards for erosion, desired plant communities, riparian management and other standards would generally be retained.
2. Routes consistent with management of the SRMA/RMZ intent would be retained. Areas allocated to day use recreation may have more looping route opportunities, while primitive areas may create more "cherry stem" spur route opportunities to maximize primitive recreation opportunities.
3. Spur routes for parking and camping would be designated open if no resource concerns exist.
4. New routes would be considered when needed to:
 - o Mitigate routes not meeting Land Health Standard criteria.
 - o Replace lost access opportunities
 - o Enhance recreation opportunities
5. Utility Rights-of-Way would generally be left open to public use.
6. Access to private property would be generally left open to public use.
7. Routes to wildlife water catchments would generally be left open for public use.
8. Motorized routes that cause conflict with other land uses or resources would be mitigated or closed (per 43 CFR 8342.1)

Within ACEC - Intent is to limit activities that diminish the purpose of the ACEC.

Factors that were considered:

1. Routes that facilitate an increase in human activity that may be damaging, such as camping spur routes, may be closed.
2. Routes that are determined to fragment habitat would be closed or limits placed on their use.
3. "Through" routes compatible with management will be left open. Analysis would attempt to identify important connecting routes.
4. The ACEC allocation would generally prohibit building new routes unless required for management.
5. Utility Rights-of-Way may be closed to public use if determined that use of the route is incompatible with the ACEC's purpose.
6. Access to private property may be closed to public use, and a Right-of-Way grant required for access by property owners.
7. Routes to wildlife water catchments would generally be left open for public use.
8. Motorized routes that cause conflict with other land uses or resources would be mitigated or closed (per 43 CFR 8342.1)

Within areas allocated to maintain wilderness characteristics/Backcountry and Passage Zone - Intent is to manage generally for semi-primitive non-motorized and primitive experiences.

Factors that were considered:

1. Routes that facilitate an increase in motorized activity, such as vehicle camping spur routes and "through" routes with intensive motorized use, may be closed.
2. Routes incompatible with maintaining the primitive values, such as redundant routes and routes no longer needed for management or other land uses would be closed.
3. "Through" routes compatible with management would be left open. Analysis would attempt to identify important connecting routes.
4. New routes would generally be prohibited unless required for management.
5. Routes to wildlife water catchments would generally be left open for public use.
6. Utility Rights-of-Way would generally be left open to public use.
7. Access to private property may be closed to public use, and a Right-of-Way grant required for access by property owner.
8. Motorized routes that cause conflict with other land uses or resources would be mitigated or closed (per 43 CFR 8342.1)

Appendix O - Grazing Allotment Information

Allotment Name	Allotment Number	Permitted AUMs	Livestock Number	Livestock Type
AGUA FRIA NATIONAL MONUMENT				
Badger Spring Wash	06182	12	1	Cattle
Bluebell	06012	72	6	Cattle
Box Bar	06063	2447	206	Cattle
Cordes	06005	731	2470	Sheep
Cordes	06005	936	78	Cattle/Horse
Cosanti Ranch	06145	48	4	Cattle
Cross Y	06013	2790	250	Cattle
EZ Ranch	06045	972	81	Cattle
Horseshoe	06235	4572	381	Cattle
2Y	00048	216	18	Cattle
Sycamore	06169	696	58	Cattle/Horse
BRADSHAW-HARQUAHALA PLANNING AREA				
6Y Ranch Lease	05042	213	25	Cattle
A Bar V	05047	24	2	Cattle
Aguila	03000	5073	427	Cattle
Antelope Creek	06238	600	50	Cattle
Arrow Y (15)	00084	204	33	Cattle
Arrow Y (3)	00069	2151	339	Cattle
Auza	05032	84	7	Cattle
Beardsley Canal	06185	12	1	Cattle
Bialac	03008	Ephemeral		Cattle
Big Bug Creek	06143	108	9	Cattle
Big Rebel Mine	06066	36	3	Cattle
Black Canyon	06122	95	16	Horse
Bo Nine	06095	948	79	Cattle
Boulder Creek	06215	5040	600	Cattle
Box Canyon Ranch	05029	72	6	Cattle
Buckhorn	06243	924	175	Cattle/Horse
Buckhorn Creek	06150	72	6	Cattle
Bumble Bee	06161	2640	485	Cattle
Cactus Garden	03011	1098	104	Cattle
Carter-Herrera	03015	512	52	Cattle
Castle Hot Springs	06206	60	8	Cattle
Central Az Ranch Co	03014	2329	211	Cattle
Champie	06026	1100	195	Cattle
Chaparral Gulch	06065	408	34	Cattle
Clem	03017	1085	400	Cattle
Congress	03019	3242	614	Cattle
Congress-Sky Arrow	05014	108	52	Cattle

Allotment Name	Allotment Number	Permitted AUMs	Livestock Number	Livestock Type
Cooper Ranch	05013	2220	185	Cattle
Copper Mountain	06139	216	18	Cattle
Cottonwood Creek	06246	96	8	Cattle
Coughlin	05015	168	14	Cattle
Cross Mountain	03021	12	1	Cattle
Desert Hills	03025	365	39	Cattle
Desert Hills Lease	05016	432	36	Cattle
Dewey	06094	180	75	Goat
Douglas	03026	144	300	Cattle
Eagle Eye	03027	Ephemeral		Cattle
Echeverria	03029	713	60	Cattle
Effus	03030	1155	125	Cattle
Eleven L	06103	1962	244	Cattle/Horse
Flat Iron	03031	457	38	Cattle
Foraker	05017	180	15	Cattle
Forepaugh Cattle Co.	05012	888	74	Cattle
Galena Gulch	06201	432	36	Cattle
Garcia	03095	3150	350	Cattle/Sheep
Grantham Bros. Lease	05049	156	13	Cattle
Green Gulch	06229	12	1	Cattle
Hackberry Gulch	06057	60	5	Cattle
Hackberry Mine	06046	12	1	Cattle
Hassayampa River	06035	12	1	Cattle
Hassayampa River Ran	05008	732	61	Cattle
Heine	05023	24	2	Cattle
Hozoni	06223	1703	330	Cattle
Humboldt	06181	24	2	Cattle
Humbug	06245	101	111	Cattle/Horse
J V Bar	06222	1781	209	Cattle/Horse
Jesus Canyon	06227	1068	111	Cattle/Horse
Jones	03045	900	75	Cattle
Kennedy	03010	360	30	Cattle
Kirkland	05019	132	11	Cattle
Lockett	06109	60	5	Cattle
Los Caballeros	03052	939	103	Cattle/Horse
Lower Bo Nine	00095	60	5	Cattle
Mayer	06011	264	22	Cattle
Michael Lease	05033	516	52	Cattle
Minnehaha Creek	06021	60	5	Cattle
Moralez	05035	826	86	Cattle
Ohaco	03060	1476	150	Cattle
Osborne Spring Wash	06213	60	5	Cattle
Oso Ranch Allotment	05040	768	64	Cattle
Poland Junction	06135	276	23	Cattle
Quarter Circle J	05020	144	12	Cattle
R. and E. Park Lease	00085	144	33	Cattle

Allotment Name	Allotment Number	Permitted AUMs	Livestock Number	Livestock Type
Rafter Lazy W Ranch	05030	120	10	Cattle
Ridgeway-Kong	03071	120	10	Cattle
Rock Springs	06219	96	8	Cattle
Sky Arrow	03079	684	339	Cattle
Sprouse	03081	819	75	Cattle
Square M	05010	60	5	Cattle
Tee	06128	1728	144	Cattle
Texas Gulch	06048	48	4	Cattle
Thompson Lease	05004	144	12	Cattle
Three Canyon	06142	252	21	Cattle
Turner	03084	Ephemeral		Cattle
U Cross	06239	1667	248	Cattle
VX Ranch	06104	680	111	Cattle/Horse
W Diamond	05028	384	32	Cattle
Wagoner	06147	12	1	Cattle
West Wing Mountain	06056	Ephemeral		Cattle/Sheep
Whitehead	05048	288	24	Cattle
Yarber Wash	06027	156	13	Cattle

Appendix P - Conservation Measures for Fire, Fuel, and Air Quality

Conservation Measures for Fire Management Activities

Wildland Fire Suppression (FS)

The following Conservation Measures will be implemented during fire suppression operations, unless firefighter or public safety, or the protection of property, improvements, or natural resources, render them infeasible during a particular operation. Each Conservation Measure has been given an alphanumeric designation for organizational purposes (*e.g.*, FS-1). Necessary modifications of the Conservation Measures or impacts to Federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor, and coordinated with the USFWS.

- FS-1** Protect known locations of habitat occupied by Federally listed species. Minimum Impact Suppression Tactics (M.I.S.T.) will be followed in all areas with known Federally protected species or habitat [Appendix U, *Interagency Standards for Fire and Aviation Operations 2003*, or updates].
- FS-2** Resource Advisors will be designated to coordinate natural resource concerns, including Federally protected species. They will also serve as a field contact representative (FCR) responsible for coordination with the USFWS. Duties will include identifying protective measures endorsed by the Field Office Manager, and delivering these measures to the Incident Commander; surveying prospective campsites, aircraft landing and fueling sites; and performing other duties necessary to ensure adverse effects to Federally protected species and their habitats are minimized. On-the-ground monitors will be designated and used when fire suppression activities occur within identified occupied or suitable habitat for Federally protected species.
- FS-3** All personnel on the fire (firefighters and support personnel) will be briefed and educated by Resource Advisors or designated supervisors about listed species and the importance of minimizing impacts to individuals and their habitats. All personnel will be informed of the conservation measures designed to minimize or eliminate take of the species present. This information is best identified in the incident objectives.
- FS-4** Permanent road construction will not be permitted during fire suppression activities in habitat occupied by Federally protected species. Construction of temporary roads is approved only if necessary for safety or the protection of property or resources, including Federally protected species habitat. Temporary road construction should be coordinated with the USFWS, through the Resource Advisor.

- FS-5** Crew camps, equipment staging areas, and aircraft landing and fueling areas should be located outside of listed species habitats, and preferably in locations that are disturbed. If camps must be located in listed species habitat, the Resource Advisor will be consulted to ensure habitat damage and other effects to listed species are minimized and documented. The Resource Advisor should also consider the potential for indirect effects to listed species or their habitat from the siting of camps and staging areas (*e.g.*, if an area is within the water flow pattern, there may be indirect effects to aquatic habitat or species located off-site).
- FS-6** All fire management protocols to protect Federally protected species will be coordinated with local fire suppression agencies that conduct fire suppression on BLM-administered lands to ensure that the agency knows how to minimize impacts to Federally protected species in the area.
- FS-7** The effectiveness of fire suppression activities and Conservation Measures for Federally protected species should be evaluated after a fire, when practical, and the results shared with the USFWS and AGFD. Revise future fire suppression plans and tactical applications as needed and as practical.

Fuels Treatments (prescribed burning and other fuels management) (FT)

The following Conservation Measures are mandatory when implementing wildland fire use, prescribed fires, and the proposed vegetation treatments (mechanical, chemical, biological):

- FT-1** Biologists will be involved in the development of prescribed burn plans and vegetation treatment plans to minimize effects to Federally protected species and their habitats within, adjacent to, and downstream from proposed project sites. Biologists will consider the protection of seasonal and spatial needs of Federally protected species (*e.g.*, avoiding or protecting important use areas or structures and maintaining adequate patches of key habitat components) during project planning and implementation.
- FT-2** M.I.S.T. will be followed in all areas with known Federally protected species or habitats.
- FT-3** Pre-project surveys and clearances (biological evaluations/assessments) for Federally protected species will be required for each project site before implementation. All applicable Conservation Measures will be applied to areas with unsurveyed suitable habitat for Federally protected species, until a survey has been conducted by qualified personnel to clear the area for the treatment activity.
- FT-4** Use of motorized vehicles during prescribed burns or other fuels treatment activities in suitable or occupied habitat will be restricted, to the extent feasible, to existing roads, trails, washes, and temporary fuelbreaks or site-access routes. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after the prescribed burn or fuels treatment project is completed.
- FT-5** As part of the mandatory fire briefing held prior to prescribed burning, all personnel (firefighters and support personnel) will be briefed and educated by Resource Advisors or designated supervisors about listed species and the importance of minimizing impacts to individuals and their habitats. All personnel will be informed of the Conservation Measures designed to minimize or eliminate take of the species present.

Rehabilitation and Restoration (RR)

- RR-1** When rehabilitating important areas for Federally listed species that have been damaged by fire or other fuels treatments, the biologist will give careful consideration to minimizing short-term and long-term impacts. Someone who is familiar with fire impacts and the needs of the affected species will contribute to rehabilitation plan development. Appropriate timing of rehabilitation and spatial needs of Federally listed species will be addressed in rehabilitation plans.
- RR-2** Seed from regionally native or sterile alien (non-native) species of grasses and herbaceous vegetation will be used in areas where reseeding is necessary following ground disturbance to stabilize soils and prevent erosion by both wind and water.
- RR-3** Sediment traps or other erosion control methods will be used to reduce or eliminate influx of ash and sediment into aquatic systems.
- RR-4** Use of motorized vehicles during rehabilitation or restoration activities in suitable or occupied habitat will be restricted, to the extent feasible, to existing roads, trails, or washes, and to temporary access roads or fuelbreaks created to enable the fire suppression, prescribed burn, or fuels treatment activities to occur. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after rehabilitation or restoration activities are completed.
- RR-5** All temporary roads, vehicle tracks, skid trails, and off-road vehicle (ORV) trails resulting from fire suppression and the proposed fire management activities will be rehabilitated (water bars, etc.), and will be closed or made impassible for future use.
- RR-6** Burned area emergency rehabilitation (BAER) activities and long-term restoration activities should be monitored, and the results provided to the USFWS and AGFD. Section 7 consultation for BAER activities will be conducted independently, if necessary.
- RR-7 (Recommended)** Develop public education plans that discourage or restrict fires and fire-prone recreation uses during high fire-risk periods. Develop brochures, signs, and other interpretive materials to educate recreationists about the ecological role of fires, and the potential dangers of accidental fires.

Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats (RA)

Wildland Fire Suppression and Rehabilitation

The following Conservation Measures will be implemented during fire suppression operations in riparian, wetland, or aquatic habitats, unless firefighter or public safety, or the protection of property, improvements, or natural resources, render them infeasible during a particular operation. Necessary modifications of the Conservation Measures or impacts to Federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor, and coordinated with the USFWS. The BLM's 1987 policy statement on riparian area management defines a riparian area as "an area of land directly influenced by permanent water. It has visible vegetation or physical characteristics

reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil.”

- RA-1** During wildfire suppression, apply M.I.S.T. within riparian areas. Fire suppression actions in riparian areas should be prioritized to minimize damage to stands of native vegetation from wildfire or suppression operations. To the extent possible, retain large, downed woody materials and snags that are not a hazard to firefighters.
- RA-2** Fire suppression and rehabilitation in riparian corridors will be coordinated with the Resource Advisor or qualified biologist approved by BLM.
- RA-3** Site-specific implementation plans that include project areas with Federally protected aquatic or riparian-obligate species will specify fire management objectives and wildland fire suppression guidance, taking into account the special concerns related to these species.
- RA-4** In riparian areas, use natural barriers or openings in riparian vegetation where possible as the easiest, safest method to manage a riparian wildfire. Where possible and practical, use wet firebreaks in sandy overflow channels rather than constructing firelines by hand or with heavy equipment.
- RA-5** Construction or development of a crossing for motorized vehicles across a perennial stream will not be permitted, unless an established road already exists or where dry, intermittent sections occur.
- RA-6** Avoid the use of fire retardants or chemical foams in riparian habitats or within 300 feet of aquatic habitats, particularly sites occupied by Federally protected species. Apply operational guidelines as stated in the *Interagency Standards for Fire and Fire Aviation Operations 2003 (or updates)*, “Environmental Guidelines for Delivery of Retardant or Foam Near Waterways,” Chapter 8 (pp. 8-13 through 8-15).
- RA-8** When using water from sources supporting Federally protected species, care must be taken to ensure adverse impacts to these species are minimized or prevented. Unused water from fire abatement activities will not be dumped in sites occupied by Federally protected aquatic species to avoid introducing non-native species, diseases, or parasites.
- RA-9** If water is drafted from a stock tank or other body of water for fire suppression, it will not be refilled with water from another tank, lakes, or other water sources that may support non-native fishes, bullfrogs, crayfish, or salamanders.
- RA-10** Use of containment systems for portable pumps to avoid fuel spills in riparian or aquatic systems will be required.

Fuels Treatments (prescribed fire; mechanical, chemical, and biological treatments)

The following Conservation Measures are mandatory when implementing wildland fire use, prescribed fires, and the proposed vegetation treatments (mechanical, chemical, biological) within riparian, wetland, or aquatic habitats.

- RA-12** All Conservation Measures for wildland fire suppression (**RA-1 to RA-11, Section 2.1**) also apply to fuels treatment activities (prescribed fire; mechanical, chemical, and biological treatments) in riparian, wetland, and aquatic habitats.
- RA-13** Fire management treatments within or adjacent to riparian and aquatic habitats will be designed to provide long-term benefits to aquatic and riparian resources by reducing threats associated with dewatering and surface disturbance, or by improving the condition of the watershed and enhancing watershed function.
- RA-14** For priority fire/fuels management areas (*e.g.*, WUIs) with Federally protected species or designated critical habitat downstream, BLM biologists and other resource specialists, as appropriate, in coordination with USFWS and AGFD, will determine:
- A) The number of acres and the number of projects or phases of projects to occur within one watershed per year.
 - B) An appropriately-sized buffer adjacent to perennial streams in order to minimize soil and ash from entering the stream.
 - C) Where livestock grazing occurs in areas that have been burned, specialists will determine when grazing can be resumed. Such deferments from grazing will only occur when necessary to protect streams from increased ash or sediment flow into streams¹.

If agreement cannot be reached or treatment will not meet fuel reduction objectives, BLM will re-initiate consultation. Our authority to make these types of changes is in the regulations at 43 CFR 4110.3-3(b).

Species Specific Conservation Measures

In addition to the general Conservation Measures listed in **Sections 1.0** and **2.0**, the following species-specific Conservation Measures will be applied during wildfire suppression to the extent possible, and will be required during fuels treatment activities (wildland fire use, prescribed fire, vegetation treatments). Necessary modifications of the Conservation Measures or impacts to Federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor, and coordinated with the USFWS.

