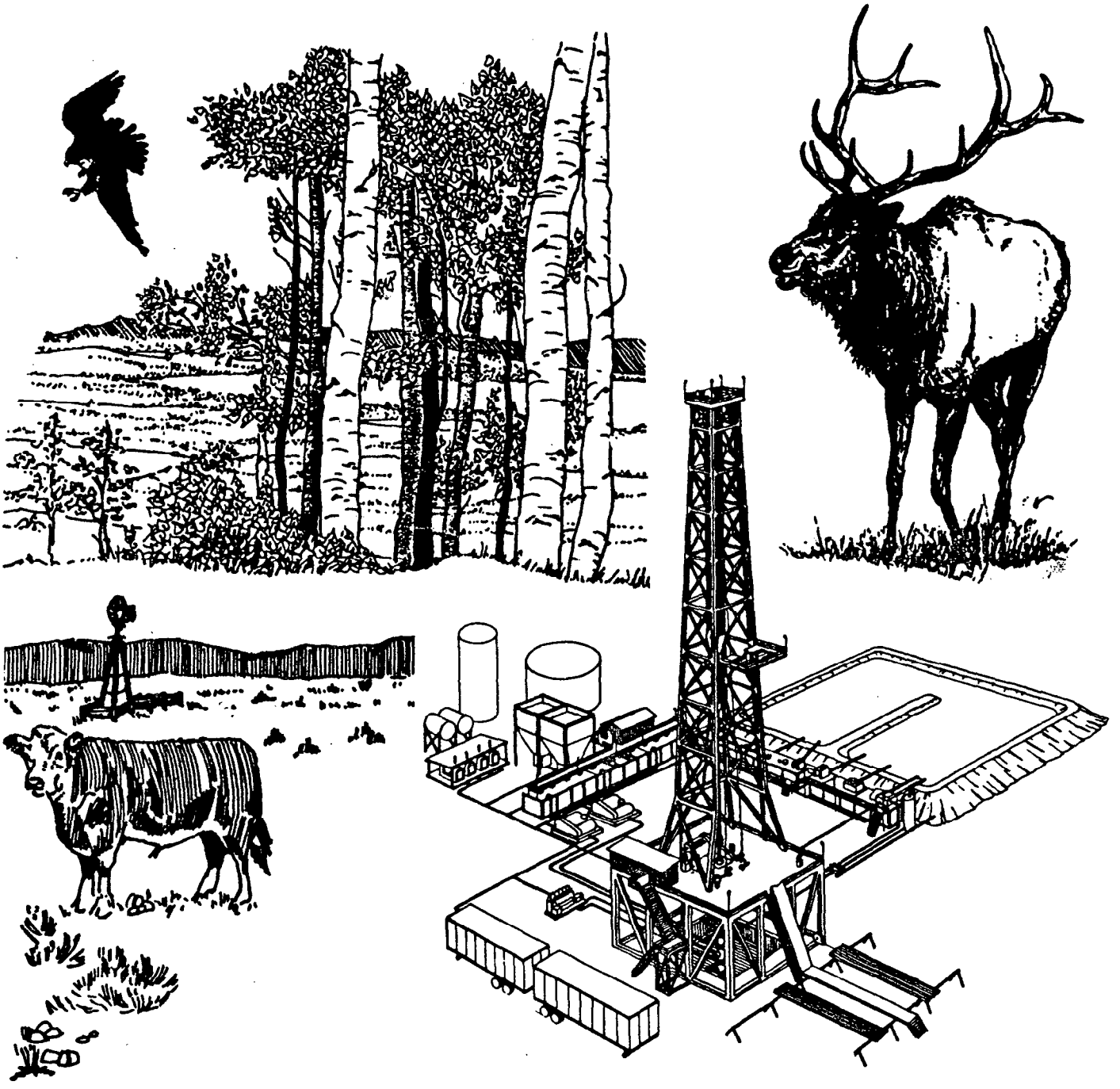
United States Department of the Interior

Bureau of Land Management
White River Resource Area
Craig District, Colorado

June 1996

White River Resource Area

Proposed Resource Management Plan and Final Environmental Impact Statement



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
CRAIG DISTRICT OFFICE
455 Emerson Street
Craig Colorado 81625

June 1996

Dear Reader:

Enclosed for your review is the White River Resource Area's Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP). The PRMP is a refinement of the Preferred Alternative and accompanying environmental consequences contained in the White River Resource Area, Draft Resource Management Plan and Environmental Impact Statement (DRMP). The PRMP reflects consideration given to public comments, corrections, and rewording for clarification. The PRMP is published in an abbreviated form and should be used in conjunction with the DRMP to facilitate review. The description of the affected environment and detailed descriptions of alternatives contained in the Draft RMP/EIS, as well as Appendixes C, through J, are referenced but not reproduced in the PRMP.

This proposed RMP has been reviewed for consistency with both the provisions of 43 CFR 4180 "Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration", and with a draft of the proposed Colorado Standards for public land health and Guidelines for Livestock Grazing management (S&G) being prepared by the three Colorado Resource Advisory Councils. This proposed RMP is consistent with both. It is likely, therefore, that the S&G when approved by the Secretary may be included in the RMP by making maintenance changes. Decisions in this proposed RMP will not likely need amendment. Opportunities to comment on the proposed Colorado S&G are available through the Front Range, Southwest and Northwest Resource Advisory Councils, and through a statewide environmental analysis (EA) process. Please contact any Colorado BLM office for more information.

At the end of the 30-day protest period, and after the Governor's consistency review, the PRMP, excluding any portion under protest, shall become final. Approval shall be withheld on any portion of the PRMP under protest until final action has been completed on such protest. The Record of Decision and the Approved Resource Management Plan will then be prepared.

We appreciate the time and effort you have given during your involvement in this process. Your continued participation is essential to achieve wise management of public lands and resources in the White River Resource Area.

Sincerely,

Mark T. Morse

Mark Morse
District Manager

WHITE RIVER RESOURCE AREA
PROPOSED RESOURCE MANAGEMENT PLAN
and
FINAL ENVIRONMENTAL IMPACT STATEMENT

JUNE 1996

Prepared by:
United States Department of the Interior
Bureau of Land Management
Colorado State Office
Craig District
White River Resource Area

MAY 2 9 1996

Approved by: _____
State Director, Colorado

_____
Date

WHITE RIVER RESOURCE AREA
PROPOSED RESOURCE MANAGEMENT PLAN
and
FINAL ENVIRONMENTAL IMPACT STATEMENT

Draft ( ) **Final (X)**

Lead Agency: The United States Department of the Interior, Bureau of Land Management.

Type of Action: **Administrative (X)** Legislative ( )

Abstract

This is the Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP) for the White River Resource Area.

This document responds to public comments received on the White River Resource Area, Draft Resource Management Plan and Environmental Impact Statement (DRMP). The PRMP also corrects errors in the DRMP identified through the public comment process and internal BLM review. The Proposed Management Plan presents a refined and modified version of the Preferred Alternative, and accompanying Environmental Impact Statement contained in the DRMP.

This document is published in abbreviated form and must be used in conjunction with the DRMP, which was published in October 1994, to facilitate review.

For further information on this PRMP, contact Bill Hill, RMP Team Leader, Bureau of Land Management, PO Box 928, Meeker, Colorado 81641; telephone number (970) 878-3601.