Birds

California brown pelican (FE)

BP-1 Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

Southwestern willow flycatcher (FE)

- WF-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.
- WF-2** Except where fires are active in occupied habitat, minimize unnecessary low-level helicopter flights during the breeding season (April 1 – September 30). Approach bucket dip sites at a 90-degree direction to rivers to minimize flight time over the river corridor and occupied riparian habitats. Locate landing sites for helicopters at least ¼ mile from occupied sites to avoid impacts to willow flycatchers and their habitat.
- WF-3** Minimize use of chainsaws or bulldozers to construct firelines through occupied or suitable habitat except where necessary to reduce the overall acreage of occupied habitat or other important habitat areas that would otherwise be burned.
- WF-4** Implement activities to reduce hazardous fuels or improve riparian habitats (prescribed burning or vegetation treatments) within occupied or unsurveyed suitable habitat for southwestern willow flycatchers only during the non-breeding season (October 1 to March 31).
- WF-5** Avoid developing access roads that would result in fragmentation or a reduction in habitat quality. Close and rehabilitate all roads that were necessary for project implementation (see **RR-5**).
- WF-6** Prescribed burning will only be allowed within ½ mile of occupied or unsurveyed suitable habitat when weather conditions allow smoke to disperse away from the habitat when birds may be present (breeding season of April 1 – September 30).
- WF-7** Vegetation treatment projects adjacent to occupied or unsurveyed suitable habitat will only be conducted when willow flycatchers are not present (October 1 – March 31).

Bald eagle (FT)

- BE-1** No human activity within ½ mile of known bald eagle nest sites between December 1 and June 30.
- BE-2** No tree cutting within ¼ mile of known nest trees.
- BE-3** No human activity within ¼ mile of known bald eagle winter roost areas between October 15 and April 15.
- BE-4** No tree cutting within the area immediately around winter roost sites as determined by BLM biologists.
- BE-5** No helicopter or aircraft activity or aerial retardant application within ½ mile of bald eagle nest sites between December 1 and June 30 or winter roost sites between October 15 and April 15.
- BE-6** Conduct prescribed burn activities outside of nesting season in a manner to ensure nest and winter roost sites are more than ½ mile from downwind smoke effects.
- BE-7** Provide reasonable protective measures so fire prescription or fuels treatment will not consume dominant, large trees as identified by the Resource Advisor or qualified biologist approved by BLM within ½ mile of known nests and roosts of bald eagles. Pre-treatment efforts should

provide reasonable protection of identified nesting and roosting trees (see Conservation Measure FT-4).

Yellow-billed cuckoo (FC)

YC-1 Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

Fish

The following Conservation Measure will be implemented for all Federally protected fish species that may be affected by the Proposed Action during fire suppression to the extent possible, and are mandatory for wildland fire use, prescribed fire, and vegetation treatment activities:

FI-1 BLM will cooperate with other agencies to develop emergency protocols to decrease the impacts of fire suppression and fuels treatment activities on Federally listed fish species. Emergency protocols will include appropriate agency contacts, a list of facilities that can hold fish, sources of equipment needed (e.g., sampling gear, trucks) and how to address human health and safety issues.

In addition to implementing **FI-1**, the following species-specific Conservation Measures will also apply:

Desert pupfish (FE, CH)

DP-1 Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats for occupied reaches and critical habitat.

DP-2 Conduct prescribed burns such that no more than one-half of the watershed of each desert pupfish site is burned in a two-year period (excluding buffers to the streams and/or spring habitats) and repeat treatments at greater than two-year intervals.

DP-3 Monitor, where practical, for fish kill immediately following the first runoff event after prescribed fires in watersheds containing desert pupfish.

DP-4 When considering which creek crossings to use for fire management activities, avoid crossings that are known to be occupied by desert pupfish.

Gila topminnow (FE)

GT-1 Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

GT-2 Conduct prescribed burns such that no more than one-half of the watershed of each gila topminnow natural or reintroduction site is burned in a two-year period (excluding buffers to the streams and/or spring habitats) and repeat treatments at greater than two-year intervals.

GT-3 Monitor for fish kill, where practical, immediately following the first runoff event after prescribed fires in the watersheds containing gila topminnows.

GT-4 When considering which creek crossings to use for fire management activities, avoid crossings that are known to be occupied by Gila topminnow, when possible.

- GT-5** Develop mitigation plans in coordination with the USFWS for each fuels management project (prescribed fire vegetation treatments) that may adversely affect the gila topminnow. Mitigation plans for prescribed fire will limit to the extent practicable the possibility that fire would spread to riparian habitats. Mitigation plans will be approved by the USFWS.
- GT-6** Cooperate with the USFWS and AGFD to identify site-specific measures, such as prescribed fires in grassland vegetation types to improve watershed conditions (*e.g.*, in the Cienega Creek watershed), to protect populations of gila topminnow from other resource program impacts.

Gila chub (PE, Proposed CH)

- GC-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats for occupied reaches and proposed critical habitat.
- GC-2** When considering which creek crossings to use for fire management activities, avoid crossings that are known to be occupied by Gila chub, when possible.
- GC-3** Cooperate with the USFWS and AGFD to identify site-specific measures, such as prescribed fires in grassland vegetation types to improve watershed conditions (*e.g.*, in the Cienega Creek watershed), to protect populations of gila chub from other resource program impacts.

Flowering Plants

The following Conservation Measures for known locations and unsurveyed habitat of all Federally protected plant species within the planning area will be implemented during fire suppression to the extent possible, and are mandatory for wildland fire use, prescribed fire, and vegetation treatment activities:

- PL-1** Known locations and potential habitat for plant populations will be mapped to facilitate planning for wildland fire use, prescribed fires, and vegetation treatments, and to ensure protection of these populations during fire suppression.
- PL-2** BLM will coordinate with FWS to delineate buffer areas around plant populations prior to prescribed fire and vegetation treatment activities. BLM will coordinate with USFWS during any emergency response and wildland fire use activities to ensure protection of plant populations from fire and fire suppression activities.
- PL-3** During fire suppression, wildland fire use, and prescribed fire in habitat occupied by Federally protected plant species, no staging of equipment or personnel will be permitted within 100 meters of identified individuals or populations, nor will off-road vehicles be allowed within the 100-meter buffer area, unless necessary for firefighter or public safety or the protection of property, improvements, or other resources (see **FS-7**). One of the primary threats to many of these plant species is trampling/crushing from personnel and vehicles.
- PL-4** No prescribed burning will be implemented within 100 meters of identified locations or unsurveyed suitable habitat for Federally protected and sensitive plant populations unless specifically designed to maintain or improve the existing population.

There are no additional species-specific conservation measures for the following Federally protected plant species: **Pima Pineapple Cactus** (*Coryphantha scheeri* var. *robustispina*), **Siler Pincushion Cactus**

(*Pediocactus sileri*), **Acuña Cactus** (*Echinomastus erectocentrus* var. *acunensis*), **Fickeisen Plains Cactus** (*Pediocactus peeblesianus* var. *fickeiseniae*).

¹The Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook, Exhibit 4-2, BLM supplemental guidance, page 5 of 9 (<http://fire.r9.fws.gov/ifcc/ESR/handbook/>) establishes the following policy for livestock exclusion following burns:

Exclusion of livestock is critical for the recovery of burned vegetation or establishment and maintenance of new seedlings and use of these areas should not be permitted until the vegetation recovers or is established. Both re-vegetated and, burned but not re-vegetated areas, will be closed to livestock grazing for at least two growing seasons following the season in which the wildfire occurred to promote recovery of burned perennial plants and/or facilitate the establishment of seeded species. Livestock permittees must be informed of the closure early during the plan preparation process, and livestock closures will be made a condition or term on the grazing license or permit through the issuance of grazing decision (see 43 CFR 4160). Livestock closures for less than two growing seasons may be justified on a case-by-case basis based on sound resource data and experience. Livestock management following seedling establishment and/ or burned area recovery should maintain both non-native and/or native species to meet land use (including Standards for Rangeland Health and Guidelines for Grazing Management) or activity plan objectives.

Appendix Q-1. Riparian Functional Condition – Agua Fria National Monument

Definitions								
<i>Conditions:</i>	<i>PFC = Proper Functioning Condition</i>				<i>Trends:</i>	<i>UP = Upward Trend</i>		<i>NA = Not Applicable</i>
	<i>FAR = Functioning At Risk</i>					<i>NAT = No Apparent Trend</i>		
	<i>NF = Non-Functioning</i>					<i>DWN = Downward Trend</i>		
AGUA FRIA NATIONAL MONUMENT								
<i>Stream</i>	<i>Segment #</i>	<i>BLM (miles)</i>	<i>Other (miles)</i>	<i>Total (miles)</i>	<i>Condition</i>	<i>Trend</i>	<i>Miles per Condition/Trend</i>	<i>Year Evaluated</i>
Agua Fria River	1-H	0.40	1.60	2.00	PFC	NA	0.40	2000
	1-I	2.20	0.20	2.40	PFC	NA	2.20	2000
	1-J	2.60	0.00	2.60	FAR	UP	2.60	2000
	1-K	2.10	0.40	2.50	PFC	NA	2.10	2000
	1-L	2.00	0.00	2.00	PFC	NA	2.00	1998
	1-M	3.00	0.00	3.00	FAR	UP	3.00	1998
	1-N	3.30	0.60	3.90	FAR	UP	3.30	1998
	1-O	2.40	0.00	2.40	FAR	NAT	2.40	1999
	1-P	2.40	0.30	2.70	FAR	NAT	2.40	200
Stream Total		20.40	3.10	23.50	Total PFC/NA		6.70	
					Total FAR/UP		8.90	
					Total FAR/NAT		4.80	
Ash Creek	72-A	0.70	1.10	1.80	PFC	NA	0.70	2003
	72-B	0.90	0.00	0.90	PFC	NA	0.90	2003
Stream Total		1.60	1.10	2.70	Total PFC/NA		1.60	
Badger Springs Wash	41-A	1.76	0.00	1.76	FAR	UP	1.76	2002
Big Bug Creek	45-A	0.83	0.00	0.83	FAR	UP	0.83	1995

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Bishop Creek	42-A	2.00	0.00	2.00	PFC	NA	2.00	1998
Dry Creek	77-A	0.80	0.00	0.80	FAR	DWN	0.80	2003
Indian Creek	44-A	2.10	0.00	2.10	FAR	DWN	2.10	2003
	44-B	4.00	0.00	4.00	FAR	NAT	4.00	2003
Stream Total		6.10	0.00	6.10	Total FAR/DWN		2.10	
					Total FAR/NAT		4.00	
Indian Creek Tributary	84-A	0.40	0.00	0.40	PFC	NA	0.40	1999
Larry Creek	79-A	1.00	0.00	1.00	PFC	NA	1.00	2003
Larry Creek Tributary	8-A	0.60	0.00	0.60	PFC	NA	0.60	1998
Little Ash Creek	73-A	1.40	0.00	1.40	FAR	DWN	1.40	2003
	73-B	0.40	0.60	1.00	PFC	NA	0.40	2000
Stream Total		1.80	0.60	2.40	Total FAR/DWN		1.40	
					Total PFC/NA		0.40	
Lousy Canyon	78-A	1.80	0.00	1.80	PFC	NA	1.80	2002
Silver Creek	43-A	1.00	0.00	1.00	FAR	UP	1.00	1998
	43-B	2.00	0.00	2.00	PFC	NA	2.00	1998
	43-C	2.00	0.00	2.00	FAR	UP	2.00	1998
Stream Total		5.00	0.00	5.00	Total FAR/UP		3.00	
					Total PFC/NA		2.00	
Sycamore Creek	46-A	1.90	0.70	2.60	FAR	UP	1.90	2000
	46-B	0.60	0.00	0.60	PFC	NA	0.60	2003
	46-C	1.20	2.00	3.20	PFC	NA	1.20	2003
Stream Total		3.70	2.70	6.40	Total PFC/NA		1.80	
					Total FAR/UP		1.90	
Overall Total for AFNM	BLM	Other	Total	PFC/NA	FAR/UP	FAR/NAT	FAR/DWN	NF
	47.79	7.50	55.29	18.30	16.39	8.80	4.30	0.00

Appendix Q-2. Riparian Functional Condition – Bradshaw-Harquahala

Definitions				
Conditions:	PFC = Proper Functioning Condition	Trends:	UP = Upward Trend	NA = Not Applicable
	FAR = Functioning At Risk		NAT = No Apparent Trend	
	NF = Non-Functioning		DWN = Downward Trend	

BRADSHAW-HARQUAHALA PLANNING AREA								
Stream	Segment #	BLM (miles)	Other (miles)	Total (miles)	Condition	Trend	Miles per Condition/Trend	Year Evaluated
Agua Fria River	1-D	1.54	0.62	2.16	PFC	NA	1.54	1997
	1-E	0.85	0.65	1.50	FAR	NA T	0.85	1997
	1-F	0.77	0.50	1.27	FAR	NA T	0.77	1997
	1-G	2.65	0.00	2.65	PFC	NA	2.65	1997
	1-Q	0.60	0.00	0.60	FAR	UP	0.60	1995
	Stream Total		6.41	1.77	8.18	Total PFC/NA		4.19
					Total FAR/UP		0.60	
					Total FAR/NAT		1.62	
Antelope Creek	9-A	1.90	0.00	1.90	FA R	UP	1.90	2000
Antelope Creek	67-A	2.00	0.60	2.60	FA R	NAT	2.00	2004
	67-B	0.70	0.10	0.80	PF C	NA	0.70	2004

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	67-C	1.00	0.80	1.80	PF C	NA	1.00	2004
Stream Total		3.70	1.50	5.20	Total PFC/NA		1.70	
					Total FAR/NAT		2.00	
Arrastre Creek	16-A	0.20	1.10	1.30	FA R	DWN	0.20	2001
	16-B	0.70	0.10	0.80	FA R	DWN	0.70	2001
	16-C	1.60	3.50	5.10	PF C	NA	1.60	2004
Stream Total		2.50	4.70	7.20	Total PFC/NA		1.60	
					Total FAR/DWN		0.90	
Banty Creek	27-A	1.20	1.30	2.50	PF C	NA	1.20	1998
	27-B	2.40	1.80	4.20	PF C	NA	2.40	1998
	27-C	2.00	1.20	3.20	FA R	NAT	2.00	2004
Stream Total		5.60	4.30	9.90	Total PFC/NA		3.60	
					Total FAR/NAT		2.00	
Big Bug Creek	45-C	1.00	1.00	2.00	NF	NA	1.00	1998
Bitter Creek	22-A	1.85	0.00	1.85	FA R	DWN	1.85	2000
Black Canyon Creek	2-A	1.04	0.00	1.04	PF C	NA	1.04	2000
	2-B	1.40	0.00	1.40	FA R	NAT	1.40	1997
	2-C	1.35	0.15	1.50	FA R	DWN	1.35	1997
	2-D	1.96	0.00	1.96	FA R	NAT	1.96	1997
	2-E	1.54	0.00	1.54	FA	NAT	1.54	1997
					R			
	2-F	2.80	0.00	2.80	FA R	NAT	2.80	1997
	2-G	0.72	0.00	0.72	FA R	NAT	0.72	1997

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	2-H	1.92	0.00	1.92	FA R	NAT	1.92	1997
	2-I	1.11	0.12	1.23	FA R	NAT	1.11	1997
	2-J	0.85	0.00	0.85	FA R	NAT	0.85	1997
Stream Total		14.69	0.27	14.96	Total PFC/NA		1.04	
					Total FAR/NAT		12.30	
					Total FAR/DWN		1.35	
Boulder Creek	34-B	1.50	1.90	3.40	PF C	NA	1.50	1998
	34-C	4.50	3.00	7.50	PF C	NA	4.50	1998
	34-D	1.40	1.40	2.80	PF C	NA	1.40	1998
Stream Total		7.40	6.30	13.70	Total PFC/NA		7.40	
Brown's Canyon	3-A	0.40	0.00	0.40	FA R	DWN	0.40	2000
Buckhorn Spring	24-A	0.40	0.00	0.40	PF C	NA	0.40	2003
Bumble Bee Creek	6-A	0.54	0.00	0.54	FA R	NAT	0.54	1998
	6-D	0.62	0.00	0.62	FA R	NAT	0.62	2002
Stream Total		1.16	0.00	1.16	Total FAR/NAT		1.16	
Buzzard Roost Creek	25-A	0.60	0.00	0.60	PF C	NA	0.60	1998
Castle Creek	4-A	0.81	0.00	0.81	FA R	NAT	0.81	2000
	4-B	0.81	0.00	0.81	FA R	NAT	0.81	1998
	4-C	1.02	0.00	1.02	FA R	NAT	1.02	1998
Stream Total		2.64	0.00	2.64	Total FAR/NAT		2.64	
Cherry Creek	18-B	0.15	0.20	0.35	PF C	NA	0.15	1998
	18-C	0.10	0.70	0.80	FA R	UP	0.10	1998

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	Stream Total	0.25	0.90	1.15	Total PFC/NA		0.15	
					Total FAR/UP		0.10	
Cottonwood Creek	15-A	0.60	0.15	0.75	PF C	NA	0.60	2003
	15-B	1.10	3.70	4.80	FA R	NAT	1.10	2003
	15-C	0.80	0.20	1.00	FA R	NAT	0.80	2003
	Stream Total	2.50	4.05	6.55	Total PFC/NA		0.60	
					Total FAR/NAT		1.90	
Cottonwood Gulch	38-B	0.82	0.17	0.99	FA R	NAT	0.82	1998
Cow Creek	83-A	0.40	0.80	1.20	FA R	NAT	0.40	2000
East Antelope Creek	68-B	0.90	1.40	2.30	PF C	NA	0.90	2004
French Gulch	69-A	1.30	0.00	1.30	FA R	UP	1.30	1998
Galena Gulch	47-A	0.80	0.00	0.80	FA R	NAT	0.80	1998
Hassayampa River	14-C	0.70	0.00	0.70	FA R	NAT	0.70	2004
	14-D	0.60	0.80	1.40	FA R	NAT	0.60	2004
	14-E	1.50	1.90	3.40	NF	NA	1.50	2004
	14-F	1.70	1.80	3.50	FA R	NAT	1.70	1995
	14-G	1.90	0.00	1.90	PF C	NA	1.90	1995
	14-H	5.10	0.20	5.30	FA R	UP	5.10	2004
	14-I	1.20	0.00	1.20	PF C	NA	1.20	2001
	14-J	0.00	1.40	1.40	PF C	NA	0.00	2001
	14-K	2.60	0.90	3.50	PF C	NA	2.60	2001