Protests to this PRMP must be received within 30 days of the date of publication of the Notice of Availability by the U.S. Environmental Protection Agency. That notice is published in the Federal Register. A news release will also be provided to local newspapers in Craig, Meeker, Rangely, and Grand Junction, Colorado that will identify the protest dates.

PROTEST PROCEDURES

The resource management planning process provides for an administrative review to the BLM Director if you believe the approval of the Proposed Resource Management Plan and Environmental Impact Statement (PRMP) would be in error (See 43 CFR 1610.5-2). Careful adherence to these guidelines will assist in preparing a protest that will assure the greatest consideration to your point of view.

Only those persons or organizations who participated in the planning process leading to this PRMP may protest. If our records do not indicate that you had any involvement in any stage in the preparation of the PRMP, your protest will be dismissed without any further review.

A protesting party may raise only those issues which he/she submitted for the record during the planning process. New issues raised in the protest period should be directed to the White River Resource Area Manager for consideration in plan implementation, as a potential plan amendment, or as otherwise appropriate.

The period for filing a plan protest begins when the Environmental Protection Agency publishes in the *Federal Register,* its Notice of Availability of the Final Environmental Impact Statement containing the PRMP. The protest period extends for 30 days. There is no provision for an extension of time. To be considered timely, your protest must be postmarked no later than the last day of the protest period. Also, although not a requirement, we suggest that you send your protest by certified mail, return receipt requested.

Protests must be in writing to: Director (480)
Bureau of Land Management
Resource Planning Team
1849 "C" Street, NW
Washington, D.C. 20240

To be considered complete, your protest must contain, at a minimum, the following information:

1. The name, mailing address, telephone number, and interest of the person filing the protest.
2. A statement of the issue or issues being raised.
3. A statement of the part or parts of the PRMP being protested. To the extent possible, this should be done by reference to specific pages, paragraphs, sections, tables, maps, etc., included in the document.
4. A copy of all documents addressing the issue or issues that you submitted during the planning process, or a reference to date the issue or issues were discussed by you for the record.
5. A concise statement explaining why the Colorado BLM State Director's proposed decision is believed to be incorrect. *This is a critical part of your protest.* Take care to document all relevant facts. As much as possible, reference or cite the planning documents, environmental analysis documents, or available planning records (i.e., meeting minutes or summaries, correspondence, etc.). A protest which merely expresses disagreement with the proposed decisions, without any data, will not provide us with the benefit of your information and insight. In this case, the Director's review will be based on the existing analysis and supporting data.

At the end of the 30-day protest period and after the Governor's consistency review, the PRMP, excluding any portions under protest, will become final. Approval will be withheld on any portion of the PRMP under protest until final action has been completed on such protest.

TABLE OF CONTENTS

CHAPTER ONE
SUMMARY OF THE PROPOSED RESOURCE MANAGEMENT PLAN

INTRODUCTION

The PRMP/Final EIS is an abbreviated document and must be used in conjunction with the Draft RMP/EIS in order to facilitate review. The following sections of the Draft RMP/EIS will not be repeated in this document: **Chapter 2, Description of Alternatives A, B, C, and D; Chapter 3, Affected Environment; Appendix D- Range Management; Appendix E- Management of Wilderness Study Areas; Appendix F- Management of Acecs; Appendix G- ROS settings; Appendix H- Motorized Vehicle Travel Management; Appendix I- Land Ownership Adjustments; and Appendix J- Wild and Scenic River Study Report.**

This Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP) describes and analyses the future management proposed for lands administered by the Bureau of Land Management in the White River Resource Area for the next 20 years. The decisions described herein apply only to BLM administered surface and mineral estate. The PRMP decisions affect a total of 1,455,900 acres of BLM surface and 365,000 acres of split mineral estate. Map 1-1 depicts the lands affected by this PRMP.

Towards the end of development of this document, the term and concept of ecosystem management was being developed by the BLM and other entities. Since no specific guidance was available on how to incorporate these ideas into planning documents of this scope, the decision was made to complete this document as planned and incorporate ecosystem philosophies into the activity planning stage that will follow approval of the plan. The discussions in each of the resource sections were reviewed for content and compared to the initial concepts being developed for ecosystem management. The end result of the review was that the proposed management plan met all the standards of the guidance being developed. Consequently, while ecosystem management is not discussed as a management philosophy in this plan, the principles behind the policy being developed are fully analyzed. The decisions developed in this document would assist the BLM in coordinating efforts to sustain the lands health, diversity, and productivity for the use and enjoyment of present and future generations. This will partially be accomplished through the development of partnerships, implementing a coordinated resource management approach to activity planning, and developing common management goals between other adjacent land owners and interested parties.

A brief summary of the proposed plan follows. Please refer to Chapter Three of this document for a detailed description of the specific Resource Management Plan decisions. Table 1-1 compares the Proposed Management Plan with the four Alternatives (A, B, C, and D) contained in the White River Resource Area Draft Resource Management Plan and Environmental Impact Statement (DRMP) that was published in October 1994. The Proposed RMP is a refinement of the Preferred Alternative (Alternative D) described in the DRMP.

PROPOSED MANAGEMENT DECISION SUMMARIES

AIR QUALITY

Existing air quality would be maintained. Activities and projects would comply with all air quality regulations.

SOIL AND WATER MANAGEMENT

Soil and water resources would continue to be monitored to define problem areas and the effectiveness of applied Conditions of Approval. Water rights would be applied for where appropriate. All actions authorized would comply with federal and state water quality standards and regulations.

MINERALS MANAGEMENT

Public lands would continue to be identified to ensure mineral resources are available for exploration, leasing and development. All permitted activities would be monitored to assure compliance with lease stipulations and mitigating requirements (conditions of approval), developed in an environmental analysis. All actions would conform to the laws and regulations associated with mineral programs.

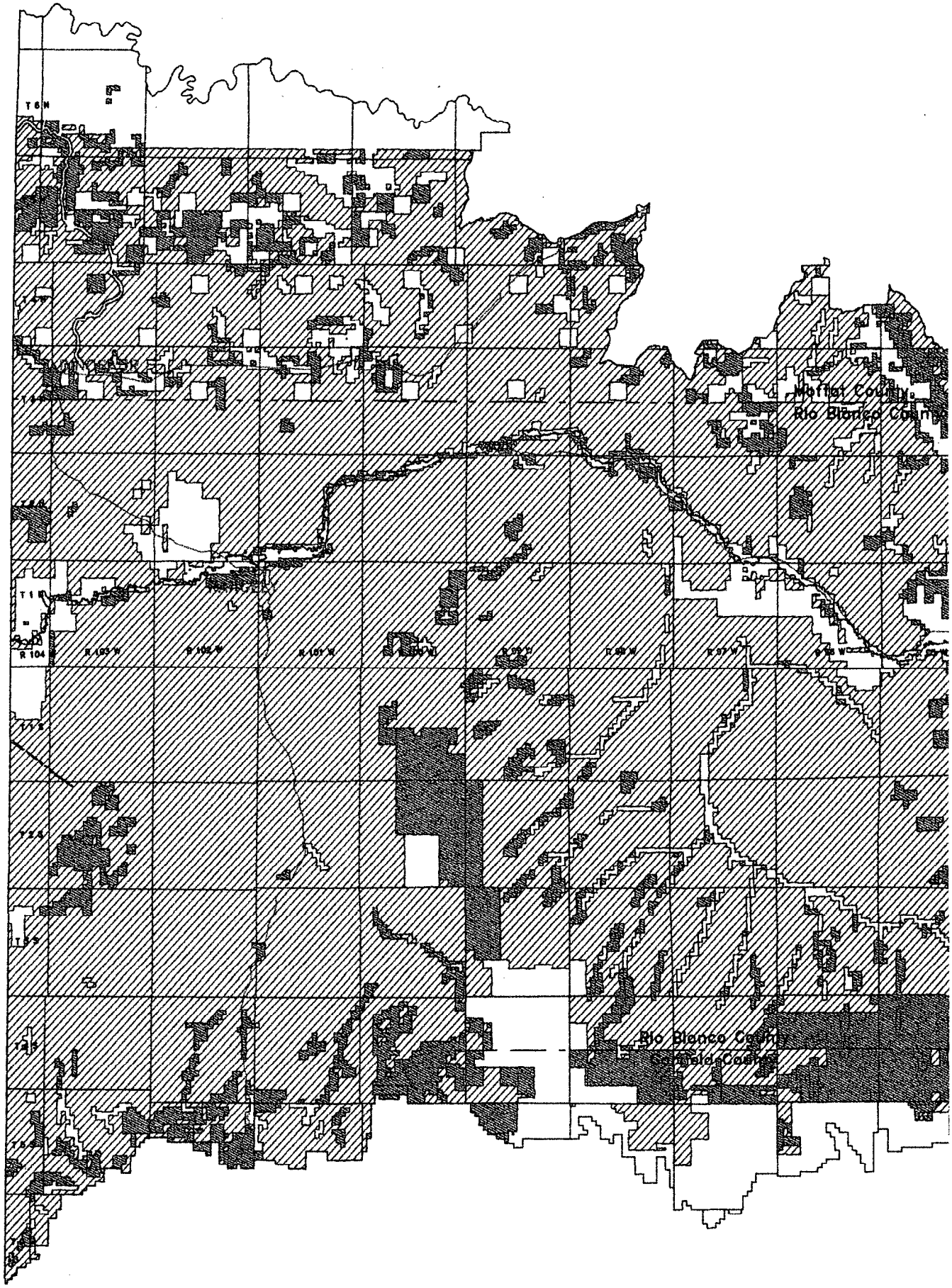
HAZARDOUS MATERIALS MANAGEMENT

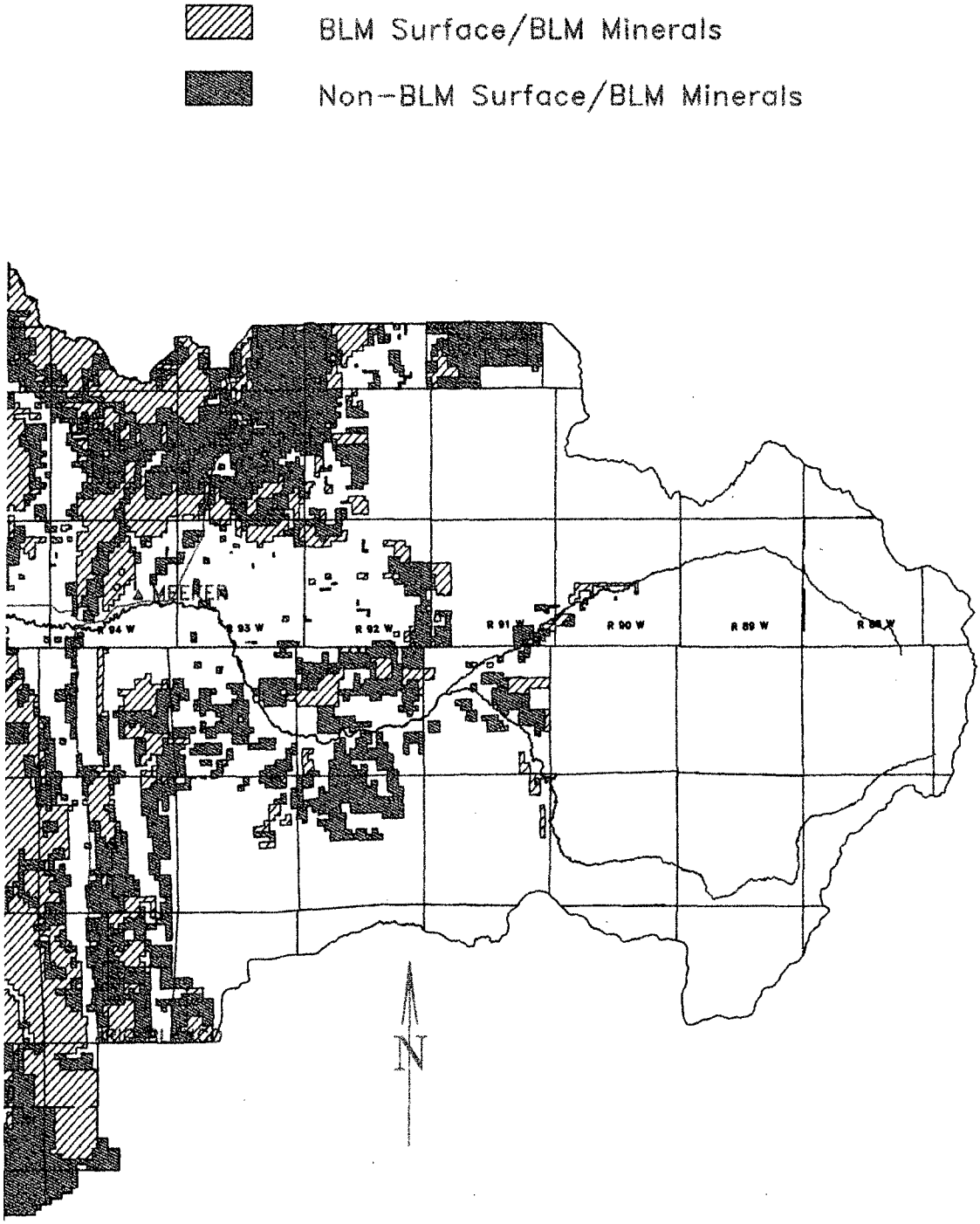
Public lands would be protected from contamination by hazardous materials and provide for removal/remediation in the event of contamination. Up-to-date inventories would be kept on applicable hazardous materials. The Resource Area would closely coordinate with appropriate local emergency planning committees and officials. All activities pertaining to hazardous substances, would comply with all applicable federal and state environmental laws.

VEGETATION MANAGEMENT

Vegetation resources would be managed to enhance and maintain sustainability for ecological condition within plant communities. Specific desired plant communities (DPC) goals would be identified and considered during activity plan development. Ecological status would be determined using BLM ecological site inventory procedures. Noxious weeds would be managed to reduce negative impact to environment, aesthetics, and economics. Riparian, sensitive plants and remnant vegetation associations would be inventoried and protected in accordance with RMP objectives, and in cooperation with Colorado Natural Area programs and other interested parties.

MAP 1–1. SURFACE AND SUBSURFACE BLM ADMINISTRATION




BLM Surface/BLM Minerals
Non-BLM Surface/BLM Minerals
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 1-1

FORESTRY MANAGEMENT

Timber and woodlands would be managed to maintain productivity, extent, structure and enhancement of other resources. All permitting for harvests would be subject to BLM handbooks and Conditions of Approval listed in Appendix C.