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	14-L	0.55	1.45	2.00	PF C	NA	0.55	2001
	14-M	0.40	0.00	0.40	FA R	NAT	0.40	2001
	14-N	0.50	0.00	0.50	PF C	NA	0.50	2001
Stream Total		16.75	8.45	25.20	Total PFC/NA		6.75	
					Total FAR/UP		5.10	
					Total FAR/NAT		3.40	
					Total NF/NA		1.50	
Humbug Creek	30-B	1.50	0.47	1.97	FA R	DWN	1.50	2000
	30-C	1.20	0.00	1.20	PF C	NA	1.20	1997
	30-D	0.61	1.82	2.43	FA R	UP	0.61	1997
	30-E	1.20	0.00	1.20	FA R	DWN	1.20	2004
	30-F	2.20	0.70	2.90	FA R	DWN	2.20	2004
	30-H	0.70	3.30	4.00	FA R	NAT	0.70	1997
	30-I	2.20	0.30	2.50	PF C	NA	2.20	1997
Stream Total		9.61	6.59	16.20	Total PFC/NA		3.40	
					Total FAR/UP		0.61	
					Total FAR/NAT		0.70	
					Total FAR/DWN		4.90	
Minnehaha Creek	17-B	0.60	0.55	1.15	FA R	NAT	0.60	2000
Oak Creek	19-A	0.75	1.00	1.75	PF C	NA	0.75	1998
	19-B	0.79	0.00	0.79	PF C	NA	0.79	1998
	19-C	0.65	1.65	2.30	FA R	UP	0.65	2004
	19-D	1.30	0.00	1.30	FA R	UP	1.30	2004
	19-E	0.20	0.50	0.70	FA	UP	0.20	2004

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					R			
Stream Total		3.69	3.15	6.84		Total PFC/NA	1.54	
						Total FAR/UP	2.15	
S. Fork Spring Creek	21-A	0.20	0.50	0.70	FA R	NAT	0.20	1999
Spring Creek	20-A	0.25	2.25	2.50	FA R	NAT	0.25	1999
	20-B	0.60	2.00	2.60	FA R	UP	0.60	1999
	20-D	0.90	0.00	0.90	FA R	NAT	0.90	2003
Stream Total		2.15	4.25	6.40		Total FAR/UP	0.60	
						Total FAR/NAT	1.55	
Tiger Canyon	66-A	0.70	0.00	0.70	FA R	NAT	0.70	1998
Tule Creek	10-E	1.27	0.00	1.27	PF C	NA	1.27	2000
Weaver Creek	70-B	0.40	0.80	1.20	FA R	NAT	0.40	1999
Overall Totals for Bradshaw-Harquahala	BLM	Other	Total	PFC/NA	FA R/ U P	FAR/NAT	FAR/DWN	NF
	92.59	51.45	144.04	35.14	12.36	33.19	9.40	2.50

Appendix R - Lands Management

LANDS AVAILABLE FOR EXCHANGE ONLY

Township	Range	Section	Aliquot	Acreage	Total
12 N	05 W	09	Lots 3-4 W $\frac{1}{2}$ SE $\frac{1}{4}$	164.20 80.00	
12 N	05 W	16	Lots 1-4 NW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	331.44	
12 N	5 W	22	Lots 3-4 S $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$	513.81	
11 N	5 W	21	Unpatented land in Sec. 21 delineated in segregation survey approved 08/23/1939)		
11 N	04 W	1	Lot 1 SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	240.36	
11 N	04 W	11	Lots 3-6 Inclusive (Plus portions of MS 4659 A & B) W $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$		
11 N	04 W	12	Lots 1-13 NE $\frac{1}{4}$ NW $\frac{1}{4}$ (Plus portions of MS 1323 B and MS 4659 A & B)		
11 N	04 W	13	Lots 1-8 SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ (Plus portions of unpatented MS parcels)	195.66 200.00	395.66
11 N	04 W	14	Lots 1-4	34.88	34.88
11 N	04 W	22	Lots 5, 6, 11, 12	166.86	166.86
11 N	04 W	23	Lots 1-9 NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	302.01 120.00	422.01
11 N	04 W	24	Lots 1-4, 7, 8, 9 (Plus unpatented MS) NE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	233.58 200.00	433.58
11 N	04 W	25	Lot 4 SW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$	174.05	175.05
11 N	04 W	26	Lots 1-3 NE $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$	99.66 480.00	579.66
11 N	04 W	27	Lots 1-3, 5, 6 SE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$	191.14 400.00	591.14
11 N	04 W	28	Lots 7, 8, 13	120.26	126.26
11 N	04 W	36	W $\frac{1}{2}$ W $\frac{1}{2}$	160	160.00
11 N	03 W	06	Lots 3-7 SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$	188.21 120.00	308.21

11 N	03 W	07	Lots 1-4 E $\frac{1}{2}$ W $\frac{1}{2}$ (Excluding Patent 31583)	308.42	308.42
11 N	03 W	18	Lots 1-4 E $\frac{1}{2}$ W $\frac{1}{2}$	149.12 160.00	309.12
10 N	06 W	10	NW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ (Less ME patents and patent 73778)	240.00	350.00
10 N	06 W	11	Lots 2-4 inclusive SW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$		130.50
10 N	06 W	15	Lots 1-4 inclusive W $\frac{1}{2}$ E $\frac{1}{2}$, W $\frac{1}{2}$ (Less Mineral Entry patents/patented lands)		
10 N	06 W	16	Lots 1-2, 4-7 Inclusive S $\frac{1}{2}$ NE $\frac{1}{4}$ (Less ME patents) SE $\frac{1}{4}$ SW $\frac{1}{4}$	295.12	295.12
10 N	06 W	22	Lots 1-4 (Less ME patents) NW $\frac{1}{4}$ (Less ME patents) S $\frac{1}{2}$ (Less ME patents)	480.00	480.00
10 N	06 W	23	Lots 2-3, 9-19 Inclusive, 21 Portions of MS 2901 S $\frac{1}{2}$ SE $\frac{1}{4}$	463.64	463.64
10 N	06 W	24	W $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ (Less ME patent/patent 453373)	220.00	220.00
10 N	07 W	18	S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	240.00	240.00
03 N	12 W	16	ALL	640.00	640.00

LANDS AVAILABLE FOR DISPOSAL

Township	Range	Section	Aliquot	Acreage	
14 N	01 W	28	NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	40.00
14 N	01 W	31	Lots 17, 18, 21, 22, 23, 25, 26	29.48	29.48
14 N	01 W	33	W $\frac{1}{2}$ W $\frac{1}{2}$ NW $\frac{1}{4}$	40.00	40.00
14 N	03 W	31	Lots 6, 7	83.94	83.94
14 N	04 W	25	SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	80.00
14 N	04 W	35	SW $\frac{1}{4}$	160.00	160.00
13 N	04 W	1	Lots 1-6 SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	227.23 280.00	507.23
13 N	04 W	12	ALL	640.00	640.00
13 N	04 W	13	Lots 1 – 19 SW $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	554.62 120.00	674.62
13 N	04 W	24	ALL	640.00	640.00

13 N	04 W	25	ALL	640.00	640.00
13 N	04 W	26	ALL Less the following: 02-80-0009 02-80-0007 02-84-0031 02-80-0008		
13 N	04 W	27	ALL	640.00	640.00
13 N	04 W	28	ALL	640.00	640.00
13 N	04 W	33	N $\frac{1}{2}$	320.00	320.00
11 N	03 W	04	SW $\frac{1}{4}$ SE $\frac{1}{4}$	40	40.00
11 N	03 W	08	Lots 2-3, 5-7, 9, 11 SW $\frac{1}{4}$ SE $\frac{1}{4}$ Portion of unpatented mineral surveys	107.16 40.00 ~80.00	227.16
11 N	03 W	17	Unpatented Mineral Survey	~20.00	~20.00
11 N	03 W	18	Portions of unpatented mineral survey	~ 5.00	~ 5.00
10 N	04 W	11	E $\frac{1}{2}$ SE $\frac{1}{4}$ (Less mineral survey 4323/Patent 1133466)		139.339
10 N	04 W	12	W $\frac{1}{2}$ SW $\frac{1}{4}$ (Less mineral survey 4323/Patent 1133466)		
10 N	04 W	16	NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	40.00
12 N	03 W	31	Lots 6 & 7, N $\frac{1}{2}$ SE $\frac{1}{4}$	171.60	171.60
12 N	03 W	32	Lots 3 & 4, N $\frac{1}{2}$ SW $\frac{1}{4}$	169.08	169.08
08 N	07 W	01	Lots 1-4 S $\frac{1}{2}$	206.24 320.00	526.24
08 N	07 W	10	S $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	80.00
08 N	07 W	11	S $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	120.00	120.00
08 N	07 W	14	NW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$	280.00	280.00
08 N	07 W	15	NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	240.00	240.00
07 N	07 W	16	ALL	640.00	640.00
07 N	07 W	33	NW $\frac{1}{4}$	160.00	160.00
07 N	06 W	17	S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	40.00
07 N	06 W	18	SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$	20.00	20.00
07 N	06 W	27	N $\frac{1}{2}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	600.00	600.00
07 N	06 W	34	N $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	80.00
07 N	02 E	15	NE $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	280.00	280.00
07 N	02 E	26	S $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$	60.00	60.00
07 N	02 E	27	Lots 1, 16, 33, 42-45, 47, 49-50, 52-53, 56-58, 61-63, 65-67 W $\frac{1}{2}$ E $\frac{1}{2}$ NE $\frac{1}{4}$	50.51 40.00	90.51
07 N	02 E	34	W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	40.00
06 N	03 E	35	E $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$		
06 N	04 W	01	SE $\frac{1}{4}$	160.00	160.00
06 N	04 W	12	NE $\frac{1}{4}$	160.00	160.00
06 N	04 W	14	Lot 2	23.46	63.46

			SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	
06 N	04 W	23	NW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	40.00
06 N	04 E	01	S $\frac{1}{2}$ SW $\frac{1}{4}$		
06 N	04 E	11	NE $\frac{1}{4}$ (less MS 4334)		
06 N	04 E	12	NW $\frac{1}{4}$ (less MS 4334)		
05 N	03 E	01	SE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	40.00
05 N	04 E	06	SW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	40.00
05 N	01 E	28	SW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	40.00
05 N	01 E	29	E $\frac{1}{2}$ E $\frac{1}{2}$	160.00	160.00
05 N	01 E	30	S $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$	60.00	60.00
05 N	01 W	13	Lot 16	66.10	66.10
05 N	01 W	14	Lot 11	39.04	39.04
05 N	01 W	15	Lot 11	54.64	54.64
04 N	1 E	06	Lots 8, 18-21 Inclusive, 29-31 Inclusive, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	39.44 130.00	169.44
04 N	1 E	07	Lots 5, 25 E $\frac{1}{2}$ W $\frac{1}{2}$	10.00 160.00	170.00
04 N	1 E	12	W $\frac{1}{2}$ W $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$	10.00	10.00
04 N	1 E	23	W $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$	10.00	10.00
04 N	2 W	07	Lots 1-2	76.50	76.50
04 N	1 W	24	NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	160.00
04 N	11W	30	NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	200.00	200.00
04 N	11W	32	N $\frac{1}{2}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$	240.00	240.00
03 N	11 W	02	Lots 1-4 Inclusive S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$	160.56 480.00	640.56
03 N	10 W	08	ALL	640.00	640.00
03 N	09 W	31	Lots 1-2 E $\frac{1}{2}$ NW $\frac{1}{4}$	76.45 80.00	156.45
03 N	06 W	13	Lots 4-5, 7 E $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ Identified disposal lands are those that lie east of right-of-way boundary AZA-23351 (centerline questionable)	Approx. 320.00	Approx. 320.00
03 N	06 W	24	Lots 1, 4, 5 E $\frac{1}{2}$ SE $\frac{1}{4}$		
03 N	05 W	14	NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	240.00	240.00
03 N	05 W	17	Lots 2-3, 8	240.45	240.45
03 N	05 W	18	Lots 1-3 Inclusive, 5-8 Inclusive, 11 NE $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$	350.29 200.00	550.29
03 N	05 W	19	Lot 7	27.73	27.73
03 N	05 W	22	ALL	640.00	640.00
03 N	05 W	23	S $\frac{1}{2}$	320.00	320.00
03 N	05 W	25	ALL	640.00	640.00

03 N	05 W	26	W½	320.00	320.00
03 N	05 W	27	ALL	640.00	640.00
03 N	05 W	34	W½	320.00	320.00
03 N	05 W	35	W½	320.00	320.00
02 N	01 W	13	SW¼SE½	40.00	40.00
02 N	01 W	24	NW¼NE¼	40.00	40.00
02 N	01 W	25	W½NE¼NW¼NE¼, NW¼NE¼NE¼, SW¼NW¼NE¼	25.00	25.00
02 N	05 W	36	N½N½SW¼, S½NW¼SW¼, SW¼NE¼SW¼, SW¼SW¼, W½SE¼SW¼	130.00	130.00
02 N	07 W	17	W½NW¼	80.00	80.00
01 N	03 W	03	S½SE¼SW¼	20.00	20.00
01 N	03 W	07	W½NE¼, E½NW¼	160.00	160.00
01 N	04 W	01	Lots 1-4 Inclusive S½N½	160.64 160.00	320.64
01 N	04 W	11	SE¼SW¼, SE¼	200.00	200.00
01 N	04 W	12	ALL	640.00	640.00
01 N	04 W	13	NE¼NE¼, E½NW¼NE¼, SW¼NW¼NE¼, NE¼NW¼, N½N½SE¼NW¼	120.00	120.00
01 N	04 W	14	N½NE¼	80.00	80.00

Appendix S Benefits-Based Recreation

AFNM Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Destination		Regional and National Tourism
Front Country		Recreation Management Zone
MARKET NICHE		
Motorized access for a combination of natural, scenic, and cultural features.		
OUTCOME OBJECTIVE		
Within the life of the plan, visitors can easily access places to learn about natural and cultural resources through self-directed interpretive opportunities where 75% of the visitors will have a pleasurable experience.		
TARGETED OPPORTUNITIES & OUTCOMES		
Activity Opportunities	PRESCRIBED SETTING Experience Opportunities	Benefit Opportunities & Outcomes
Hiking	Enjoying access to natural landscapes.	Personal: Greater freedom from urban living.
Nature/cultural walks	Learning more about the natural landscape.	Community/Social: Increased sense of stewardship.
Interpretation	Feeling good about how cultural the cultural heritage is protected.	Environmental: Greater cultivation of stewardship ethic.
Education		Economic: Opportunities exist in the private sector to compliment visitor's needs and provide various services.
OHV	Knowing that this site exists and feeling proud that is managed.	
PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative
Remoteness: SPN	Contacts: RN	Mechanized Use: R; RN; SPM
Naturalness: SPN	Group Size: R	Management Controls: RN; SPM
Facilities: RN; SPM	Evidence of Use: SPM	Visitor Services: R
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK		
Management	Conduct administrative actions to maintain desired settings. Develop interpretative media at high and moderate use sites.	

Match-up Marketing (inc. education & interpretation)	Work with the Friends of the AFNM to develop interpretation programs. Work with local communities to partner on leverage opportunities.
Monitoring	Monitor visitor satisfaction through surveys, comment cards, and/or personal contacts. Conduct Rapid Site Inventory from existing inventory to detect change.
Administration	Install signage for travel and transportation network. Provide brochures, maps, and on-site personnel. Install regulatory signs wherever needed.

RECREATION SETTINGS AFNM Front Country

EXISTING SETTING

PRESCRIBED
SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone Agua Fria NM Front Country
Niche Motorized Access to natural, cultural, and scenic areas/appreciation.
Activity Opportunities interpretation, hiking, mountain bicycling, OHV,

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Sense of place: Knowing this attraction is here, in, or near my residence.</p>	<p>Greater environmental awareness and sensitivity.</p> <p>A more outdoor-oriented lifestyle.</p> <p>Enhanced sense of personal freedom</p>	<p>Improved understanding of our interaction and impact on public lands.</p>	<p>Greater cultivation of natural resources and stewardship ethic.</p>

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Stewardship & Hospitality:</p> <p>Feeling good about the way our cultural heritage is being protected.</p>	<p>Enlarged sense of personal accountability for acting responsibly on public lands.</p>	<p>Reduced negative human impacts such as litter, looting, vegetative trampling, and unplanned (social) trails.</p>	<p>Increased awareness and protection of natural and cultural landscapes.</p>

Targeted Opportunities/Outcomes

Recreation Management Zone Agua Fria NM Passage, PAGE 2
Niche Motorized Access to natural, cultural, and scenic areas/appreciation.
Activity Opportunities interpretation, hiking, mountain bicycling, OHV,

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Enjoy Nature: Enjoying nature and having access to natural landscapes.	Greater freedom from urban living.	Enhanced lifestyle.	Greater appreciation for natural and cultural heritage. Appreciation for how managers care for the landscape and its attributes.
Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits

AFNM Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET	
Destination		Regional and National Tourism	
Back Country		Recreation Management Zone	
MARKET NICHE			
Non-motorized recreation			
OUTCOME OBJECTIVE			
Within the life of the plan, visitors will have a pleasurable experience where they will be in the setting characteristics they intended where at least 75% of these visitors will be pleased with their recreation experience.			
TARGETED OPPORTUNITIES & OUTCOMES			
Activity Opportunities	Benefit Opportunities & Outcomes	Benefit Opportunities & Outcomes	
Hiking Backpacking Nature Study Journaling Photography	Savoring the total sensory mechanisms of sight, sound, and smell of the natural landscape. Contemplating humankind's or own relationship within the land/cosmos. Thinking about and shaping spiritual values. Feeling good about solitude, isolation, and independence.	<p>Personal: Enhanced lifestyle, physical conditioning, and improving competencies for decision making.</p> <p>Community/Social: Greater community involvement in recreation and aesthetics and other land use decisions.</p> <p>Environmental: Conservation of entire sustainable ecosystems.</p> <p>Economic: Enhanced ability for visitors to find areas providing wanted recreation experience and benefits.</p>	
PRESCRIBED SETTING CHARACTER			
Physical		Social	Administrative
Remoteness: SPNM;SPM		Contacts: SPNM	Mechanized Use: P, SPNM
Naturalness: P; SPNM		Group Size: SPNM	Management Controls: SPNM
Facilities: P, SPNM		Evidence of Use: P, SPNM	Visitor Services: P, SPNM, SPM
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK			
Management	Conduct administrative actions to maintain desired settings. Establish key observation points for Rapid Site Inventory.		
Match-up Marketing (inc. education & interpretation)	Work with the Friends of the AFNM and others who may conduct studies and interpretive opportunities for the zone, including education outreach with programs such as Leave No Trace.		

Monitoring	Monitor visitor satisfaction through surveys, comment cards, and/or personal contacts. Conduct Rapid Site Inventory from existing inventory to detect change.
Administration	Provide basic maps and LNT information for users.

RECREATION SETTINGS AFNM Back Country

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group with SRP approval	Greater than 50 people per group
e. Contacts (with other groups)					

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Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view
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f. Evidence of Use

Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice
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ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
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g. Visitor Services

None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
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h. Management Controls

No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
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i. Mechanized Use

None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present
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EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes			
Recreation Management Zone Agua Fria National Monument Back Country			
Niche Non-motorized areas for recreation users			
Activity Opportunities hiking, backpacking, exploring nature, physical conditioning, journaling, photography			
Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Savoring the total sensory mechanisms of sight, sound, and smell of the natural landscape.	A more holistic sense of wellness. Greater self-reliance. Greater sensitivity/ awareness of outdoor aesthetics, nature's art and elegance.	Greater retention of distinctive natural landscape features. Increased awareness and need for protection of natural landscapes.	Greater community involvement in recreation and other land use decisions.

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Contemplating humankind's/own relationship with the land and cosmos.	Confirmation/development of my own values. Deeper sense of personal humility. Greater spiritual growth.	Greater environmental awareness and sensitivity.	Increased compassion for others.

Targeted Opportunities/Outcomes

Recreation Management Zone Agua Fria NM Passage, PAGE 2

Niche

Activity Opportunities

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Thinking about and shaping my own spiritual values	Improving mental well-being Greater spiritual growth Increased adaptability	Enlarged sense of personal accountability for acting responsibly on public lands.	Enhanced lifestyle. Lifestyle improvement or maintenance. Conservation of entire sustainable ecosystems.

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
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Feeling good about solitude, being isolated, and independent.

Improved skills for outdoor enjoyment.

Increased independence/autonomy.

Appendix S

Enhanced ability for visitors to find areas providing wanted recreation experience and benefits.

AFNM Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Destination		Regional and National Tourism
Passage Zone		Recreation Management Zone
MARKET NICHE		
Motorized access for a combination of natural, scenic, and cultural features.		
OUTCOME OBJECTIVE		
Secondary travel routes provides the means for visitors to see and experience the diversity in the landscape and improve orientation skills. At least 75% of visitors to this zone will enjoy exploring these areas.		
TARGETED OPPORTUNITIES & OUTCOMES		
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Hiking	Enjoying access to natural landscapes.	Personal: Greater freedom from urban living.
Mountain biking	Learning more about the natural landscape.	Community/Social: Increased sense of stewardship.
Interpretation	Feeling good about how the area is used and enjoyed.	Environmental: Greater awareness of nature's terms and that this is a special place.
Education	Enjoying the opportunity to explore on my/our own.	Economic: Renting/buying the correct equipment to venture into the passage zone.
OHV		
PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative
Remoteness: RN; SPN	Contacts: RN	Mechanized Use: RN, SPM
Naturalness: SPM	Group Size: SPM	Management Controls: FC, SPM
Facilities: SPNM, SPM, RN	Evidence of Use: SPM	Visitor Services: R
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK		
Management	Conduct administrative actions to maintain desired settings. Develop interpretation areas along Bloody Basin Road.	
Match-up Marketing (inc. education & interpretation)	Work with Friend's of the AFNM to develop interpretation programs. Work with local communities to partner on leverage opportunities.	

Monitoring	Monitor visitor satisfaction through surveys, comment cards, and/or personal contacts. Conduct Rapid Site Inventory from existing inventory to detect change.
Administration	Install signage for travel and transportation network. Provide brochures, maps, and other means of on-site information as needed to enhance the visitor's trip.

RECREATION SETTINGS AFNM Passage

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and	3-6 encounters/day off travel routes(e.g.,	7-14 encounters/day off travel routes(e.g., staging	15-19 encounters/day off travel routes(e.g.,	People seem to be everywhere, but human	Other people consistently in view

Appendix S

fewer than 6 encounters per day on travel routes	campsites) and 7-15 encounters/day on travel routes	areas) and 15-19 encounters/day en route	campgrounds) and 30 or more encounters/day en route	contact is still intermittent	
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f. Evidence of Use

Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice
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ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
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g. Visitor Services

None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
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h. Management Controls

No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
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i. Mechanized Use

None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present
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EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone Agua Fria NM Passage

Niche Motorized Access to natural, cultural, and scenic areas/appreciation.

Activity Opportunities interpretation, hiking, mountain bicycling, OHV,

Experience / Combination of Experiences



Personal Benefits



On-site Benefits



Off-site Benefits

Learning more about the natural landscape located in this zone.

Greater freedom from urban living.

Greater sensitivity/ awareness of outdoor aesthetics, nature's art and elegance.

Increased stewardship

Reduced looting and vandalism of sites.

Increase the awareness and protection of natural landscapes.

Experience / Combination of Experiences



Personal Benefits



On-site Benefits



Off-site Benefits

Targeted Opportunities/Outcomes

Recreation Management Zone Agua Fria NM Passage, PAGE 2
Niche Motorized Access to natural, cultural, and scenic areas/appreciation.
Activity Opportunities interpretation, hiking, mountain bicycling, OHV,

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Feeling good about how this area is being used and enjoyed.	Greater environmental awareness and sensitivity	Greater sensitivity and respect for other visitors. Sharing spectacular sights/natural phenomena with others.	Greater awareness that this area is a special place. An improved stewardship ethic.

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Enjoying exploration on my/our own.	Greater self-reliance. Greater sense of adventure.	Improved leadership abilities.	A more outdoor oriented lifestyle and self-reliance in daily living.

Targeted Opportunities/Outcomes

Recreation Management Zone Agua Fria NM Passage
Niche Motorized Access to natural, cultural, and scenic areas/appreciation.
Activity Opportunities interpretation, hiking, mountain bicycling, OHV,

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Learning more about the natural landscape located in this zone.	Greater freedom from urban living. Greater sensitivity/ awareness of outdoor aesthetics, nature's art and elegance.	Increased stewardship Reduced looting and vandalism of sites.	Increase the awareness and protection of natural landscapes.

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
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Targeted Opportunities/Outcomes

Recreation Management Zone Agua Fria NM Passage, PAGE 2
Niche Motorized Access to natural, cultural, and scenic areas/appreciation.
Activity Opportunities interpretation, hiking, mountain bicycling, OHV,

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Feeling good about how this area is being used and enjoyed.	Greater environmental awareness and sensitivity	Greater sensitivity and respect for other visitors. Sharing spectacular sights/natural phenomena with others.	Greater awareness that this area is a special place. An improved stewardship ethic.

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Enjoying exploration on my/our own.	Greater self-reliance. Greater sense of adventure.	Improved leadership abilities.	A more outdoor oriented lifestyle and self-reliance in daily living.

Castle Hot Springs Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET	
Destination		Regional motorized and non-motorized recreationists	
Hieroglyphic		Recreation Management Zone	
MARKET NICHE			
Motorized recreationists			
OUTCOME OBJECTIVE			
Within the life of the plan, create a motorized route network that is sustainable. Recreation use will be compatible with regional air quality standards and 75% of visitors will have at least a moderate realization of desired outcomes.			
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes	
OHV club events Competitive racing OHV riding Camping associated with OHV riding	Develop personal skills and abilities Talk to others about equipment and gear. Enjoy the closeness of friends and family. Develop personal skills and abilities.	<p>Personal: Stronger ties with family and friends. Improved skills for outdoor enjoyment. Greater sense of personal security. Improve problem solving skills. Enhanced sense of personal freedom.</p> <p>Community/Social: Greater family bonding. Reduced social isolation. Improved group cooperation. More well rounded child development.</p> <p>Environmental: Reduced negative human impacts such as vegetation trampling, litter, and soil erosion.</p> <p>Economic: Improved local economic stability.</p>	
PRESCRIBED SETTING CHARACTER			
Physical		Social	Administrative
Remoteness: RN, SPM		Contacts: RN, SPM	Mechanized Use: RN, SPM
Naturalness: RN, SPM		Group Size: R, RN, SPM	Management Controls: RN, SPM
Facilities: RN, SPM		Evidence of Use: RN, SPM	Visitor Services: RN, SPM
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK			
Management	Designate all motorized routes for casual use, commercial use, organized, and competitive use. Locate at least 20 miles for diverse competitive challenge. Develop parking and other facilities to support uses.		
Match-up Marketing (inc. education & interpretation)	Partner with OHV clubs to develop maintenance and management agreements and to manage volunteers. Develop joint marketing materials.		
Monitoring	Measure current disturbance and monitor for change. Use visitor surveys to determine satisfaction. Monitor for complaints from surrounding communities and landowners. Monitor with citizen collaboration.		

Administration

Work with user groups to help maintain facilities and provide educational outreach while conducting visitor contacts.

Targeted Opportunities/Outcomes

Recreation Management Zone Hieroglyphics

Niche Motorized recreation

Activity Opportunities Camping associated with OHV riding, OHV club events, Competitive racing, OHV riding,

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Enjoying the closeness of family and friends Develop personal skills and abilities Develop self confidence	Stronger ties with family and friends Improve skills for outdoor enjoyment Greater sense of personal security	Greater family bonding Enhanced sense of personal freedom and greater self reliance Improved leadership abilities Improved group cooperation	More well rounded child development Greater freedom from urban living Reduced social isolation

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Talk to others about gear and equipment	Improve problem solving skills	Reduced negative human impacts such as vegetation trampling, litter, and soil erosion	Improved local economic stability
Enjoying an escape from crowds of people	Closer relationship with the natural world	Increased awareness and protection of natural resources	Greater freedom from urban living

Hassayampa Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET	
Destination		Regional Motorized Users and Organized Groups	
Stanton		Recreation Management Zone	
MARKET NICHE			
Organized Prospecting Groups and Motorized Recreationists			
OUTCOME OBJECTIVE			
Through the life of the plan, provide an environment suitable for an array of motorized and non-motorized recreation opportunities, including group events associated with prospecting clubs. Conflict complaints will not exceed three per year and 75% of visitors surveyed will respond with moderate realization of desired outcomes.			
TARGETED OPPORTUNITIES & OUTCOMES			
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes	
Diverse motorized recreation	Enjoy being close with family and friends	<p>Personal: Stronger ties with family and friends. Improved skills for outdoor enjoyment. Improved problem-solving skills.</p>	
Prospecting club outings on club held lands	Develop personal skills and abilities	<p>Community/Social: Greater family bonding. More well rounded child development. Reduced social isolation. Improved group cooperation.</p>	
Long distance equestrian routes	Appreciation of personal interaction with others	<p>Environmental: Reduced negative human impacts such as vegetation trampling, litter, and soil erosion.</p>	
	Talk to others about gear and equipment	<p>Economic: Improved local economic stability.</p>	
PRESCRIBED SETTING CHARACTER			
Physical	Social	Administrative	
Remoteness: SPM - RN	Group Size: SPM – RN – R	Visitor Services: SPM – RN	
Naturalness: SPM - RN	Contacts: SPM - RN	Management Controls: SPNM – SPM	
Facilities: SPNM, SPM	Evidence of Use: SPM - RN	Mechanized Use: SPM – RN	
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK			
Management	No competitive races. Provide a diverse network of motorized routes compatible with existing non-motorized trails. Improve the quality of recreation experiences for both casual and group recreation activities.		
Match-up Marketing (inc. education & interpretation)	Partner with prospecting clubs and organized OHV groups to develop marketing and educational materials.		

Monitoring	Monitor visitor satisfaction through user surveys. Monitor setting and environmental changes by measuring changes in setting character and changes in recreation related disturbances.
Administration	Apply administration actions as needed to maintain the SPM and RN settings.

EXISTING SETTING

PRESCRIBED SETTING

RECREATION SETTINGS Stanton

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (with other groups)					
Fewer than 3 encounters	3-6 encounters/day off	7-14 encounters/day off		People seem to be	Other people consistently

Appendix S

per day at campsites and fewer than 6 encounters per day on travel routes	travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	everywhere, but human contact is still intermittent	in view
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice
ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone Stanton
Niche Prospecting clubs and motorized recreationists

Activity Opportunities Prospecting club events, diverse motorized recreation, long distance equestrian rides

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Enjoying the closeness of family and friends</p> <p>Develop personal skills and abilities</p> <p>Develop self-confidence</p>	<p>Stronger ties with family and friends</p> <p>Improve skills for outdoor enjoyment with others</p> <p>Greater sense of personal security</p>	<p>Greater family bonding</p> <p>Greater sensitivity to and respect for other visitors</p> <p>Improved leadership abilities</p> <p>Improved group cooperation</p>	<p>More well rounded child development</p> <p>A more outdoor oriented lifestyle and self reliance</p> <p>Reduced social isolation</p>

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Appendix S Off-site Benefits
<p>Appreciation of personal interaction with visitors</p> <p>Talk to others about gear and equipment</p>	<p>Greater personal enrichment through involvement with other people</p> <p>Improve problem solving skills</p>	<p>Increased acceptance of others who are different</p> <p>Reduce negative human impacts such as vegetation trampling, littering, and soil erosion.</p>	<p>Improve community integration</p> <p>Improve local economic stability</p>

Hassayampa Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Destination	Regional Motorized users and organized groups	

San Domingo Wash

Recreation Management Zone

MARKET NICHE

Organized prospering groups, non-motorized and motorized recreation users

OUTCOME OBJECTIVE

By 2012, provide a Sonoran Desert experience suitable for an array of motorized and non-motorized recreation opportunities. Less than three written complaints annually and 75% of visitors responding with favorable realization of desired outcomes.

TARGETED OPPORTUNITIES & OUTCOMES

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Camping	Enjoying closeness of family and friends.	Personal: Improved skills for the outdoors. Enhanced sense of personal freedom. Stronger ties with family and friends.
Prospecting	Developing personal skills and abilities.	Community/Social: Greater bonding with family and friends. Improved group cooperation. Improved networking abilities with people who have similar interests.
OHV travel	Learning about the biological and physical resources.	Environmental: Reduce negative human impact like vegetation trampling, litter, and soil erosion.
OHV group and race events	Talking to others about technique and equipment.	Economic: Improved local economic stability.
Equestrian	Developing self confidence.	
	Enjoying the outdoor world.	

PRESCRIBED SETTING CHARACTER

Physical	Social	Administrative
Remoteness: SPM, RN	Group Size: SPM, RN, R, U	Visitor Services: SPNM, SPM
Naturalness: RN	Contacts: SPM, RN	Management Controls: P, SPNM, SPM, RN
Facilities: RN	Evidence of Use: SPM, RN	Mechanized Use: SPM

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

Management	Locate at least 10 miles of single and two track motorized routes to provide for an array of challenges for ATVs and motorcycles. Limit number of motorized competitive races to 2 per year. Develop at least 1 day use motorized and non-motorized staging area.
Match-up Marketing (inc. education & interpretation)	Partner with prospecting clubs and organized OHV groups to develop marketing and educational materials.

Monitoring	Monitor visitor satisfaction through user surveys. Monitor settings by measuring setting changes.
Administration	Apply administration actions as needed to maintain the SPM to rural settings

Targeted Opportunities/Outcomes

Recreation Management Zone San Domingo Wash

Niche Organized Prospecting groups, motorized and non-motorized recreationists

Activity Opportunities Prospecting club group events, diverse motorized recreation, non-motorized users.

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Enjoying the closeness of family and friends</p> <p>Develop personal skills and abilities</p> <p>Learning about the biological and physical resources</p>	<p>Stronger ties with family and friends</p> <p>Improve skills for outdoor enjoyment with others</p> <p>Improved knowledge and improved safety about interacting with the natural environment.</p>	<p>Greater family bonding</p> <p>Greater protection of resources as skill abilities improve.</p> <p>Greater protection of resources as knowledge level improves.</p>	<p>More well rounded child development</p> <p>A more outdoor oriented lifestyle and self reliance</p> <p>A greater appreciation for biological and physical resources and how to use these resources responsibly.</p>

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Talk to others about technique and equipment</p> <p>Developing self-confidence</p> <p>Enjoying the outdoor world.</p>	<p>Improve communication and problem solving skills.</p> <p>Greater sense of personal security.</p> <p>Reduce stress</p>	<p>Reduce negative human impacts such as vegetation trampling, littering, and soil erosion.</p> <p>Improved leadership abilities.</p> <p>Reduce negative human impacts such as vegetation trampling, lettering, and soil erosion.</p>	<p>Positive contribution to local and regional economic stability.</p> <p>Improve local economic stability</p> <p>Reduced social isolation</p> <p>Improved community integration.</p>

RECREATION SETTINGS San Domingo Wash

EXISTING SETTING

PRESCRIBED
SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters	3-6 encounters/day off travel routes(e.g., campsites) and 7-15	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

per day on travel routes	encounters/day on travel routes	encounters/day en route	more encounters/day en route		
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING
SETTING

PRESCRIBED x S
SETTING

Hassayampa Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Destination		Local and regional motorized recreation enthusiasts
Vulture Mine		Recreation Management Zone
MARKET NICHE		
Motorized recreationists and some organized prospecting clubs		
OUTCOME OBJECTIVE		
Through the life of the plan, provide a Sonoran Desert landscape suitable for intensive single and two track routes for general motorized recreation use, commercial use, organized OHV events, and competitive races. Conflict complaints will not exceed three per year and 75% of visitors surveyed will respond with moderate realization of desired outcomes.		
TARGETED OPPORTUNITIES & OUTCOMES		
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Casual use motorized recreation	Develop personal skills and abilities	Personal: Improve skills for outdoor enjoyment Enhance sense of personal freedom. Greater self-reliance. Stronger ties with family and friends.
Group events, both motorized recreationists and prospecting clubs	Talk to others about gear and equipment Develop self confidence	Community/Social: Greater family bonding. Reduced social isolation. Improved group cooperation.
Competitive motorized races	Enjoy closeness of family and friends	Environmental: Reduced negative human impacts such as vegetation trampling, litter, and soil erosion. Economic: Improved local economic stability.
PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative
Remoteness: SPM - RN	Group Size: SPNM – SPM – RN – R – U	Visitor Services: RN
Naturalness: SPM - RN	Contacts: SPM – RN – R – U	Management Controls: RN
Facilities: SPM – RN	Evidence of Use: SPM – RN	Mechanized Use: SPM – RN
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK		
Management	Designate single and two-track routes to provide an array of motorized recreation opportunities, including routes available for competitive racing. Develop parking and staging areas to meet recreation demand and limit resource impacts.	
Match-up Marketing (inc. education & interpretation)	Partner with motorized recreation organizations to develop marketing and educational materials.	

Monitoring	Monitor visitor satisfaction through user surveys. Monitor setting and environmental changes by measuring changes in setting character and changes in recreation related disturbances.
Administration	Apply administration actions as needed to maintain desired settings.