LIVESTOCK GRAZING MANAGEMENT

Livestock grazing would be managed as described in 1981 Rangeland Program Summary. Forage allocations from the Summary would continue until sufficient data exists to require their modification. Monitoring studies would continue on 81 allotments to evaluate livestock grazing levels. Range improvements would continue to be used to improve rangeland conditions. Integrated Activity Plans, including NEPA analysis, would be developed for all allotments within the activity plan boundaries.

WILD HORSE MANAGEMENT

Wild horses in the Piceance-East Douglas Herd Management Area would be managed to maintain 95-140 animals. Wild horses would be removed from West Douglas and North Piceance Herd Areas. The wild horse herds would be managed to improve both the short and long term range condition. Monitoring would continue to be conducted so that herd numbers could be maintained in accordance with the Wild Horse and Burro Act of 1971.

WILDLIFE MANAGEMENT

Big game forage allocations would remain the same as specified in the 1981 Grazing Management Environmental Impact Statement and subsequent Rangeland Program Summary. Rangeland and grazeable woodlands that are in a downward trend would be reevaluated for forage reallocations. Developing water sources, vegetation manipulations and animal redistribution techniques would normally be integrated with range improvement or riparian restoration activities. Monitoring would be conducted to determine which rangelands are healthy, at risk, and/or not functioning properly.

Existing information on raptor nest locations would be verified and supplemental surveys would be conducted on a project driven basis. Protective stipulations and conditions of approval, determined through NEPA process, would be applied to project proposals and authorizations.

Habitat conditions for native grouse populations would be restored, maintained and enhanced. Habitat management guidelines would be applied during the NEPA process, and projects implemented through approved activity plans.

Fisheries would be improved, recovered and maintained to increase recreation fishing opportunities. Impacts by projects and authorizations would be assessed during the NEPA process, with appropriate mitigation applied. Mitigation would not violate valid existing rights.

Recovery of special status species (i.e. candidate, listed or proposed) would continue to be pursued to ultimately remove these species from special status consideration. The Endangered Species Act (USFWS) process would continue to be implemented with appropriate conditions of approval applied on all authorizations and permits.

WILDERNESS MANAGEMENT

Six Wilderness Study Areas (WSA) would be managed so as not to impair their suitability until they are formally designated or released as wilderness by Congress. Two of the WSAs not recommended for wilderness (Black Mountain, Windy Gulch), once released would receive no special management. The third, (Oil Spring Mountain) would be designated as a ACEC once released. Wilderness Management Plans would be written when Congress formally designates wilderness.

WILD AND SCENIC RIVER MANAGEMENT

All river and stream segments in the White River Resource Area would be dropped from further consideration and management as WSRs, once the RMP Record of Decision has been signed.

VISUAL RESOURCE MANAGEMENT

All public lands would be managed to protect the quality of the scenic or visual resource values of these lands. Proposed VRM classes would become effective after signing of RMP and Record of Decision. Impairment of visual resources would be protected by applying stipulations and/or conditions of approval for all authorizations and permits.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Areas identified as having importance for historic, cultural, scenic and natural values, would continue to be protected. Management would be as described in the Draft RMP, Appendix F. Basic protection stipulations would be either controlled surface use or timing limitation stipulations. Integrated activity plans would replace existing ACEC activity plans, once completed.

RECREATION MANAGEMENT

The entire White River Resource Area would be managed as the White River Extensive Recreation Management Area (ERMA). The area would be managed custodially to provide unstructured recreation opportunities. Specific management would be developed in project plans, or integrated activity plans, following approval of RMP. Resources would be managed and monitored, to ensure protection of sensitive resources, and continued availability of recreation opportunities and experiences (i.e. trails, cultural interpretation, watchable wildlife, geology, paleontology, etc.).

MOTORIZED VEHICLE TRAVEL MANAGEMENT

Motorized vehicle travel would be managed to provide for public needs and demands, protect natural resources, safety to users, and minimize conflicts between various user groups. During the "interim", prior to development of a Travel Management Plan, no areas within the Resource Area would be designated as open except to winter snowmobile travel. The development of a Travel Management Plan would be a public process and would evaluate road/trail status, determine where, and if, roads and trails would be closed, identify needs such as construction of motorized or non-motorized trails, or other changes as necessary. Under the interim management, approximately 922,000 acres would have a limitation from October 1 through April 30 to existing roads and trails. These lands would be

available for cross country travel the remainder of the year, as long as resource damage did not occur. About 326,985 acres would have a limitation to confine travel to existing roads, trails, or ways year round in order to protect sensitive resources. Travel would be limited to designated roads and trails on approximately 115,690 acres. Approximately 91,000 acres would be closed to motorized vehicle travel.

CULTURAL RESOURCE MANAGEMENT

Cultural resources would continue to be identified, protected and preserved in accordance with existing laws and regulations. Cooperative Agreements would continue to be pursued, with qualified entities, for research and or/educational use of cultural resources. A patrol/protection plan would be established, and implemented, for cultural resources, designating areas within .5 miles of all roads and trails, county roads and State highways, for protection.

PALEONTOLOGICAL RESOURCE MANAGEMENT

Inventories would be completed for locations of significant fossil locations, and appropriate fossil bearing formations would be identified (Class I). Paleontological resources would be made available for scientific and educational purposes. Significant fossil resources would continue to be protected on public lands. All authorizations would comply with laws and regulations.

LANDS AND REALTY MANAGEMENT

Public lands would be made available for siting of public and private facilities through issuance of permits and applicable land use authorizations. NEPA documentation would be prepared for all applications and mitigating measures applied to protect public lands. Land use authorizations would be denied in exclusion areas, except on short term permits involving no development.

Acquisitions of non-Bureau lands would be pursued through exchange, purchase or donation where it would enhance BLM objectives and improve efficiency in public and private land management.

Access would continue to be pursued where it would enhance use of public lands and resources. All access plans would be analyzed through necessary NEPA documentation.

Elimination of unnecessary segregation of public lands would be pursued to provide protection to at risk resource values as well as better land management.

Eligible waterpower and reservoir sites would be protected from adverse affects to value of the sites.

FIRE MANAGEMENT

Fire would be managed to protect public health and safety, and property, as well as allowing it to carry out an important ecological function. Management would include both prescription fire and fire suppression activities. A Fire Management Activity Plan would be completed following RMP approval that would establish the priorities, restrictions and/or constraints, for the program.

COMPARISON TABLE OF THE PRMP AND ALL ALTERNATIVES

Table 1-1 compares the management components for each resource or resource use contained within each alternative. In many cases the proposed management is the same as identified in one of the other alternatives.