RECREATION SETTINGS Vulture Mine

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (with other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters	3-6 encounters/day off travel routes(e.g., campsites) and 7-15	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

per day on travel routes	encounters/day on travel routes	encounters/day en route	more encounters/day en route		
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone Vulture Mine

Niche Motorized Recreationists and organized prospecting groups

Activity Opportunities Casual motorized recreation, group events, competitive races

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Develop personal skills and abilities</p> <p>Talk to others about gear and equipment</p> <p>Develop self-confidence</p>	<p>Improve skills for outdoor enjoyment</p> <p>Improve problem solving skills</p> <p>Greater sense of personal security</p>	<p>Enhanced sense of personal freedom</p> <p>Greater self reliance</p> <p>Reduced negative human impacts such as vegetation trampling, littering, and soil erosion</p> <p>Improved leadership abilities</p> <p>Improved group cooperation</p>	<p>Greater freedom from urban living</p> <p>Improve local economic stability</p> <p>Reduced social isolation</p>

Experience / Combination of Experiences		Personal Benefits		On-site Benefits		Off-site Benefits	
Enjoy the closeness of friends and family		Stronger ties with family and friends		Greater family bonding		More well rounded child development	

Hassayampa Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Community		Local and regional tourism
Wickenburg Community		Recreation Management Zone
MARKET NICHE		
Equestrian trail users		
OUTCOME OBJECTIVE		
Through the life of the plan, create a world class equestrian trail system that meets the needs of the Wickenburg community. Diverse recreation activities such as equestrian, hiking, biking, OHV use, etc., will not result in user conflicts or degrade the natural and cultural resources. Over 90% of the visitors will have a satisfactory experience.		
TARGETED OPPORTUNITIES & OUTCOMES		
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Equestrian riding Hiking Mountain biking OHV-ATV, motorcycles, trucks, etc.	Sharing cultural heritage with new people Feeling this community is a special place to live Enjoying the serenity of the outdoors.	Personal: More relaxed, mentally recharged, and improved mental well-being Community/Social: Better understanding of community cultural identify. Greater community ownership and citizenry. Environmental: Develop or strengthen strong affinity for place. Increased sense of stewardship and care giving for area. Greater protection for natural and cultural resources. Economic: Safeguarding recreation and tourism market, niche, or character.
PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative
Remoteness: SPNM, SPM, RN Naturalness: SPNM, SPM, RN Facilities: RN	Group Size: SPNM, SPM, RN, R Contacts: SPNM, SPM, RN Evidence of Use: SPNM, SPM, RN	Visitor Services: SPNM, SPM, RN Management Controls: SPNM, SPM, RN Mechanized Use: SPNM, SPM, RN
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK		
Management	Develop system of high quality trails; maintain and upgrade vulture pack trail; develop horse camping facilities.	

Match-up Marketing (inc. education & interpretation)	Work with Wickenburg Chamber of Commerce Conservation Foundation and businesses to develop marketing materials and educational materials.
Monitoring	Success will be measured by feedback from the Wickenburg Chamber of Commerce, trail related businesses, and the Wickenburg Community.
Administration	Work with Wickenburg to develop citizen and community partnerships to maintain the trail network and desired experiences and settings.

RECREATION SETTINGS Wickenburg Community

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (with other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
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g. Visitor Services

None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
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h. Management Controls

No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
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i. Mechanized Use

None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present
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EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone Wickenburg Community

Niche Equestrian trail users

Activity Opportunities Equestrian riding, hiking, mountain bicycling, OHV-ATV

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Sharing our cultural heritage with others</p>	<p>Greater awareness that this community is a special place</p> <p>Increased appreciation of the cultural history</p> <p>Improved understanding of this community's dependency on public lands</p>	<p>Greater understanding of the cultural identity retained in the community</p> <p>Greater community ownership and stewardship of recreation and natural resources</p>	<p>Greater community involvement in recreation and other land use decisions.</p> <p>Greater commitment by community to protect the resources and educate those looking for a Sonoran desert experience of the old west.</p> <p>Maintenance of community's recreation tourism market, niche, and character.</p>

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Enjoying the serenity of the outdoors.</p> <p>Feeling that this is a good place to live</p>	<p>Feel more relaxed, mentally charged, and improved well-being.</p> <p>Enlarged sense of personal accountability for acting responsibly on public lands</p>	<p>Develop and strengthen affinity for this area</p> <p>Greater protection of fish, wildlife, and plant habitat from growth, development, and public use impacts.</p>	<p>Increased sense of stewardship, pride, and care for the area.</p> <p>Increased community involvement strengthening our community's small town rural character.</p> <p>Heightened sense of satisfaction with community</p>

Hassayampa Special Recreation Management Area

PRIMARY MARKET STRATEGY	MARKET
Community	Local and regional tourism

The Box

Recreation Management Zone

MARKET NICHE

Local day and overnight users mostly equestrian and hiking

OUTCOME OBJECTIVE

Within the life of the plan, provide a high quality non-motorized recreation use area with amenities. Trash and litter will be reduced and 90% of users will have experiences that achieve their desired outcomes.

TARGETED OPPORTUNITIES & OUTCOMES

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Picnicking Hiking Horseback riding Camping	Enjoying the closeness of friends and family Enjoying easy access to natural landscapes Feeling good about how this attraction is being used and enjoyed Escape everyday responsibility for awhile	<p>Personal: Stronger ties with friends and family and more outdoor oriented lifestyle. Diminished mental anxiety.</p> <p>Community/Social: Greater awareness that community is a special place. Greater family bonding. Enhanced lifestyle.</p> <p>Environmental: Maintenance of distinctive recreation setting character. Greater community ownership and stewardship of recreation and natural resources.</p> <p>Economic: Increased desirability as a place to live.</p>

PRESCRIBED SETTING CHARACTER

Physical	Social	Administrative
<p>Remoteness: SPM, RN</p> <p>Naturalness: SPM, RN</p> <p>Facilities: SPM, RN, R</p>	<p>Group Size: SPNM, SPM, RN, R</p> <p>Contacts: SPNM, SPM, RN</p> <p>Evidence of Use: SPM, RN</p>	<p>Visitor Services: SPM, RN</p> <p>Management Controls: RN</p> <p>Mechanized Use: SPNM, SPM, RN, R</p>

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

Management	Locate and develop parking, camping, and public use areas. Develop passenger car access. Designate routes for various uses such as hiking and equestrian. Identify motorized routes in suitable places. Construct appropriate facilities as needed (toilets, tables, etc.).
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<p>Match-up Marketing (inc. education & interpretation)</p>	<p>Establish partnerships with town of Wickenburg, Wickenburg Chamber of Commerce, Yavapai County, and others to help plan site and develop marketing strategies.</p>
<p>Monitoring</p>	<p>Develop and conduct monitoring of facilities as they are built or designated so capacity can be established. Monitoring can include measurement user surveys and feedback from partners.</p>
<p>Administration</p>	<p>Work with partners to develop a volunteer service to help maintain the site and help to modify visitor behavior.</p>

RECREATION SETTINGS: THE BOX

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (with other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters	3-6 encounters/day off travel routes(e.g., campsites) and 7-15	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

per day on travel routes	encounters/day on travel routes	encounters/day en route	more encounters/day en route		
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone The Box

Niche Local day and overnight users

Activity Opportunities Picnicking, camping, hiking, horseback riding

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Enjoying the closeness of family and friends</p> <p>Enjoying having easy access to natural landscapes</p>	<p>Stronger ties with family and friends</p> <p>A more outdoor oriented lifestyle</p>	<p>Greater family bonding</p> <p>Greater awareness that this community is a special place</p>	<p>More well rounded child development</p> <p>Enhanced lifestyle</p>

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Feeling good about how this attraction is being used and enjoyed</p> <p>Escaping everyday responsibilities for awhile</p>	<p>More well-informed responsible visitor</p> <p>Diminished mental anxiety</p>	<p>Greater community ownership and stewardship of recreation and natural resources</p> <p>Enhanced lifestyle</p>	<p>Increased desirability as a place to live or retire</p> <p>Maintenance of distinctive recreation setting character</p>

Upper Agua Fria River Basin Special Recreation Management Area

PRIMARY MARKET STRATEGY	MARKET
Community	Local and regional residents and motorized and non-motorized recreationists.

Mayer Community: Recreation Management Zone

MARKET NICHE
Community-based dispersed non-motorized and motorized recreation use and community open space.

OUTCOME OBJECTIVE
Throughout the life of the plan, provide diverse dispersed recreation opportunities and open space that satisfy community and regional needs, protects natural resources, and reduces conflict with residents, local land owners and recreationists. Maintaining access to public lands will be paramount. Complaints of conflicts will be reduced to less than 25 per year.

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Hiking	Experiencing a greater sense of independence	<p>Personal: Greater awareness that this community is a special place. Improved sense of control over one's life. Better mental and physical health.</p> <p>Community/Social: Improved understanding of this community's dependency on public lands. Increased sense of stewardship, pride and care for the area. Increased independence and autonomy. Increased awareness and protection of natural and cultural resources. Increased community involvement and strengthening our community's small town rural character.</p> <p>Environmental: Increased awareness and protection of natural resources. Increased desirability as a place to live.</p> <p>Economic: Increased property values.</p>
Hunting	Releasing or reducing some built-up mental tension	
Horseback riding	Enjoying escape from crowds of people	
OHV	Enjoying easy access to natural landscapes	
Mountain biking	Being in control of things that happen	
Open Space	Just knowing this attraction is here in or near my community	

PRESCRIBED SETTING CHARACTER

Physical	Social	Administrative
Remoteness: R, RN, SPM	Contacts: RN, SPM, SPNM	Mechanized Use: RN, SPM
Naturalness: RN, SPM	Group Size: R, RN, SPM, SPNM	Management Controls: RN, SPM
Facilities: RN, SPM	Evidence of Use: RN, SPM, SPNM	Visitor Services: RN, SPM

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

<p>Management</p>	<p>Develop travel and transportation network and support facilities to meet diverse recreation demands while reducing conflict between recreation users and local residents and landowners.</p> <p>Locate, and develop new trails, parking, and staging areas, where suitable, for motorized and non-motorized use.</p> <p>Comply with the managerial and social settings described in the land use plan, such as VRM designations and ROS settings.</p> <p>Define, designate, implement and monitor a designated and comprehensive travel route network for motorized and non-motorized recreation experiences and access. Allow facilities when needed to protect resources, provide for visitor safety, improve the quality of recreation experiences or to resolve social conflicts. Apply Tread Lightly, Leave-No-Trace and Adaptive Management Practices as described in the land use plan. Maintain the 14-day camping Limit and current or future Land Health Standards.</p>
<p>Match-up Marketing (inc. education & interpretation)</p>	<p>Partner with residents, user groups, and other government agencies to develop a strategy to develop partnerships and local stewardship efforts, maintain or enhance public access to public lands, reduce resource and user conflicts, and ensure open space and resource conservation.</p>
<p>Monitoring</p>	<p>Track complaints and visitor satisfaction. Determine the number and success of partnerships and community involvement through surveys and community outreach.</p>
<p>Administration</p>	<p>Work with citizen partnerships and other government agencies to apply needed administration to meet objectives. Combine management, marketing and monitoring goals above, along with aggressive partnership building and community involvement. Partner with the communities of Mayer, Prescott Valley, Arcosonti and other growing communities in the region.</p> <p>Work with citizen volunteer groups to complete a comprehensive strategy and trails plan for selecting and developing new single- and multi-use hiking, equestrian, and OHV trails for all lands in the Upper Agua Fria Basin area. Collaborate with the following entities: AGFD, Prescott National Forest, Yavapai County, Yavapai County Trails Association, and land managers of other trails.</p> <p>Establish a citizen's working group to help comprehensive trail management, design, planning and on-the-ground implementation.</p>

RECREATION SETTINGS: Mayer Community

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters	3-6 encounters/day off travel routes(e.g., campsites) and 7-15	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

per day on travel routes	encounters/day on travel routes	encounters/day en route	more encounters/day en route		
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describes experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone: Mayer Community

Niche: Community-based dispersed non-motorized and motorized recreation use and community open space.

Activity Opportunities Equestrian riding, hiking, mountain bicycling, hunting, sightseeing, open space, and OHV-ATV

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Feeling good about the way our natural resources are being managed and how this attraction is being used and enjoyed.</p>	<p>Greater awareness that this community is a special place</p> <p>Improved understanding of this community's dependency on public lands</p>	<p>Greater community ownership and stewardship of recreation and natural resources</p>	<p>Greater community involvement in recreation and other land use decisions.</p> <p>Greater commitment by community to protect the resources and educate those looking for open space and the experience of the old west.</p> <p>Greater protection of fish, wildlife, and plant habitat from growth, development, and public use impacts.</p> <p>Maintenance of community's recreation niche, and character.</p> <p>Increased awareness and protection of natural resources.</p>

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Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Enjoying the serenity of the outdoors.</p> <p>Feeling that this is a good place to live</p> <p>Enjoying having easy access to natural landscapes.</p> <p>Avoiding compromising the quality of life here in the Upper Agua Fria Watershed.</p>	<p>Feel more relaxed, mentally charged, and improved well-being.</p> <p>Enlarged sense of personal accountability for acting responsibly on public lands</p> <p>Greater awareness that this community is a special place.</p> <p>Greater sense of responsibility for one's quality of life. Greater</p>	<p>Develop and strengthen affinity for this area</p> <p>Maintenance of open space and distinctive open-space atmosphere.</p> <p>Maintenance of open space and distinctive open-space atmosphere</p> <p>Enlarged sense of personal accountability for acting responsibly on public lands.</p>	<p>Increased sense of stewardship, pride, and care for the area.</p> <p>Increased community involvement strengthening our community's small town rural character.</p> <p>Improved understanding of how this community's urban-rural interface impacts its quality of life.</p> <p>Heightened sense of satisfaction with our community. Enhanced lifestyle. Enlarged sense of community dependency on</p>

Appendix S

<p>Being in control of things that happen and knowing that things are not going to change too much.</p> <p>Relishing group affiliation and togetherness.</p>	<p>environmental awareness and sensitivity.</p> <p>Increased independence and autonomy.</p> <p>Greater personal enrichment through involvement with other people with similar interests.</p>	<p>Greater understanding of the importance of open space and recreation to our community.</p> <p>Improved community integration.</p>	<p>public lands.</p> <p>Increased desirability as a place to live. Increased property values due to open space and recreation. Some increased local-tourism revenue.</p> <p>Greater sense of responsibility for one's quality of life. Greater environmental awareness and sensitivity. Improved group cooperation.</p>
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Castle Hot Springs Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Destination		Regional motorized and non-motorized recreationists

Hieroglyphic Mountains Recreation Management Zone

MARKET NICHE

Motorized recreationists

OUTCOME OBJECTIVE

Within the life of the plan, create a motorized route network that is sustainable. Recreation use will be compatible with regional air quality standards and 75% of visitors will have at least a moderate realization of desired outcomes.

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
OHV club events	Develop personal skills and abilities	<p>Personal: Stronger ties with family and friends. Improved skills for outdoor enjoyment. Greater sense of personal security. Improve problem solving skills. Enhanced sense of personal freedom.</p> <p>Community/Social: Greater family bonding. Reduced social isolation. Improved group cooperation. More well rounded child development.</p> <p>Environmental: Reduced negative human impacts such as vegetation trampling, litter, and soil erosion.</p> <p>Economic: Improved local economic stability.</p>
Competitive racing		
OHV riding	Talk to others about equipment and gear.	
Camping associated with OHV riding	Enjoy the closeness of friends and family.	
	Develop self-confidence	

PRESCRIBED SETTING CHARACTER

Physical	Social	Administrative
Remoteness: RN, SPM	Group Size: R, RN, SPM	Visitor Services: RN, SPM
Naturalness: RN, SPM	Contacts: RN, SPM	Management Controls: RN, SPM
Facilities: RN, SPM	Evidence of Use: RN, SPM	Mechanized Use: RN, SPM

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

Management	Designate all motorized routes for casual use, commercial use, organized, and competitive use. Locate at least 20 miles for diverse competitive challenge. Develop parking and other facilities to support uses.
Match-up Marketing (inc. education & interpretation)	Partner with OHV clubs to develop maintenance and management agreements and to manage volunteers. Develop joint marketing materials.
Monitoring	Measure current disturbance and monitor for change. Use visitor surveys to determine satisfaction. Monitor for complaints from surrounding communities and

	landowners. Monitor with citizen collaboration.
Administration	Work with user groups to help maintain facilities and provide educational outreach while conducting visitor contacts.

RECREATION SETTINGS Hieroglyphic Mountains

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters	3-6 encounters/day off	7-14 encounters/day off	15-19 encounters/day off	People seem to be	Other people consistently

Appendix S

per day at campsites and fewer than 6 encounters per day on travel routes	travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	travel routes(e.g., staging areas) and 15-19 encounters/day en route	travel routes(e.g., campgrounds) and 30 or more encounters/day en route	everywhere, but human contact is still intermittent	in view
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

ix S

Targeted Opportunities/Outcomes

Recreation Management Zone Hieroglyphic Mountains

Niche Motorized recreation

Activity Opportunities Camping associated with OHV riding, OHV club events, Competitive racing, OHV riding,

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Enjoying the closeness of family and friends</p> <p>Develop personal skills and abilities</p> <p>Develop self confidence</p>	<p>Stronger ties with family and friends</p> <p>Improve skills for outdoor enjoyment</p> <p>Greater sense of personal security</p>	<p>Greater family bonding</p> <p>Enhanced sense of personal freedom and greater self reliance</p> <p>Improved leadership abilities</p> <p>Improved group cooperation</p>	<p>More well rounded child development</p> <p>Greater freedom from urban living</p> <p>Reduced social isolation</p>

Experience / Combination of Experiences		Personal Benefits	On-site Benefits	Off-site Benefits
Talk to others about gear and equipment		Improve problem solving skills	Reduced negative human impacts such as vegetation trampling, litter, and soil erosion	Improved local economic stability

Castle Hot Springs Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET	
Destination		Regional motorized and non-motorized recreationists	
Sheep Mountain		Recreation Management Zone	
MARKET NICHE			
Non-motorized recreation – hikers			
OUTCOME OBJECTIVE			
A primitive undeveloped non-motorized setting will be maintained and natural character of landscape will be enhanced. Difficult access characterizes this area.			
Activity Opportunities	Experience Opportunities	Benefit Opportunities & Outcomes	
Hiking Backpacking	Savoring the total sensory receptors such as sight, sound, and smell of a natural landscape. Contemplating the relationship humans have with the land. Releasing or reducing built-up mental tensions.	<p>Personal: Enhanced awareness and understanding of nature. Greater sense of responsibility for one's quality of life. Improved mental well-being.</p> <p>Community/Social: Enhanced lifestyle</p> <p>Environmental: Greater environmental awareness and protection of natural resources. Closer relationship with natural world.</p> <p>Economic: Increased work productivity.</p>	
PRESCRIBED SETTING CHARACTER			
Physical	Social	Administrative	
Remoteness: SPM, SPNM	Contacts: P	Mechanized Use: P	
Naturalness: SPNM	Group Size: P	Management Controls: P	
Facilities: P	Evidence of Use: P	Visitor Services: P	
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK			
Management	Close reclaiming routes except those needed for administrative use. No new motorized routes. No discretionary surface disturbance.		
Match-up Marketing (inc. education & interpretation)	Work with citizen groups and surround land owners to manage access to area.		
Monitoring	Conduct period assessments to determine if there are changes to disturbed areas.		

Administration Combine management and marketing goals above.

RECREATION SETTINGS Castle Hot Springs, Sheep Mountain

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (with other groups)					

Appendix S

Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

**EXISTING
SETTING**

**PRESCRIBED
SETTING**

Targeted Opportunities/Outcomes

Recreation Management Zone Castle Hot Springs, Sheep Mountain

Niche: Non-motorized recreation: hikers

Activity Opportunities Hiking or backpacking

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Savoring the total sensory perceptions of sight, sound, and smell of a natural landscape</p> <p>Contemplating the relationship of humans with the land.</p>	<p>Enhanced awareness and understanding of nature</p> <p>Greater environmental awareness and sensitivity</p> <p>Greater sense of responsibility for one's own quality of life</p>	<p>Increased awareness and protection of natural landscapes</p> <p>Closer relationship with the natural world</p>	<p>Greater cultivation of a natural resource stewardship ethic.</p> <p>Greater environmental awareness and protection of natural resources.</p> <p>Greater understanding of social relationships in society.</p> <p>Closer relationship with natural world.</p>

Experience / Combination of Experiences →	Personal Benefits →	On-site Benefits →	Off-site Benefits
Releasing or reducing built up mental tensions	Improved mental well/being	Diminished mental anxiety	Increased work productivity Enhanced lifestyle

Castle Hot Springs Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET	
Destination		Regional motorized and non-motorized recreationists	
Castle Hot Springs		Recreation Management Zone	
MARKET NICHE			
Dispersed non-motorized and motorized recreation users.			
OUTCOME OBJECTIVE			
Throughout the life of the plan, provide diverse recreation opportunities that meet regional needs, protects natural resources, and reduces conflict with residents and local land owners. Complaints of conflicts will be reduced to less than 25 per year.			
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes	
Hiking Hunting Horseback riding OHV Mountain biking	Experiencing a greater sense of independence Releasing or reducing some built-up mental tension Enjoying escape from crowds of people	<p>Personal: Greater self-reliance. Improved sense of control over one's life. Restored mind from unwanted stress. Closer relationship with the natural world.</p> <p>Community/Social: Greater freedom from urban living. Increased independence and autonomy.</p> <p>Environmental: Increased awareness and protection of natural resources.</p> <p>Economic: Increased work productivity.</p>	
PRESCRIBED SETTING CHARACTER			
Physical	Social	Administrative	
Remoteness: R, RN, SPM	Contacts: RN, SPM, SPNM	Mechanized Use: RN, SPM	
Naturalness: RN, SPM	Group Size: R, RN, SPM, SPNM	Management Controls: RN, SPM	
Facilities: RN, SPM	Evidence of Use: RN, SPM, SPNM	Visitor Services: RN, SPM	
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK			
Management	Develop transportation network and support facilities to meet a diverse recreation demand while reducing conflict between recreation users and local residents and landowners.		
Match-up Marketing (inc. education & interpretation)	Partner with residents, user groups, and other government agencies to develop a strategy to modify user behavior and reduce conflict.		

Monitoring	Track complaints and visitor satisfaction.
Administration	Work with citizen partnerships and other government agencies to apply needed administration to meet objectives.

Targeted Opportunities/Outcomes				
Recreation Management Zone Castle Hot Springs, Castle Hot Springs				
Niche Dispersed non-motorized and motorized recreationists				
Activity Opportunities OHV, Hiking, equestrian, hunting				
Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits	
Experiencing a greater Sense of independence	Greater self reliance	Improved sense of control over one's life	Increased independence/ autonomy	

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Releasing or reducing built up mental tensions	Restored mind from unwanted stress	Diminished mental anxiety	Increased work productivity
Enjoying an escape from crowds of people	Closer relationship with the natural world	Increased awareness and protection of natural resources	Greater freedom from urban living

EXISTING SETTING

PRESCRIBED SETTING

RECREATION SETTINGS, Castle Hot Springs

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (with other groups)					

Appendix S

Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view
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f. Evidence of Use

Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice
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ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
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g. Visitor Services

None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
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h. Management Controls

No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
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i. Mechanized Use

None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present
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EXISTING SETTING

PRESCRIBED SETTING

Castle Hot Springs Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Destination		Local and regional residents
Baldy Mountain		Recreation Management Zone
MARKET NICHE		
Local and regional non-motorized visitors seeking trails and open space.		
OUTCOME OBJECTIVE		
By the year 2012, manage to allow visitors to obtain non-motorized trail based recreation opportunities throughout the zone, with at least 75% of visitors realizing at least a good recreation benefits and outcomes.		
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Hiking	Enjoying easy access to natural landscapes.	Personal: Improved quality of life and improved physical fitness.
Horseback riding	Participating in needed physical exercise.	Community/Social: Enlarged sense of community dependency on public lands and local lifestyles.
Mountain biking	Knowing things are not going to change too much.	Environmental: Greater protection of wildlife habitat from public land use impacts.
Hunting		Economic: Increased property values and a positive contribution to economic stability.
Sightseeing		
PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative
Remoteness: SPNM, SPM	Contacts: SPM	Visitor Services: SPM
Naturalness: RN	Group Size: RN, R, U	Management Controls: RN
Facilities: SPM	Evidence of Use: SPNM	Mechanized Use: SPMN
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK		
Management	Develop up to five hiking, mountain bicycling, and equestrian trails. Designate and limit vehicle use to designated routes. Establish visual resource management Class II designations.	
Match-up Marketing (inc. education & interpretation)	Establish agreements with the Bradshaw Foothills Coalition, Peoria, and Maricopa and Yavapai Counties for the development of educational and marketing material, and for shared management of trails.	

Monitoring	Track complaints and visitor satisfaction; track compliance with route closures and use regulations.
Administration	Work with citizen partnerships and other government agencies to apply needed administration to meet objectives. Specifically using existing groups such as the Bradshaw Foothills Coalition to plan, survey, construct and maintain a high-quality trail system.

Targeted Opportunities/Outcomes

Recreation Management Zone Baldy Mountain

Niche Local and regional non-motorized and visitors seeking trails and open space.

Activity Opportunities Hiking, horseback riding, mountain biking, hunting, sightseeing

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
Enjoying easy access to natural landscapes	Greater freedom from urban living	Enhanced lifestyle	Greater appreciation for open spaces Greater involvement in open space issues.

Personal Benefits	On-site Benefits	Off-site Benefits
A more holistic sense of wellness and improved mental well-being	Improved sense of control over one's life	Improved productivity in work and community involvement.

	<p>Greater sensitivity to/awareness of outdoor aesthetics, nature's art and its elegance</p> <p>Enhanced awareness and understanding of nature</p>	<p>Enlarged sense of personal accountability for acting responsibly on public lands</p>	<p>Maintenance of community's distinctive recreation-tourism market niche or character</p> <p>Greater retention of distinctive natural landscape features</p>
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Recreation Settings Baldy Mountain

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice
ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Black Canyon Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Community and Regional		Local and regional tourism

Table Mesa

Recreation Management Zone

MARKET NICHE

Intensive motorized recreation for single and two-track routes with camping related to OHV use.

OUTCOME OBJECTIVE

Within the life of the plan, provide for quality recreation opportunities that meet the community and regional needs, provide for acceptable dust control and compatibility with neighboring communities and landowners, and protect and enhance resource protection. Trash and litter will be reduced and 90% of users will have experiences that achieve their desired outcomes.

TARGETED OPPORTUNITIES & OUTCOMES

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
OHV (single and two-track) Camping related to OHV use	Developing skills and abilities Enjoying the closeness of friends and family Enjoying easy access to natural landscapes Enjoying being able to frequently participate in desired activities in the setting of this place.	Personal: Stronger ties with friends and family and more outdoor oriented lifestyle. Improved teamwork and cooperation. A more outdoor oriented lifestyle. A more well-informed responsible visitor. Community/Social: Greater family bonding. Greater awareness that this community is a special place. Greater community ownership and stewardship of recreation and natural resources. Environmental: Maintenance of distinctive recreation setting character. Greater community ownership and stewardship of recreation and natural resources. Economic: Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits.

PRESCRIBED SETTING CHARACTER

Physical	Social	Administrative
Remoteness: RN, R Naturalness: SPM, RN Facilities: SPM, RN	Group Size: SPM, RN Contacts: R Evidence of Use: SPM, RN	Visitor Services: RN Management Controls: SPM, RN Mechanized Use: SPM, RN

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

Management	Continue to manage for a semi-primitive motorized and roaded-natural setting. Develop facilities, staging areas, trails, and other sites when needed to protect resources, to promote visitor health and safety, or to maintain recreation opportunities.
Match-up Marketing (inc. education & interpretation)	Develop collaborative partnerships with Maricopa County Parks and Recreation Department and communities to share recreation management and projects such as developing a long term Black Canyon Hiking and Equestrian Trails master plan, ensure consistent management between partners, maintain open space and provide a natural gateway into Maricopa County.
Monitoring	Determine specific areas where comprehensive site assessments would be initiated to determine the existing physical and social impacts of recreation activities, establish monitoring plans to manage camping and other recreation uses, and define conditions and standards as related to recreation settings established for area. Monitoring can include user surveys and feedback from partners.
Administration	Work with partners to develop a volunteer service to help maintain the site and help to modify visitor behavior.

RECREATION SETTINGS, Table Mesa

EXISTING SETTING	PRESCRIBED SETTING
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PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (with other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters	3-6 encounters/day off travel routes(e.g., campsites) and 7-15	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

per day on travel routes	encounters/day on travel routes	encounters/day en route	more encounters/day en route		
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone Table Mesa

Niche Intensive motorized recreation and two-track with camping related to OHV use

Activity Opportunities OHV riding, camping

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Developing skills and abilities</p> <p>Enjoying the closeness of family and friends</p> <p>Enjoying easy access to natural landscapes</p>	<p>Improved teamwork and cooperation</p> <p>Stronger ties with family and friends</p> <p>A more outdoor oriented lifestyle</p>	<p>Greater personal enrichment through involvement with other people</p> <p>Greater family bonding</p> <p>Greater awareness that this community is a special place</p>	<p>Improved understanding of how this area's rural-urban interface impacts its quality of life.</p> <p>Enhanced lifestyle.</p> <p>Enlarged understanding of one's responsibility to help care for this area and keep it clean.</p>

Experience / Combination of Experiences		Personal Benefits	On-site Benefits	Off-site Benefits
Enjoying to frequently participate in desired activities in the setting of this place		More well-informed responsible visitor	Greater community ownership and stewardship of recreation and natural resources	Maintenance of distinctive recreation setting character

BLACK CANYON - Special Recreation Management Area

PRIMARY MARKET STRATEGY	MARKET
Community	Local and regional non-motorized recreationists.

North Black Canyon Trail

Recreation Management Zone

MARKET NICHE

Non-motorized open space recreation – hiking, equestrian, and mountain bike riding opportunities in the Upper Agua Fria watershed area.

OUTCOME OBJECTIVE

By 2012, complete the Black Canyon Trail north and east of Highway 69 to connect with trails in Prescott National Forest. Analyze, build and designate the trail to provide a non-motorized experience along the historic sheep driveway. Identify exact locations of the trail and facilities in conjunction with the Yavapai Trails Association and other interested citizens. Maintain rural roaded-natural and semi-primitive motorized settings as suitable. Consider and study the Black Canyon Trail for inclusion into the National Recreation Trail System, as described in the National Trails System Act of 2002 (P.L.90-543).

Provide high-quality non-motorized recreation experiences for hikers, equestrians and mountain bikers through the Upper Agua Fria Basin area north of Highway 69. Provide loops and trailheads for destination and point-to-point non-motorized travel through completion of a professionally developed and maintained trail. Promote the preservation of, public access to, and appreciation of open space and public landscapes. By 2008, establish partnerships with the Upper Agua Fria Watershed Group, Yavapai County, the Black Canyon Trail Coalition, and other associated user groups and communities. Begin trail work in FY-2007 and measure public satisfaction through use surveys.

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
<p>Hiking, Backpacking, Equestrian, and Mountain Biking.</p> <p>Community Partnerships and Coalitions.</p>	<p>Savoring the total sensory receptors such as sight, sound, and smell of a natural landscape.</p> <p>Enjoying a wide variety of environments within a dedicated and managed recreation area.</p> <p>Feeling good about the way our natural resources are being managed and how this attraction is being used and enjoyed.</p> <p>Enjoying getting needed physical exercise. Avoid compromising the quality of life here.</p> <p>Knowing that things are not going to change too much.</p>	<p><u>Personal:</u> Enhanced awareness and understanding of nature. Greater sense of responsibility for one’s quality of life. Greater environmental awareness and sensitivity. Improved physical and mental well being.</p> <p><u>Community/Social:</u> Enhanced lifestyle. Greater personal enrichment through involvement with other people of similar interests. Heightened sense of satisfaction with our community. Greater community involvement in recreation and other land use decisions. Enhanced lifestyle.</p> <p><u>Environmental:</u> Greater environmental awareness and protection of natural resources. Closer relationship with natural world.</p> <p><u>Economic:</u> Increased desirability as a place to live. Increased property values due to open space and recreation. Some increased local-tourism revenue.</p>

Feeling good about how visitors are being managed.

PRESCRIBED SETTING CHARACTER

Physical	Social	Administrative
Remoteness: SPM, RN	Contacts: SPM, RN	Mechanized Use: SPNM
Naturalness: SPM, RN, R	Group Size: SPNM, SPM, RN	Management Controls: SPM, RN
Facilities: SPM, RN	Evidence of Use: SPNM, SPM	Visitor Services: SPM, RN

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

Management	<p>Locate and develop staging, or camping areas near communities and vehicle access points to service the North Black Canyon Trail and adjoining public lands for the following purposes: parking, unloading OHVs and horses, and picnicking. Development could include the following: informational signs, kiosks, picnic tables, loading ramps, and soil stabilization for dust abatement.</p> <p>Issue a right-of-way for the trail and facilities to preserve public access and protect the trail from incompatible land uses. Acquire access easements or rights-of-way for non-Federal lands where the trail or facilities are proposed.</p> <p>Recognize the trail and facilities in any land tenure actions. Retain a 1/4-mile corridor (1/8 mile each side) along the trail.</p> <p>Allocations for Visual Resource Management designed to achieve Desired Future Conditions are discussed in section 2.6.2.2.6.6.</p> <p>Nominate the North BCT in the National Recreation Trail System. Begin trail layout, survey and construction in FY-2007.</p>
Match-up Marketing (inc. education & interpretation)	Work with citizen groups, communities, the Black Canyon Trail Coalition membership, the Upper Agua Fria Watershed group, the Yavapai County Trails Association, national hiking and mountain bike associations, local communities, and surrounding land users to fund, survey, maintain, and construct the North BCT.
Monitoring	Conduct period assessments annually along the trail to determine new alignments, loops, connectivity, and maintenance needs.
Administration	Combine management, marketing and monitoring goals above, along with aggressive partnership building and community involvement. Partner wit the communities of Mayer, Prescott Valley, Arcosonti and other growing communities in the region.

Work with citizen volunteer groups to complete a comprehensive strategy and trails plan for selecting and developing new single- and multi-use hiking, equestrian, and OHV trails for all lands in the RMZ. Collaborate with the following entities: AGFD, Prescott National Forest, Yavapai County, Yavapai County Trails Association, and land managers of other trails.

Establish a citizen's working group to help with trail and facility sites, designs, and management. Develop a Black Canyon Trail management and partnership plan with community and citizen input in conjunction with the Black Canyon Trail Plan for the Black Canyon SRMA. Within one year of plan approval define the following: proposed trail alignments, trailheads, linking trails, and other alignments. Complete this master plan within two years of plan approval.

RECREATION SETTINGS North Black Canyon Trail

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					

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Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19 encounters/day en route	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone – North Black Canyon Trail

Niche: Local and regional community open space for trail-based opportunities for hikers, mountain bikers and horse riders.

Activity Opportunities Mountain biking, hiking, equestrian and backpacking

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Savoring the total sensory perceptions of sight, sound, and smell of a natural landscape.</p> <p>Enjoying having easy access to natural landscapes.</p> <p>Enjoying having a wide variety of environments within a single recreation area.</p>	<p>Enhanced awareness and understanding of nature. Closer relationship with natural world.</p> <p>Greater environmental aware-ness and sensitivity. Greater sense of responsibility for one’s own quality of life.</p> <p>Learning more about things here and enjoying some needed mental rest and physical exercise.</p>	<p>Increased awareness and protection of natural landscapes.</p> <p>A more outdoor-oriented lifestyle and a closer relationship with the natural world.</p> <p>Greater awareness and understanding of nature.</p>	<p>Greater cultivation of a natural resource stewardship ethic.</p> <p>Encouraging others to help safeguard our lifestyle and quality of life.</p> <p>Greater community ownership and stewardship of park, recreation and natural resources. Maintenance of distinctive recreation settings and character.</p>

Experience / Combination of Experiences 	Personal Benefits 	On-site Benefits 	Off-site Benefits
<p>Enjoying getting some needed physical exercise, and perhaps strenuous exercise.</p>	<p>Improved mental and physical well/being</p>	<p>Diminished mental anxiety.</p>	<p>Increased work productivity Improved physical fitness and health maintenance.</p>
<p>Enjoying a wide variety of environments within a dedicated and managed recreation area.</p> <p>Feeling good about the way our natural resources are being managed and how this attraction is being used and enjoyed.</p> <p>Avoiding compromising the quality of life here in the Upper Agua Fria Watershed.</p> <p>Just knowing this attraction in or near my community.</p> <p>Being in control of things that happen and knowing</p>	<p>Closer relationship with the outdoor world. A more outdoor oriented lifestyle.</p> <p>Greater sense of responsibility for my own quality of life and an enlarged sense of personal accountability for acting responsibly on public lands.</p> <p>Greater awareness that this community is a special place.</p> <p>Increased independence and autonomy.</p> <p>Greater sense of responsibility for one's quality of life. Greater</p>	<p>Maintenance of community's distinctive recreation character.</p> <p>Better sense of my place within the community.</p> <p>Maintenance of open space and distinctive open-space atmosphere.</p> <p>Enlarged sense of personal accountability for acting responsibly on public lands.</p> <p>Greater understanding of the importance of open space</p>	<p>Greater appreciation of this site's recreation heritage and how managers care for it.</p> <p>Greater community involvement in recreation and other land use decisions. Enhanced awareness and understanding of nature. Greater environmental awareness and protection of natural resources.</p> <p>Improved understanding of how this community's urban-rural interface impacts its quality of life.</p> <p>Heightened sense of satisfaction with our community. Enhanced lifestyle. Enlarged sense of community dependency on public lands.</p> <p>Increased desirability as a place to live. Increased property</p>

<p>that things are not going to change too much.</p> <p>Relishing group affiliation and togetherness.</p>		<p>environmental awareness and sensitivity.</p> <p>Greater personal enrichment through involvement with other people with similar interests.</p>	<p>and recreation to our community.</p> <p>Improved group cooperation.</p>	<p>values due to open space and recreation. Some increased local-tourism revenue.</p> <p>Greater sense of responsibility for one's quality of life. Greater environmental awareness and sensitivity.</p>
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Harquahala Mountains ERMA

PRIMARY MARKET STRATEGY	MARKET
N/A	Local and regional motorized and non-motorized recreation.