Table 1-1 Summary of Management Actions and Impacts by Alternative and Proposed Management

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Surface Stipulations and Conditions of Approval (COAs) - Surface stipulations to protect sensitive resources, developed through the *White River Resource Area Oil and Gas Umbrella Environmental Assessment* (EA), would continue to be attached to **new** leases for *oil and gas*, where applicable. Surface stipulations in the oil and gas EA would not be attached to **existing** leases. For **existing** leases, mitigation developed through the NEPA process would be attached to applications for permit to drill (APDs), where applicable, subject to valid existing rights. This mitigation is referred to as conditions of approval (COAs). Surface stipulations in the oil and gas EA **would not be** attached to permits for *other surface-disturbing activities*. Mitigation developed through the NEPA process continue to be attached to permits for *other-surface-disturbing activities*, where applicable. Surface stipulations in the oil and gas EA are (1) no surface occupancy (NSO) - 19,750 acres, (2) controlled surface use (CSU) - 831,380 acres, and timing limitation (TL) - 591,860 acres. Surface stipulations in the oil and gas EA would protect resources of concern from *oil and gas development* only. Mitigation developed through the NEPA process would protect resources from development of **existing** oil and gas leases and from *other surface-activities* but not as effectively as if applied through the RMP process.	**Surface Stipulations and Conditions of Approval (COAs)** - Surface stipulations developed through this RMP would supersede those in the oil and gas EA. RMP surface stipulations would be attached to **new** oil and gas leases. RMP surface stipulations would not be attached to **existing** leases. For **existing** leases, mitigation developed through the NEPA process would be attached to applications for permit to drill (APDs), where applicable, subject to valid existing rights. This mitigation is referred to as conditions of approval (COAs). Surface stipulations in the RMP **would be** attached to permits for *other surface-disturbing activities*. Mitigation developed through the NEPA process also would be attached to these permits, where applicable. Surface stipulations in the RMP are (1) NSO - 276,040 acres, (2) CSU - 1,050,120 acres, and TL -331,850 acres. Surface stipulations in the RMP would protect resources of concern from *oil and gas development and also from other types of surface-disturbing activities*. Mitigation developed through the NEPA process would provide additional, more effective protection to resources of concern.	**Surface Stipulations and Conditions of Approval (COAs)** - Same as Alternative B except for the number of acres subject to RMP surface stipulations. Surface stipulations are (1) NSO -1,125,720 acres, (2) CSU - 1,528,230 acres, and TL - 1,631,040 acres.	**Surface Stipulations and Conditions of Approval (COAs)** - Same as Alternative B except for the number of acres subject to RMP surface stipulations. Surface stipulations are (1) NSO - 148,450 acres, (2) CSU - 1,228,280 acres, and TL -959,000 acres.	**Surface Stipulations and Conditions of Approval (COAs)** - Same as Alternative B Except for the number of acres subject to RMP surface stipulations. Surface stipulations are (1) NSO - 143,083 acres, (2) CSU - 725,339 acres (3) TL - 912,455 acres. Overlap commonly occurs between these three types of stipulations. Approximately 1,302,200 acres are affected by this category.
Air Quality - Compliance with applicable local, state, and federal air quality laws, regulations, and implementation plans is required. Compliance would minimize emissions from primary emission sources. No areas would be identified near the Dinosaur National Monument (DNM) for State of Colorado visibility impairment analysis prior to the State issuing emissions permits. The potential to impair visibility from incremental development near the DNM Monument would be greater than that under the other alternatives.	**Air Quality** - Same as Alternative A except 13 areas near the DNM would be identified for State of Colorado visibility impairment analysis prior to the state issuing emissions permits on BLM lands. The likelihood of impairing visibility from incremental development near the DNM would be reduced.	**Air Quality** - Same as Alternative B.	**Air Quality** - Same as Alternative B.	**Air Quality** - Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Soils - Surface stipulations developed in the Piceance Basin RMP specifically for soils and other surface stipulations in the oil and gas EA would be attached to *new oil and gas leases*, where applicable. Surface stipulations specifically for soils: 7,200 acres NSO on Baxter/Douglas Pass area, 16,490 acres CSU in soils management priority areas (MPAs).	**Soils** - No surface stipulations developed specifically for soils. Eliminating the soils NSO stipulation on Baxter/Douglas Pass and soils MPA would increase soil erosion in those areas from 1 ton/acre/year to 8 tons/acre/year.	**Soils** - Surface stipulations developed in this RMP specifically for soils and for other resources would be attached to *all surface-disturbing activities*, including new oil and gas leases, where applicable. RMP stipulations specifically for soils: 827,630 acres NSO and 52,000 acres CSU	**Soils** - Same as Alternative C except for the number of acres subject to RMP surface stipulations. Surface stipulations developed specifically for soils: 36,325 acres NSO and 536,000 CSU)	**Soils** - Same as Alternative C, except that the number of acres subject to surface stipulations would be as follows, (1) NSO - 35,785, (2) CSU - 536,260.
Surface Water - Compliance with state nonpoint source management plan, state water quality standards, and *Clean Water Act* is required. Watershed activity plans would be developed for 15 areas totaling 589,560 acres. During low flows, increased sediments would be most apparent within the Piceance Creek, Douglas Creek and the White River drainages because of the location of the energy activities.	**Surface Water** - Same as Alternative A except watershed activity plans would be developed for 7 areas totaling 80,910 acres.	**Surface Water** - Same as Alternative A.	**Surface Water** - Same as Alternative A.	**Surface Water** - Same as Alternative A.
Groundwater - Some cumulative degradation or alteration of groundwater would probably occur from underground disturbing activities, but most of the disturbances would be localized.	**Ground Water** - Same as Alternative A.	**Ground Water** - Same as Alternative A.	**Ground Water** - Same as Alternative A.	**Ground Water** - Same as Alternative A.
Water Rights - BLM would continue to secure water rights from springs and/or water developments by filing for water rights under current Colorado Law. This would meet the resource area's current and projected future demands for water except for during drought years.	**Water Rights** - Same as Alternative A.	**Water Rights** - Same as Alternative A .	**Water Rights** - Same as Alternative A.	**Water Rights** - Same as Alternative A.
Oil and Gas - Oil and Gas leasing would be subject to surface stipulations developed in the oil and gas EA. (see p. S-2) Surface stipulations would increase costs of extraction but would not prevent recovery. Drilling an estimated 50 wells per year over the next 10 to 15 years would yield approximately 86.7 million cubic feet of gas and produce approximately 11.5 million barrels of crude oil. Even though exploration would continue at the above rate, production would decrease approximately 7 to 10 percent yearly.	**Oil and Gas** - Same as Alternative A except oil and gas leasing would be subject to surface stipulations developed in this RMP (see p. S-2).	**Oil and Gas** - Same as Alternative B except for the number of acres subject to RMP surface stipulations (see p. S-2).	**Oil and Gas** - Same as Alternative B except for the number of acres subject to RMP surface stipulations (see p. S-2).	**Oil and Gas** - Same as Alternative B, except for number of acres subject to surface stipulations, (1) NSO - 143,083 acres, (2) CSU - 725,339 acres, (3) TL - 912,455 acres. Approximately 1,721,444 acres are available for leasing with 168,486 acres available for lease with standard terms and conditions. 83,720 acres are not available for lease.
Oil Shale - Oil shale decisions developed through the *Piceance Basin Resource Management Plan and Environmental Impact Statement* would be carried forward into this RMP. Oil shale leasing would be subject to surface stipulations developed in this RMP. Surface stipulations would not make lands unavailable for leasing and development but would likely increase mining costs. The costs would depend on the restrictions necessary to mitigate impacts to an acceptable level and the distance to relocate operations. Making 223,860 acres available for oil shale leasing and development could produce an estimated 19 to 25.5 billion barrels of kerogen using today's technology.	**Oil Shale** - Same as Alternative A except for the number of acres subject to RMP surface stipulations.	**Oil Shale** - Same as Alternative A except for the number of acres subject to RMP surface stipulations.	**Oil Shale** - Same as Alternative A except for the number of acres subject to RMP surface stipulations	**Oil Shale** - Same as Alternative A except for the number of acres subject to surface stipulations, (1) NSO - 12,040 acres, (2) CSU - 99,880 acres, (3) TL - 83,410 acres. Approximately 223,860 acres would be available for leasing. An additional 70,820 acres would be available for multi-mineral leasing.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Sodium - Sodium decisions in Piceance Basin RMP would be carried forward into this RMP. Sodium leasing would be subject to surface stipulations in this RMP. Surface stipulations would not make lands unavailable for leasing and development but would likely increase mining costs. Making 93,210 acres available for sodium leasing could produce approximately 20.2 billion tons of sodium.	**Sodium** - Same as Alternative A except for the number of acres subject to RMP surface stipulations.	**Sodium** - Same as Alternative A except for the number of acres subject to RMP surface stipulations.	**Sodium** - Same as Alternative A except for the number of acres subject to RMP surface stipulations.	**Sodium** - Same as Alternative A except for acres subject to lease and acres subject to surface stipulations. 106,760 acres would be available for sodium only leasing, and 70,820 acres would be available for multi-mineral leasing.(1) NSO - 5,596 acres (2) CSU - 29,122 acres (3) TL - 62,760 acres
Coal - Leasing decisions made in the *Coal Amendment to the White River Management Framework Plan* would be carried forward into this RMP. Coal leasing would be subject to surface stipulations in this RMP. NSO stipulations could preclude surface mining. They would not preclude underground mining but would increase mining costs. The total NSO applies to 2,700 acres (2 percent) of land available for coal. Making 151,170 acres available for further coal leasing would satisfy existing and anticipated future demand for this planning period.	**Coal** - Same as Alternative A except for the number of acres subject to RMP surface stipulations. The total NSO applies to 9,300 acres (6 percent) of land available for coal.	**Coal** - Same as Alternative A except for the number of acres subject to RMP surface stipulations. The total NSO applies to 57,090 acres (38 percent) of land available for coal.	**Coal** - Same as Alternative A except for the number of acres subject to RMP surface stipulations. The total NSO applies to 21,690 acres (14 percent) of land available for coal.	**Coal** - Same as Alternative A except for the number of acres subject to surface stipulations. Lands available for coal leasing - 150,570 acres, (1) NSO - 21,690 acres, (2) CSU - 78,190 acres, (3) TL - 107,070 acres.
Mineral Materials - RMP surface stipulations would not affect the supply of mineral materials or potential operators because suitable material is available within reasonable distances to markets.	**Mineral Materials** - Same as Alternative A.	**Mineral Materials** - Same as Alternative A.	**Mineral Materials** - Same as Alternative A.	**Mineral Materials** - Lands (including split estate) available for mineral material disposal amounts to approximately 1,596,627 acres, of which 725,339 acres have CSU stipulations and 912,455 acres have timing limitations stipulations.
Locatable Minerals - The potential for locatable mineral development in the White River Resource Area is very low. The possibility of mining claim development is considered to be nonexistent.	**Locatable Minerals** - Same as Alternative A.	**Locatable Minerals** - Same as Alternative A.	**Locatable Minerals** - Same as Alternative A.	**Locatable Minerals** - Same as Alternative A.
Plant Communities - Managing to achieve desired plant communities would result in the following ecological site classifications (acres): Potential natural community (PNC) - 212,050; late-seral communities -16,490; mid-seral communities - 399,270; early-seral communities - 96,520; unclassified - 131,540	**Plant Communities** - Managing to achieve desired plant communities would result in the following ecological site classifications (acres): PNC - 215,900; late-seral communities - 628,060; mid-seral communities - 383,840; early-seral communities - 96,520; unclassified - 131,540.	**Plant Communities** - Managing to achieve desired plant communities would result in the following ecological site classifications (acres): PNC - 217,090; late-seral communities - 631,630; mid-seral communities - 379,090; early-seral communities - 96,520; unclassified - 131,540 acres.	**Plant Communities** - Ecological site classifications would be the same as in Alternative C.	**Plant Communities** - Ecological site classifications would be the same as in Alternative C.
BLM lands would be revegetated with non-native plant species on the following plant community acreage: Pinyon/juniper - 69,075; sagebrush rangelands - 39,180; mountain shrub - 9,200; other - 3,100	Revegetation acres with nonnative plant species in: pinyon/juniper - 51,500 acres; sagebrush rangelands - 38,730 acres; mountain shrub - 9,500 acres; other plant communities 3,100 acres.	Revegetation with nonnative plant species - same as Alternative B.	Revegetation with nonnative plant species - same as Alternative B.	Revegetation with nonnative plant species - same as Alternative B.
Forage allocated in the 1981 *Grazing Management Environmental Impact Statement* (EIS) animals would not be reallocated resource area wide. Forage allocations would be reevaluated following completion of the RMP and reallocated, if necessary, to accommodate existing wildlife numbers, which have increased since completion of the grazing EIS.	Forage allocated in the grazing EIS would not be reallocated resource area wide. Forage allocations would be reevaluated during preparation of integrated activity plans (IAPs) and reallocated, if necessary, to accommodate *existing* wildlife numbers, which have increased since allocations were made in the grazing EIS.	Forage allocated in the grazing EIS would not be reallocated resource area wide. Forage allocations would be reevaluated during preparation of integrated activity plans (IAPs) and reallocated, if necessary, to accommodate proposed CDOW big game objectives, which would result in increases from the grazing EIS.	Forage allocation -same as Alternative C.	Forage allocations - same as Alternative C.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Noxious and Problem Weeds - Surface disturbance associated with oil and gas development, on- and off-road motorized vehicle travel, oil shale development, additional access, and woodland and timber management would provide potential sites for noxious and problem weed infestations that could ultimately compromise ecosystems.	**Noxious and Problem Weeds** - Same as Alternative A except: Limiting vehicle travel to *existing roads and trails* would reduce the formation of new trails and thus the potential for noxious and problem weed infestations.	**Noxious and Problem Weeds** - Same as Alternative A except: Five weed-free zones would be designated where special precautions would be taken to prevent the spread of noxious and problem weeds. Special precautions in weed-free zones and limiting motorized vehicle travel to *designated roads and trails* would significantly reduce the potential for noxious and problem weed infestations.	**Noxious and Problem Weeds** - Same as Alternative C.	**Noxious and Problem Weeds** - Same as Alternative C.
Riparian - An estimated 50 to 75 percent of riparian habitats on BLM lands would be in non-functioning condition. An estimated 85 percent of riparian habitats on BLM lands would be in stable condition.	**Riparian** - An estimated 25 percent of riparian habitats on BLM lands would not have sufficient vegetation cover to function properly. An estimated 75 percent of riparian habitats on BLM lands would improve to proper functioning condition.	**Riparian** - Same as Alternative B.	**Riparian** - Same as Alternative B.	**Riparian** - Same as Alternative B.
T/E and Special Status Plants - T/E and special status plants, although *protected by law*, could be lost accidentally from development or recreation on or adjacent to BLM lands occupied by T/E plants and by vehicles driving off existing roads and trails. Any significant loss of two federally-listed plant species that are not known to occur any where else in the world could jeopardize their existence.	**T/E and Special Status Plants** - Same as Alternative A except motorized vehicles would be limited to existing roads and trails. This would reduce loss of T/E and special status plants. Loss of plants could still occur accidentally from development and from noncompliance with off-road vehicle restrictions.	**T/E and Special Status Plants** - Same as Alternative B.	**T/E and Special Status Plants** - Same as Alternative B.	**T/E and Special Status Plants** - Same as Alternative B except that motorized vehicle travel would be limited to designated roads and trails with ACEC's. Approximately 45,400 acres would have NSO stipulations.