Harquahala Mountains ERMA

MARKET NICHE
Motorized recreation on designated routes and associated with dispersed hiking, sightseeing, hunting and camping opportunities. Emphasis on Resource Protection and Land Health Standards, OHV designation route use compliance.

OUTCOME OBJECTIVE
By 2010, inventory, evaluate, designate and sign a motorized route network that is sustainable within the Harquahala Mountains ERMA. Motorized recreation use will be compatible with Land Health Standards for the area. 100% of motorized users will be aware of OHV designations and motorized use rules through visitor information, park ranger contact and peer group/volunteer outreach. Plan to achieve 95 percent visitor compliance with motorized recreation rules with an 80% favorable realization of our visitor's desired dispersed semi-primitive motorized experiences. Document less than five motorized wilderness boundary intrusions per year and less than 10 motorized incursions into closed OHV areas.

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Dispersed trail-based OHV riding	N/A	N/A
Dispersed Hunting, Camping, Hiking and Sightseeing, both motorized and non-motorized.	Many opportunities and outcome exist, but we are not targeting any specific ones. We are managing for custodial use which includes: conflicts, resource protection, and public safety in an ERMA.	Many opportunities and outcome exist, but we are not targeting any specific ones. We are managing for custodial use.

PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative

Remoteness: SPNM, SPM, RN	Contacts: SPNM, SPM, RN	Mechanized Use: SPM
Naturalness: RN, SPM, SPNM	Group Size: P, SPNM, SPM, RN	Management Controls: SPNM, SPM, RN, R
Facilities: SPNM, SPM, RN	Evidence of Use: SPNM, SPM	Visitor Services: SPM, RN, R

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

Management	Comply with the managerial and social settings described in the land use plan, such as VRM designations, ROS settings, and lands managed to maintain wilderness characteristics. Define, designate, implement and monitor a designated and comprehensive travel route network for motorized recreation experiences and access. Authorize appropriate SRPs that little effect current recreation settings and motorized route networks. Allow facilities when needed to protect resources, provide for visitor safety, improve the quality of recreation experiences or to resolve social conflicts. Apply Tread Lightly, Leave-No-Trace and Adaptive Management Practices as described in the land use plan. Maintain the 14-day camping Limit and current or future Land Health Standards.
Match-up Marketing (inc. education & interpretation)	Sign all special management areas, motorized and non-motorized routes, and install info kiosks. Prepare and distribute Access Guides. Partner with OHV clubs and other peer user groups to develop maintenance and management agreements on the route network.
Monitoring	Measure current disturbances and monitor for change (Rapid Site Assessment for entire ERMA). Initiate visitor surveys to determine satisfaction. Monitor for complaints from other agencies and resource staff. Monitor with citizen collaboration. Monitor wilderness boundaries and closed OHV areas.
Administration	Work with user, volunteers, and OHV peer groups to maintain signs and provide educational outreach while conducting visitor contacts. Continue to implement Management, Marketing and Monitoring efforts as described above.

RECREATION SETTINGS: Harquahala Mountains ERMA

EXISTING SETTING

PRESCRIBED SETTING

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters	3-6 encounters/day off	7-14 encounters/day off	15-19 encounters/day off	People seem to be	Other people consistently

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per day at campsites and fewer than 6 encounters per day on travel routes	travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	travel routes(e.g., staging areas) and 15-19 encounters/day en route	travel routes(e.g., campgrounds) and 30 or more encounters/day en route	everywhere, but human contact is still intermittent	in view
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describes experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

Appendix

**PRESCRIBED
SETTING**

Harcuvar Mountains ERMA

PRIMARY MARKET STRATEGY	MARKET
N/A	Local and regional dispersed motorized recreation.

Harcuvar Mountains ERMA

MARKET NICHE
Motorized recreation on designated routes associated with dispersed hiking, sightseeing, hunting and camping opportunities. Emphasis on Resource Protection.

OUTCOME OBJECTIVE
By 2011, inventory, evaluate, designate and sign a motorized route network that is sustainable within the Harcuvar Mountains ERMA. Motorized recreation use will be compatible with Land Health Standards for the area. 100% of motorized uses will be aware of the OHV designations and motorized use rules through visitor information, park ranger contact and peer group/volunteer outreach. Plan to achieve 95 percent visitor compliance with motorized recreation rules with an 80% favorable realization of our visitor's desired dispersed semi-primitive motorized experiences.

Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
<p>Dispersed trail-based OHV riding</p> <p>Dispersed Hunting, Camping, Hiking and Sightseeing – all activities mainly vehicle based.</p>	<p>N/A</p> <p>Many opportunities and outcomes exist, but we are not targeting any specific ones. We are managing for custodial use which includes: conflicts, resource protection, and public safety in an ERMA.</p>	<p>N/A</p> <p>Many opportunities and outcomes exist, but we are not targeting any specific ones. We are managing for custodial use.</p>

PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative

Remoteness: SPNM, SPM	Contacts: SPNM, SPM	Mechanized Use: SPM
Naturalness: RN, SPM, SPNM	Group Size: SPNM, SPM	Management Controls: RN, SPM
Facilities: SPM	Evidence of Use: SPNM, SPM	Visitor Services: SPM

ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK

Management	Comply with the managerial and social settings described in the land use plan, such as VRM designations, ROS settings, and lands managed to maintain wilderness characteristics. Define, designate, implement and monitor a designated and comprehensive travel route network for motorized recreation experiences and access. Authorize appropriate SRPs that little effect current recreation settings and motorized route networks. Allow facilities when needed to protect resources, provide for visitor safety, improve the quality of recreation experiences or to resolve social conflicts. Apply Tread Lightly, Leave-No-Trace and Adaptive Management Practices as described in the land use plan. Maintain the 14-day camping Limit and current or future Land Health Standards.
Match-up Marketing (inc. education & interpretation)	Sign all special management areas, motorized and non-motorized routes, and install info kiosks. Prepare and distribute Access Guides. Partner with OHV clubs and other peer user groups to develop maintenance and management agreements on the route network.
Monitoring	Measure current disturbance and monitor for change. Use visitor surveys to determine satisfaction. Monitor for complaints from other agencies and resource staff. Monitor with citizen collaboration.
Administration	Work with user, volunteers, and OHV peer groups to maintain signs and provide educational outreach while conducting visitor contacts. Continue to implement Management, Marketing and Monitoring efforts as described above.

RECREATION SETTINGS: Harcuvar Mountains**EXISTING SETTING****PRESCRIBED
SETTING****ERMA**

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores
SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters	3-6 encounters/day off travel routes(e.g., campsites) and 7-15	7-14 encounters/day off travel routes(e.g., staging areas) and 15-19	15-19 encounters/day off travel routes(e.g., campgrounds) and 30 or	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view

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per day on travel routes	encounters/day on travel routes	encounters/day en route	more encounters/day en route		
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
g. Visitor Services					
None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describes experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

EXISTING SETTING

PRESCRIBED SETTING

BLACK CANYON - Special Recreation Management Area

PRIMARY MARKET STRATEGY		MARKET
Destination		Local, regional and national non-motorized recreationists
Black Canyon Trail		Recreation Management Zone
MARKET NICHE		
Non-motorized recreation – hiking, equestrian, and mountain bike riding, including long distance hikes and rides.		
OUTCOME OBJECTIVE		
By 2016, establish and maintain a high quality non-motorized recreation experience for hikers, equestrians and mountain bikers through the Black Canyon Corridor. Provide loops, links, and trailheads for destination, point-to-point and long distanced non-motorized travel through completion of a professionally developed and maintained trail. Promote the preservation of, public access to, and appreciation of the open space, landscapes and historic setting of the Black Canyon Corridor. By 2007, develop and maintain partnerships between BLM, the Black Canyon Trail Coalition, Maricopa and Yavapai Counties, user groups and communities.		
Activity Opportunities	Experience Opportunities & Outcomes	Benefit Opportunities & Outcomes
Hiking, Backpacking, Equestrian, and Mountain Biking. Community Partnerships and Coalitions.	Savoring the total sensory receptors such as sight, sound, and smell of a natural landscape. Enjoying a wide variety of environments within a single recreation area. Feeling good about the way our natural resources are being managed and how this attraction is being used and enjoyed. Enjoying getting needed physical exercise.	Personal: Enhanced awareness and understanding of nature. Greater sense of responsibility for one’s quality of life. Greater environmental awareness and sensitivity. Improved physical and mental well being. Community/Social: Enhanced lifestyle. Greater personal enrichment through involvement with other people of similar interests. Environmental: Greater environmental awareness and protection of natural resources. Closer relationship with natural world. Economic: Increased local-tourism revenue.
PRESCRIBED SETTING CHARACTER		
Physical	Social	Administrative
Remoteness: SPM, RN, R, U	Contacts: SPNM, SPM, RN, R	Mechanized Use: P, SPNM
Naturalness: SPM, RN, R, U	Group Size: SPNM, SPM, RN, R, _U	Management Controls: SPM, RN, R
Facilities: SPM, RN	Evidence of Use: SPNM, SPM	Visitor Services: SPNM, SPM, RN, R
ACTIVITY PLANNING (IMPLEMENTATION) FRAMEWORK		
Management	Issue R-O-W for the BCT. Acquire easements for access to the trail. Retain a ¼ mile corridor along the trail for a permanent protected trail location. Develop access and up to eight trailheads. Include BCT in the National Recreation Trail System.	

Match-up Marketing (inc. education & interpretation)	Work with citizen groups, communities, the Black Canyon Trail Coalition membership, national hiking and mountain bike associations, and surrounding land users to fund, maintain, and construct the BCT.
Monitoring	Conduct period assessments annually along the trail to determine new alignments, loops, connectivity, and maintenance needs.
Administration	Combine management, marketing and monitoring goals above, along with aggressive partnership building and community involvement.

RECREATION SETTINGS Black Canyon Trail

EXISTING SETTING

PRESCRIBED SETTINGS

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and	3-6 encounters/day off travel routes(e.g.,	7-14 encounters/day off travel routes(e.g., staging	15-19 encounters/day off travel routes(e.g.,	People seem to be everywhere, but human	Other people consistently in view

fewer than 6 encounters per day on travel routes	campsites) and 7-15 encounters/day on travel routes	areas) and 15-19 encounters/day en route	campgrounds) and 30 or more encounters/day en route	contact is still intermittent
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f. Evidence of Use

Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice
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ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
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g. Visitor Services

None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
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h. Management Controls

No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
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i. Mechanized Use

None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present
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EXISTING SETTING

PRESCRIBED SETTING

Targeted Opportunities/Outcomes

Recreation Management Zone - Black Canyon Trail

Niche: Local, regional and national destination trail-based opportunities for hikers, mountain bikers and horse riders, including long distance rides.

Activity Opportunities Mountain biking, hiking, equestrian and backpacking

Experience / Combination of Experiences	Personal Benefits	On-site Benefits	Off-site Benefits
<p>Savoring the total sensory perceptions of sight, sound, and smell of a natural landscape.</p> <p>Enjoying having easy access to natural landscapes.</p> <p>Enjoying having a wide variety of environments within a single recreation area.</p>	<p>Enhanced awareness and understanding of nature.</p> <p>Greater environmental awareness and sensitivity. Greater sense of responsibility for one's own quality of life.</p> <p>Learning more about things here and enjoying some needed mental rest and physical exercise.</p>	<p>Increased awareness and protection of natural landscapes.</p> <p>A more outdoor-oriented lifestyle and a closer relationship with the natural world.</p> <p>Greater awareness and understanding of nature.</p>	<p>Greater cultivation of a natural resource stewardship ethic.</p> <p>Encouraging others to help safeguard our lifestyle and quality of life.</p> <p>Greater community ownership and stewardship of park, recreation and natural resources. Maintenance of distinctive recreation settings and character.</p>

Experience / Combination of Experiences →	Personal Benefits →	On-site Benefits →	Off-site Benefits
Enjoying getting some needed physical exercise, and perhaps strenuous physical exercise	Improved mental and physical well/being	Diminished mental anxiety	Increased work productivity Enhanced lifestyle. Improved physical fitness and health maintenance.
<p>Enjoying participating in group outdoor events</p> <p>Avoiding compromising the quality of life here in the Black Canyon Corridor.</p> <p>Feeling good about the way our natural resources are being managed and how this attraction is being used and enjoyed.</p> <p>Just knowing this attraction in or near my community.</p> <p>Being in control of things that happen</p>	<p>Greater sense of adventure and a more outdoor-oriented lifestyle.</p> <p>Greater sense of responsibility for my own quality of life and an enlarged sense of personal accountability for acting responsibly on public lands.</p> <p>Improved team work and cooperation.</p> <p>Greater awareness that this community is a special place.</p> <p>Increased independence and autonomy.</p>	<p>Improved appreciation and a closer relationship with the natural world and involvement with other people doing similar activities.</p> <p>Maintenance of community's distinctive recreation character.</p> <p>Better sense of my place within the community.</p> <p>Heightened sense of satisfaction with our community.</p> <p>Maintenance of open space and distinctive small-town</p>	<p>Improved skills for outdoor enjoyment with others, and stronger ties with my family and friends.</p> <p>Greater understanding of the importance of recreation and tourism to our community. Increased local-tourism revenue.</p> <p>Greater community involvement in recreation and other land use decisions.</p> <p>Enlarged sense of community dependency on public lands.</p> <p>Improved understanding of how this community's urban-rural</p>

<p>Relishing group affiliation and togetherness.</p>		<p>Greater personal enrichment through involvement with other people with similar interests.</p>	<p>atmosphere. Improved group cooperation.</p>	<p>interface impacts its quality of life. Greater community involvement in recreation and other land use decisions.</p>
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Appendix T - Off-Highway Vehicle Mitigation Examples

Nature of the conflict with routes and use of routes							
Conflict	Typical mitigation measures						
	Typical mitigation is in order of possible implementation, not all measures may be used and not all may be listed.						
	Mitigation actions taken should be triggered as a result of monitoring and reaching identified thresholds.						
	Monitoring should be done before, during and after mitigation measures are implemented to identify trends.						
Resource issues:							
The physical location of a route is degrading riparian condition	<ol style="list-style-type: none"> 1. Relocate the route to avoid the area 2. Harden or raise the route above water level if route is necessary and unable to be relocated 3. Close the route if no suitable mitigation is possible and make a plan for reclamation 						
Human use associated with a route is degrading riparian condition	<ol style="list-style-type: none"> 1. Place information signs to request positive behavior (ie use only when dry etc) 2. Harden and/or raise the route above water level or place barriers to keep vehicle and people on routes 3. Relocate the route to allow riparian condition to improve 4. Close the route if no suitable mitigation is possible and make a plan for reclamation 						
Human use associated with a route is degrading desired plant communities	<ol style="list-style-type: none"> 1. Place signs to encourage vehicles and people to stay on routes 2. Conduct public outreach regarding noxious weeds and conserving vegetation 3. Fence the area or place barriers to manage people 4. Develop a program to improve desired plant community 5. Close the route and make a plan for reclamation 						

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Human use associated with a route is degrading water quality	1. Review the situation to determine the source of degradation and monitor to determine severity					
	2. Place water control measures on the route					
	3. Take reasonable measure to further harden/stabilize the route					
	4. Reroute the route					
	5. Close the route if no suitable mitigation is possible					
Human use on a route is determined to degrade a particular habitat	1. Request certain behavior from route users through signs and other information					
	2. Place limitations of use on the route (time/season of use, type of use, number of users, behavioral requirements)					
	3. Reroute the route					
	4. Replace habitat to offset problems caused by human use, some methods could be:					
	a. Augment food/water sources					
	b. Place barriers along route to protect specific habitat features					
	c. Relocate or expand reproduction sites to be away from the route					
	5. Close route if no suitable mitigation is possible, make plan for reclamation					
Human use associated with a route is determined to degrade a Special Status Species' habitat	1. Review management plans for the species and follow recommendations					
	Design mitigation plans to address:					
	1) Temporary conditions					
	2) Seasonal conditions					
	3) Year round conditions					
	2. Develop specific mitigation measures based on the site if species management plan is insufficient					
	3. Close route if no suitable mitigation is possible, make a plan for reclamation					
Human use associated with a route is determined to degrade Sonoran Desert Tortoise habitat (Maintaining No-Net Loss habitat policy)	1. Physically relocate habitat disturbances and/or schedule permitted activities to occur during dormant periods					
	2. Engineer Tortoise fences and underpasses for Tortoise benefit					
	3. Acquire replacement habitat lands and funding for tortoise benefitting activities					
	4. Close unauthorized routes and make a plan for reclamation					
Human use associated with a route is determined to degrade a Threatened and Endangered Species (T&E species)	1. Initiate consultation with Fish and Wildlife Service					
	2. Review recovery plan, implement mitigations as defined in plan					

	3. Close route if no suitable mitigation is possible, make a plan for reclamation						
Dust caused on or near a route violates county, state or federal regulations	1. Determine a short term solution						
	a. Monitor situation and determine severity of the problem						
	b. Close the route or area temporarily to stop dust generation						
	c. Stabilize the route using a county approved method						
	d. Place signs requesting a certain behavior (ie no wheel spin, reduce speed)						
	2. Determine a long term solution						
	a. Change formal maintenance interval on route consistent with use level						
	b. Develop a localized outreach program						
	c. Implement new technology as part of an area wide plan						
	d. Close route if suitable dust control is not possible, make plan for reclamation						
Human use associated with a route is causing unnatural erosion rates	1. Review the route to determine cause and monitor to determine severity						
	2. Place water control measures on the route						
	3. Take reasonable measure to further harden or stabilize the route						
	4. Reroute the route						
	5. Close the route if no suitable mitigation is possible						
Social Issues:							
Speed differential causes conflict between recreationists and/or local residents	1. Place signs to raise awareness of lawful uses of the area.						
	2. Monitor situation on the ground and request law enforcement support if necessary						
	3. Conduct public outreach in an attempt change behavior						
	4. Review terrain and improve sight distances if possible						
	5. Redesign traffic flow by separating uses or limit by type or time of use						