Sensitive Plants and Remnant Vegetation Associations (RVAs) - An NSO stipulation for *known* plant habitat would protect sensitive plants and RVAs, but plants could be lost accidentally from development and by vehicles driving off existing roads and trails.	**Sensitive Plants and RVAs** - Same as Alternative A except motorized vehicles would be limited to existing roads and trails. This would reduce loss of T/E and special status plants. Loss of plants could still occur accidentally from development and by noncompliance with off-road vehicle restrictions.	**Sensitive Plants and RVAs** - Same as Alternative B.	**Sensitive Plants and RVAs** - Same as Alternative B.	**Sensitive Plants and RVAs** - Same as Alternative B except approximately 4,200 acres would be protected with NSO stipulations. Motorized vehicle travel would be limited to designated roads and trails within ACECs and existing roads and trails in habitat outside ACECs.
Timberlands - A total of 19,190 acres would be available for harvest. At a 100-year rotation rate, the annual allowable harvest would be 190 acres/year.	**Timberlands** - A total of 1,450 acres would be available for harvest. At a 100-year rotation rate, the annual allowable harvest would be 14.5 acres/year.	**Timberlands** - A total of 400 acres would be available for harvest. At a 100-year rotation rate, the annual allowable harvest would be 4 acres/year. No harvest program would be pursued.	**Timberlands** - Same as Alternative C.	**Timberlands** - A commercial timber harvest would not be developed for fir, spruce, and aspen. Aspen would be available for personal use. Coal Oil Rim and Moosehead Mtn. would be designated as ACECs to protect timber land.
Woodlands - A total of 177,150 acres would be available for commercial harvest. At a 100-year rotation rate, the annual allowable harvest would be 890 acres/year.	**Woodlands** - A total of 146,730 acres would be available for commercial harvest. At a 100-year rotation rate, the annual allowable harvest would be 240 acres/year.	**Woodlands** - A total of 27,600 acres would be available for commercial harvest. At a 100-year rotation rate, the annual allowable harvest would be 45 acres/year.	**Woodlands** - Same as Alternative C.	**Woodlands** - Same as Alternative C.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Livestock Grazing - Decisions made through the 1981 *Grazing Management Environmental Impact Statement* would be carried forward into this RMP. Forage allocations would not change. Existing and proposed surface disturbance would result in a cumulative forage loss of 11,500 AUMs. A total of 6,670 AUMs currently allocated to livestock would be lost. This represents a 5 percent loss in comparison to current livestock grazing levels, or a loss of forage sufficient to sustain 555 cows yearlong.	**Livestock Grazing** - Forage allocations made in the grazing EIS would not change. Existing and proposed management (including increases in deer and elk) would result in a cumulative forage loss of 12,130 AUMs. A total of 7,300 AUMs currently allocated to livestock would be lost. This represents a 6 percent loss in comparison to current livestock grazing levels, or a loss of forage sufficient to sustain 608 cows yearlong. This is an increased forage loss of 630 AUMs (9 percent) from Alternative A. The greatest losses would occur in GRAs 1,2,3 and 5.	**Livestock Grazing** - Forage allocations made in the grazing EIS would not change. Existing and proposed management (including increases in deer and elk) would result in a cumulative forage loss of 14,884 AUMs. A total of 10,054 AUMs currently allocated to livestock would be lost. This represents a 7 percent loss in comparison to current livestock grazing levels, or a loss of forage sufficient to sustain 550 cows yearlong. This is an increased forage loss of 2,754 AUMs (41 percent) from Alternative A. The greatest losses would occur in GRAs 1,2,3 and 5.	**Livestock Grazing** - Forage allocations made in the grazing EIS would not change. Existing and proposed management (including increases in deer and elk) would result in a cumulative forage loss of 11,430 AUMs. A total of 6,600 AUMs currently allocated to livestock would be lost. This represents a 5 percent loss in comparison to current livestock grazing levels, or a loss of forage sufficient to sustain 550 cows yearlong. This is a decrease in forage loss of 70 AUMs (1 percent) from Alternative A. The greatest losses would occur in GRAs 1,2,3 and 5.	**Livestock Grazing** - Forage allocations made in the 1981 Rangeland Program Summary would continue until data exists to require modification. The present level of 126,490 AUMs would continue for the short term. The 144 grazing allotments have been placed into categories that define intensity of management. 54 allotments are in the improve category and will receive the greatest management emphasis including development of allotment management plans.
Wild Horses - A total of 2,100 AUMs of forage would be provided to support 60-140 wild horses. The boundaries of the Piceance-East Douglas Herd Management Area (HMA), containing 161,300 acres, would remain the same. Wild horses would continue to use 18,530 acres of patented oil shale claims (the Boxelder Allotment and Pasture C of the Square S Allotment) that lie within the HMA boundary until or unless the owners of the claims request the horses be removed. The Piceance-East Douglas HMA would be managed to provide 2,100 AUMs of forage for 60-140 wild horses. Wild horses would be removed from the North Piceance (107,590 acres) and West Douglas (190,870 acres) herd areas (HAs). Managing to accommodate 60-140 horses would contribute to near optimum wild horse fecundity.	**Wild Horses** - A total of 1,050 AUMs of forage would be provided to support 60-70 wild horses. The Piceance-East Douglas HMA would be adjusted to exclude 18,532 acres of patented oil shale claims (the Boxelder Allotment and Pasture C of the Square S Allotment). The wild horses on those patented claim lands would also be removed. Removing the 18,532 acres of patented oil shale claims and the horses from the HMA would eliminate potential problems associated with wild horses using lands not under the BLM's jurisdiction. The adjusted HMA would be 146,200 acres. The adjusted HMA would be managed to provide 1,050 AUMs of forage for 60-70 wild horses. Wild horses would be removed from the North Piceance and West Douglas herd areas (HAs). Managing to accommodate 60-70 wild horses would be the lowest population level at which a viable wild horse could be maintained.	**Wild Horses** - A total of 4,800 AUMs of forage would be provided to support 320 wild horses. Piceance-East Douglas HMA - Same as Alternative A except: The HMA would be managed to provide 2,100 AUMs of forage for 90-140 horses. The North Piceance HA and a portion of the West Douglas HA would be designated as the North Piceance HMA and the Texas Creek HMA, respectively. The two new HMAs (148,960 acres) would be managed to provide a maximum 1,950 AUMs for 100-130 wild horses. The remainder of the West Douglas HA (149,500 acres) would be managed to provide 750 AUMs for 0-50 horses. Managing to accommodate 320 horses would improve herd fecundity, genetics, and the desirability of horses for adoption.	**Wild Horses** - A total of 2,100 AUMs of forage would be provided to support 95-140 wild horses. The Piceance-East Douglas HMA would be expanded to include the Greasewood Allotment (28,830 acres) portion of the North Piceance HA. Adding the Greasewood Allotment to the Piceance-East Douglas HMA would eliminate conflicts between wild horses and livestock. The expanded HMA would total 190,130 acres and include the patented oil shale claims. A cooperative agreement to allow wild horses to use the oil shale claims would be pursued with the owner of the claims. The expanded HMA would be managed to provide 2,100 AUMs for 95-140 horses. Wild horses would eventually be removed (the long-term objective) from the remainder of the North Piceance HA and the West Douglas HA. Managing forage to accommodate 95-120 horses would enhance habitat conditions for wild horses and maximize their productivity.	**Wild Horses** - Same as Alternative D.