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Sound level causes conflict between recreationists and/or local residents	1. Place signs to raise awareness of sound issues					
	2. Monitor situation on the ground and request law enforcement support if necessary					
	3. Conduct public outreach in an attempt change behavior					
	4. Implement "Quiet Time" of use restrictions					
	5. Reroute traffic to minimize conflict					
	6. Place sound reducing barriers if applicable					
	7. Close route if no suitable mitigation is possible					
A route causes unacceptable changes to the desired Recreation Opportunity Spectrum(ROS) setting (ex. unplanned OHV play areas, large party sites, dump sites, resource theft)	1. Investigate the cause and implement signage and law enforcement as necessary					
	2. Design mitigation plans to address:					
	1. Short term conditions					
	a. Implement new signing and public outreach to explain desired setting					
	b. Implement temporary use restrictions(ex. No overnight camping)					
	c. Issue emergency closure order, address conditions during closure					
	2. Long term conditions					
	a. Implement better signing and mapping protocols for this area					
	b. If no suitable mitigation is possible, ammend RMP to close the area					
	3. Close areas near the route contributing to the unacceptable changes such as unplanned OHV play areas, large party sites, dumping sites, resource theft etc					
A proposed route is out of compliance with the Visual Resource Management(VRM) classification of the area	1. Evaluate the potential for and implement a method to make the route less noticeable such as landscaping.					
	2. If no suitable mitigation is possible, construction would not be allowed					
A route causes unacceptable impacts to cultural or archeological resources	1. Stabilize the resource and begin data recovery					
	2. Fence one or both sides of the route to keep vehicles from pulling off the route onto a site					
	3. Interpret the resource to gain public support for protection					
	4. Work with AZ Site Stewards program for monitoring, increase law enforcement presence					
	5. Reroute the route to avoid further disturbance of the site					

	6. Close the route if no mitigation is possible, make a plan for reclamation						
Human use on a route causes unacceptable impacts to a designated wilderness (ex. vehicle trespass)	1. Improve signage along wilderness boundary						
	2. Implement short sections of fence in problem areas						
	3. Use technology to gather information for more detailed action						
	4. Use volunteers and law enforcement to improve compliance along boundaries						
	5. Place time of use limits on the route to encourage lawful use (ie daytime use only)						
	6. Close the route if no mitigation is possible						
NLCS units							
Human use on a route outside wilderness causes unacceptable impacts to a designated wilderness (ex. vehicle trespass)	1. Improve signage along wilderness boundary						
	2. Secure funding and resources to rehabilitate areas attracting trespass						
	3. Implement short sections of fence in problem areas						
	4. Use technology such as remote cameras and infrared counters to gather data for more detailed action						
	5. Engage volunteers and law enforcement to improve compliance along boundaries						
	6. Place time of use limits on the route to encourage lawful use (ie special event use only)						
	7. Close the route if no mitigation is possible, make a plan for reclamation						
Human use on a route in a National monument causes, or is expected to cause, harm to monument objects.							
Archeological resources (in monument)	1) Stabilize the site and begin data recovery.						
	2) Engineer fences and barriers to protect site if these features won't attract vandalism						
	3) Close the route if no mitigation is possible, make a plan for reclamation						

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Biological resources - habitat (in monument)	1) Protect the objects through the use of temporary closures until the situation can be mitigated.						
	2) Develop mitigation plans for:						
	a. Short term conditions such as special events and unusual weather events that change visitor behavior						
	Typical mitigations:						
	1) Implement habitat improvement projects with AZ Game and Fish Dept.						
	2) Issue a temporary closure order for the area						
	b. Long term conditions such as increasing visitation due to development or increased popularity of the area						
	Typical mitigations:						
	1) Implement visitor management tools to guide visitors to more developed areas						
	2) Implement resource conservation plans specific to the area.						
Soil and Air resources (in monument)	1) Implement interpretive signage and possibly speed limits to reduce dust and soil loss from dusting/erosion						
	2) Engineer water control features on the route; ensure intended access maintenance level is maintained						
	3) Use methods to reduce dust and/or harden the route to minimize soil loss/dust (within ROS allocation)						
	4) Issue temporary closure orders for seasonal conditions (excessive wet or dry conditions)						
	5) Close route if no mitigation is possible, make a plan for reclamation						

Appendix U – Special Status Species

Special status species (other than federally listed), their status, habitat and occurrence in the planning area are described in the following table:

Common Name	Classification	Occurrence and Habitat Use in Planning Areas
Mammals		
Allen's Big-eared Bat	BS	Potential to occur, roosts in caves and mines
Big Free-tailed Bat	BS	Potential to occur, roosts in caves and mines
California Leaf-nosed Bat	S	Occurs seasonally roosts in caves and mines
Cave Myotis	BS	Occurs seasonally roosts in caves and mines
Fringed Myotis	BS	Occurs seasonally roosts in caves and mines
Long-eared Myotis	BS	Potential to occur, roosts in caves and mines
Long-legged Myotis	BS	Potential to occur, roosts in caves and mines
Little Brown Bat	BS	Potential to occur, roosts in caves and mines
Pocketed Free-tailed Bat	BS	Potential to occur, roosts in caves and mines
Red Bat	S	Potential to occur, roosts in riparian trees
Small-footed Myotis	BS	Potential to occur, roosts in caves and mines
Southern Yellow Bat	S	Potential to occur, roosts in trees
Spotted Bat	S	Extremely rare, roosts in crevices, caves and mines
Birds		
American Bittern	S	Potential to occur, riparian areas
Baird's Sparrow	S	Potential to occur during migration
Belted Kingfisher	S	Uncommon along riparian areas, non-breeding
Burrowing Owl	BS	Uncommon but widespread in relatively open areas
Common Black-Hawk	S	Nests in large trees in riparian areas

Common Name	Classification	Occurrence and Habitat Use in Planning Areas
Ferruginous Hawk	S	Uncommon in winter or during migration
Great Egret	S	Uncommon along riparian areas and at Lake Pleasant
Least Bittern	S	Uncommon along riparian areas and at Lake Pleasant
Loggerhead Shrike	BS	Fairly common all habitats
Northern Goshawk	S	Potential to occur, higher elevations
Osprey	S	Uncommon along riparian areas, non-breeding
Peregrine Falcon	S	Uncommon or wintering, no breeding documented
Pine Grosbeak	S	Uncommon wintering
Snowy Egret	S	Uncommon along riparian areas and at Lake Pleasant
Sprague's Pipit	S	Potential to occur during migration
White-faced Ibis	BS	Infrequent in winter, uses riparian and stock tanks
Amphibians and Reptiles		
Arizona Skink	S	Mid elevation chaparral and along some riparian areas
Arizona Toad	S	Seasonally and locally common, lower elevations, around water
Chuckwalla	BS	Locally common, lower elevation boulder areas
Gila Monster	BS	Widespread but uncommon, generally below 5,000 feet in elevation
Lowland Leopard Frog	S	Riparian areas, springs and stock tanks, populations are generally down and some local populations have disappeared over the past 10 years due to the spread of chytrid fungus
Mexican Garter Snake	S	Historic along Agua Fria River, not documented there in over 10 years, may be extirpated, riparian areas with abundant emergent vegetation
Rosy Boa	BS	Widespread but uncommon, lower elevation boulder areas
Fishes		
Desert Sucker	BS	Common, deeper pools in most perennial streams
Longfin Dace	BS	Common, most streams with perennial water
Speckled Dace	BS	Upper elevations of Sycamore, Little Ash and Dry Creeks on the AFNM

Common Name	Classification	Occurrence and Habitat Use in Planning Areas
		during wet years. During dry years, distribution recedes upstream to National Forest reaches of these streams.
Plants		
Giant Sedge	BS	Lower elevation springs, seeps and riparian areas
California Flannelbush	BS	Rare on canyon slopes 3,500-6000 feet in elevation
Murphey Agave	BS	Sonoran Desertscrub generally between Lake Pleasant and Black Canyon City. Associated with prehistoric Native American sites.

Scientific names are presented in Appendix H.

Classification

BS - BLM Sensitive, Updated BLM Sensitive Species List for Arizona (Instruction Memorandum No. AZ-2000-018, Change 1)

S - State Sensitive, Wildlife of Special Concern in Arizona (AGFD, Draft 1996)

Appendix V – Additional Information for the Black Canyon Utility Corridor

Changes made in Alternative E from the DRMP/DEIS to the PRMP/FEIS for the Black Canyon Utility Corridor are analyzed in this appendix. The following is a table that compares resources within the two corridor proposals:

Table 1 – Comparison of Resources by Corridor

Resource		DRMP/DEIS Alt. E Corridor	PRMP/FEIS Alt E. Corridor
Riparian Habitat	Antelope Creek	1.6 miles	2 miles
	Black Canyon Creek	1.2 miles	1.6 miles
	Bumble Bee Creek	0.7 miles	0.7 miles
	<i>Total</i>	3.5 miles	4.3 miles
Routes	Primary Road Paved	0.1 miles	0.1 miles
	Primary Road Unpaved	4.2 miles	6 miles
	Secondary Road Paved	1.3 miles	1.3 miles
	Secondary Road Unpaved	2 miles	3.9 miles
	Single Track	2.8 miles	0.7 miles
	Tertiary Road Unpaved	58.6 miles	74.5 miles
	<i>Total</i>	68.8 miles	86.3 miles
Desert Tortoise Habitat	Category 2	1480 acres	1540 acres
	Category 3	860 acres	820 acres
	<i>Total</i>	2340 acres	2360 acres
Vegetation Communities	Great Basin Mixed Grass – Mixed Scrub	160 acres	270 acres
	Interior Chaparral – Mixed Evergreen Sclerophyll	2050 acres	2190 acres
	Interior Chaparral (Mixed)– Mixed Grass – Scrub	1030 acres	1840 acres

	Complex		
	Interior Chaparral – Shrub Live Oak – Pointleaf Manzanita	0 acres	10 acres
	Semi Desert Mixed Grass- Mixed Scrub	1300 acres	1440 acres
	Sonoran Palo Verde- Mixed Cacti- Mixed Scrub	11,840 acres	12,210 acres
	<i>Total</i>	16,380 acres	17,960 acres
Area of Corridor Potentially Visible (as calculated from GIS viewshed analysis)	Observation points at:		
	Black Canyon City	600 acres	640 acres
	Interstate 17	9050 acres	9390 acres
	Spring Valley	140 acres	190 acres
	Sunset Point	3800 acres	5170 acres
Area containing wilderness characteristics		540 acres	740 acres
Black Canyon Trail	1969 Secretary of Interior Designated corridor	80 acres	80 acres
	1996 Proposed or Constructed Trail	0 miles	4.7 miles

The table above shows the revised corridor location in the PRMP/FEIS would contain 0.8 more miles of riparian habitat than the corridor in Alternative E of the DRMP/DEIS.

The revised corridor would contain 17.5 miles more vehicle routes, 15.9 miles more tertiary unpaved routes, which constitute the majority of routes used by recreationists.

The revised corridor would contain 60 acres more of category 2 desert tortoise habitat and 40 acres less of category 3 habitat.

The vegetation communities within each corridor are very similar in extent with small changes in acres for the revised corridor as compared with the corridor analyzed in Alternative E of the DRMP/DEIS.

VRM inventory conducted for the DRMP/DEIS placed the entire area in an inventory class II. Design limitations of most utilities that would be constrained to use utility corridors make them difficult or impossible to conform to VRM class II standards. Viewshed analysis was conducted using GIS data using observation points in four locations – Black Canyon City, Sunset Point Rest Area, along Interstate 17, and from the

community of Spring Valley. Comparison of the two corridors shows visibility of either corridor is similar from all locations, with slightly more acres of the revised corridor being visible from all locations than the Alternative E corridor. Visibility acres cannot be added to determine total visibility of each corridor because many places may be visible from more than one location.

Both corridors have some area that was inventoried as containing wilderness characteristics and would be allocated to maintain those characteristics in the Preferred Alternative of the DRMP/DEIS. The corridor described in the DRMP/DEIS encompasses 540 acres with these characteristics, whereas the revised corridor location would encompass 740 acres, 200 additional acres.

The Black Canyon Trail was dedicated by the Secretary of Interior in 1969. As a consequence of changing land jurisdiction, the actual location of the trail has deviated from the original secretarial order. The table above compares how much of both the secretarial trail corridor and the current trail location fall within each corridor. Each of the utility corridors contains the same number of acres of the Secretarial trail corridor, while the revised corridor contains 4.7 miles of current trail.

There are no existing or proposed Special Area Designations within either corridor proposal.

There are no known paleontological resources within either corridor proposal.

There is no Wild Horse or Burro Herd Management Areas within either corridor proposal.

No energy resources are known to occur within either of the corridor proposals. The primary purpose of a utility corridor is to support the transmission of energy from areas of production to consumers.

Impacts

Impact analysis conducted in the DRMP/DEIS pertaining to utility corridors in general and the Black Canyon Utility corridor specifically can be found in document sections:

- Impacts to lands and realty can be found in section 4.7.2,
- Impacts to soils in 4.8.2,
- Impacts to air quality in 4.9.2,
- Impacts to water quality in 4.10.2,
- Impacts on biological resources in 4.11.2,
- Impacts on cultural resources in 4.12.2,
- Impacts on paleontological resources in 4.13.2,
- Impacts on recreation resources in 4.14.2,
- Impacts on visual resources in 4.15.2,
- Impacts on rangeland management in 4.16.2,

- Impacts on minerals and energy resources in 4.17.2,
- Impacts on fire and fuels resources in 4.18.2,
- Impacts on wild horses and burros in 4.19.2,
- Impacts on travel management in 4.20.2,
- Impacts on wilderness characteristics in 4.21.2,
- Impacts on the social and economic conditions of the area in 4.22.1.

The revised corridor location would be in essentially the same area as the one in the preferred alternative of the DRMP/DEIS and the impacts would be essentially the same as described in Chapter 4. As a result, the overall cumulative effects of either corridor on resources and uses would be equivalent.

A comparison of these impacts is listed below.

- The corridor represents an improved location to long term management of major rights-of-way. The corridor allows for further development of utility projects to meet the demand of the large and rapidly growing Phoenix Greater Metropolitan Area, while confining those utility projects to an area where environmental impacts can be minimized.
- Development of utilities within either corridor could disturb soils in the same ways by creating increased erosion and reduced productivity. Impacts to soils would be essentially the same in either corridor proposal.
- Construction activities associated with development of utilities within either corridor could degrade air quality by contributing pollutants to the air and increasing the emission of fugitive dust. Removal of vegetation and exposure of the soil surface to wind erosion can also contribute to air quality degradation. Air quality impacts would be essentially the same in either corridor proposal.
- Water quality degradation is most likely to occur due to soil erosion increasing turbidity of streams. Water quality impacts would be essentially the same in either corridor proposal.
- The issuance of utility rights-of-ways and their development can cause destruction of wildlife habitat and, depending on the type of development, could degrade habitat quality through fragmentation and increased human activities. Both proposals would have no effect to any listed threatened, endangered, proposed or candidate species of plant or wildlife. No known listed species nor critical habitat for any listed species occurs within either corridor proposal. The riparian areas along Antelope Creek and Bumble Bee Creek are in both corridor alternatives so the potential impacts would be similar. The desert tortoise habitat at the southern end of the area is included in both corridors so the potential impacts would be similar. The total amount of wildlife habitat is essentially the same for both alternatives thus the potential impacts to wildlife habitat would be unchanged.
- Existing information indicates that there would be little difference between the two alternatives as they affect cultural resources. Adjustments were made to the corridor boundaries to exclude known sensitive cultural resources from the revised corridor. Neither alternative would constrain any proposed cultural resource related uses or management actions.
- Utility development can affect recreation by increasing or reducing access to areas and primarily through changing the characteristics of the landscape by creating new roads or other facilities. Both corridor proposals are in the same general area and would generally have the same impacts to recreation.

- Allocation of a utility corridor itself has no affect on the Black Canyon Trail.
- Development of utilities within either corridor has the same potential for degrading visual resources. The boundary of the revised corridor proposal was purposely kept west of the rim of Black Mesa so as to minimize the potential visibility of future utility developments from both Interstate 17 and the Sunset Point Rest Area, a popular scenic overlook for the area.
- Limitations of access to minerals along with the physical facilities associated with the utility can affect potential mineral extraction. However, since both corridors are in the same general area, impacts to mineral resources would be essentially the same.
- Development of utilities within a corridor has the potential to increase fire occurrence and have both short and long term effects to fuels. Because both corridors are in the same general area, containing the same fire potential and regimes, the impacts of either corridor would be the same.
- During construction and during the operation and maintenance of equipment and facilities, existing public access points may be closed or restricted and some new routes may be created. Either corridor would have essentially the same impacts to travel management.
- Development of utilities in areas that contain wilderness characteristics could potentially degrade the quality of those characteristics. Though the revised corridor location contains more acres of allocation to maintain wilderness characteristics, (740 acres versus 540 in the DRMP/DEIS corridor) potential impacts are essentially the same for each corridor.
- The revised corridor location potentially improves long term economic conditions in central Arizona by providing a more suitable location for future utility development than the corridor analyzed in the DRMP/DEIS. Limitations or constraints to energy transmission to the Greater Phoenix Metropolitan Area could have broad economic impacts. By relocating the corridor to be suitable for more types of utility development, those potential impacts could be avoided.
- Development of utility projects is often controversial in nearby communities for reasons of visibility of the utility facilities and potential safety issues both during construction and long term operations. Since both corridors are essentially the same in relation to communities in the area, the social affects of either corridor would be the same.

Cumulative Impacts

- Both corridor proposals would exclude future utility development from the monument, limiting cumulative impacts to outside the monument.
- Within either corridor, the potential cumulative impacts of utility development would be the same.
- At present, another known major action currently being analyzed in the area is the future expansion of Interstate 17 from 4 lanes (two each direction.) Several alternatives are being studied for this expansion. If the I-17 expansion proposal were to select lanes along Bumblebee Creek or in that valley area, they would be constructed in either corridor proposal which would create additive effect of the roadway and future utilities. This affect could degrade visual resources, recreation experiences, and could change the overall character of the area. However, the cumulative affects would be essentially the same for either corridor.