Big Game - Management may increase winter deer forage by 28%, improve habitat utility on 9% of winter ranges, and improve herbaceous forage on 14% of fall/spring ranges. Improved water distribution would expand suitable summer habitat by up to 15%. Conversely, habitat treatment guidelines may allow land treatments to reduce sagebrush forage by up to 35% on winter range or up to 65% on severe winter range, and increase cover deficient conditions on an additional 10% of winter range. Deer range capacity could be reduced by up to 35% through and beyond plan life. Under	**Big Game** - Management may increase winter deer forage by 22%, improve habitat utility on 8% of winter ranges, and improve herbaceous forage on 32% of fall/spring ranges. Improved water distribution would expand suitable summer habitat by up to 5%. Conversely, habitat treatment guidelines may allow land treatments to reduce sagebrush forage by up to 20% on general and severe winter ranges and increase cover deficient conditions on an additional 6% of winter	**Big Game** - Management would increase winter deer forage by 20%, improve habitat utility on 8% of winter ranges, and improve herbaceous forage on 24% of fall/spring ranges. Improved water distribution would, expand suitable summer habitat by a minimum 5%. Integrating habitat treatment guidelines with all land treatment would maintain winter forage sufficient to prevent localized reductions in habitat capacity and optimize big game habitat utility on all	**Big Game** - Management effects on deer, pronghorn and elk populations and habitats would be the same as Alternative C except flexibility within habitat treatment guidelines may allow localized short-term declines in winter forage capacity for deer and pronghorn. GRA-wide ceilings would prevent reductions in overall range capacity. Similarly, guideline latitude may reduce opportunities for	**Big Game** - Same as Alternative D except improving a winter forage base increase of 20%, improving cover distribution on a minimum 8%, and improving alternate or supplemental herbaceous forage availability on 24% would provide improvement in woody forage vigor and condition.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Big Game continued - reduced population goals (11%), it is likely that long-term habitat conditions for deer would improve, but population productivity and risk of periodic population crashes would remain static.	**Big Game continued** - range. Treatment guidelines would prevent GRA-wide range capacity impairment. Under reduced population goals (11%), long-term deer habitat conditions (especially woody forage vigor) would improve, but herd productivity and risk of periodic population crashes would remain static through plan life.	**Big Game continued** - project areas. Under reduced deer population goals (18%), improvement in woody forage condition would be attained within plan life. Enhanced habitat utility would establish long term improving trends in habitat condition and herd productivity and help moderate dramatic population fluctuations.	**Big Game continued** - optimizing deer habitat utility to levels intermediate between Alternatives B and C (i.e. up to an additional 4% of winter range in cover deficient condition).	**Big Game continued**
Enhanced herbaceous forage and water availability would improve 35% of pronghorn range, but woody forage could be reduced by 35%.	Enhanced herbaceous forage and water availability would improve 40% of pronghorn range. Overall declines in range capacity would be prevented by limiting reductions in woody forage to 20%. Increase emphasis on herbaceous community development would fully compensate forage deficits attributable to elk and accelerate achievement of desired grazing use and watershed improvement goals.	Enhanced herbaceous forage and water availability would improve 41% of pronghorn range. Limiting reductions in woody forage to 10% would prevent localized declines in range capacity. Increased emphasis on herbaceous community development and reducing elk populations by 28% would offset additional forage use attributable to elk within plan life. Long-term forage use by elk would not interfere with attainment of desired grazing use and watershed improvement goals.		Enhanced herbaceous forage and water availability would be the same as Alternative C.
Long-term improvements in herbaceous forage would offset forage deficits attributable to elk, but elk use would prolong efforts to reduce grazing intensity and achieve watershed improvement goals.				
Direct habitat losses from land use would be locally pronounced, but insignificant overall. Public use depresses big game habitat utility by an average 10-20%. Localized indirect habitat losses of up to 60% occur on 6% of summer range and 14% of winter range. There is little available control of road proliferation and escalation of indirect big game impacts.	Road density limitations applied to 18% of all big game range would stabilize or slightly increase the effective utility of big game critical habitats and would reduce effective habitat loss in heavy development areas by 50-75% in the long term.	Road density limitations would maintain 70% of big game range utility across a minimum 66% of the resource area.	Road density limitations would affect big gmae habitats the same as AlternativeC.	Road density limitations would be the same as Alternative C.
Timing limitations are ineffective in minimizing disturbance of big game production activities. Severe winter range timing limitations prevent acute animal harassment under the most severe winter conditions, but do not effectively minimize harassment or mortality during prolonged winters.	Timing limitations would be ineffective in minimizing disturbance of big game production activities. Severe winter range timing limitations would minimize chronic animal stress on ranges hosting up to 55% of the resource area's big game population.	Timing limitations would minimize chronic animal stress and displacement from preferred habitats on all ranges that fulfill special big game functions. Stipulation application would extend to ranges occupied by up to 75% of wintering big game and would maintain functional utility on at least 42% of summer ranges.	Timing limitations would minimize chronic animal stress and displacement from preferred habitats on a balanced range of habitats that fulfill important year-round big game functions. Stupulation application would extend to ranges occupied by up to 70% of wintering big game and would maintain functional utility on at least 42% of summer ranges.	Timing limitations same as Alternative D.
Non-T/E Raptors - Woodland and timber canopy treatments would reduce woodland raptor nest and foraging habitat capacity by 15% in the short term and 35% in the long term. Long term habitat capacity for raptors and nongame prey associated with mature pinyon-juniper and spruce-fir types (e.g. northern goshawk) would be reduced by 35% and 50%, respectively. Woodland and brush manipulations would increase foraging habitat for soaring raptors by 20% for 50-60 years.	**Non-T/E Raptors** - Woodland and timber canopy treatments would reduce woodland raptor nest and foraging habitat capacity by 7% in the short term and 25% in the long term. Long term habitat capacity for mature pinyon-juniper and spruce-fir canopy associates (i.e. raptors and nongame prey) would be reduced by 40% and 3%, respectively. Woodland and brush manipulations would increase foraging habitat for soaring raptors by 15% for 50-60 years.	**Non-T/E Raptors** - Woodland canopy treatments would reduce woodland raptor nest and foraging habitat capacity by about 5% in the short and long term. Long term habitat capacity for mature pinyon-juniper canopy associates (i.e. raptors and nongame prey) would be reduced by 8%. Habitat capacity for spruce-fir and aspen associates would not be affected. Woodland and brush manipulations would increase foraging habitat the same as Alternative B.	**Non-T/E Raptors** - Same as Alternative C except modified nest survey requirements would reduce nest detection levels and the subsequent use of NSO and TL stipulations and nest habitat provisions. Nest surveys at levels comparable to Alternative C would be gained on an estimated 60 to 70 percent of affected woodland habitats.	**Non-T/E Raptors** - Same as Alternative C except long term habitat capacity for mature pinyon-juniper canopy would reduced by 10%.
NSO and TL stipulations protect ongoing nesting activity, but are incapable of maintaining the integrity of nest habitats for sustained use. Public land uses reduce nest habitat utility by up to 10%.	NSO and TL stipulations and nest habitat provisions would protect nest activities and maintain known nest habitat utility for extended timeframes. Limiting road densities would stabilize or slightly reduce nest habitat disuse on 20% of woodland, 40% of forest, and 28% of ferruginous hawk and burrowing owl habitats.	NSO and TL stipulations, nest habitat provisions, and nest survey requirements would protect nest activities and maintain the utility of suitable nest habitats for extended timeframes. Limiting road densities would stabilize or slightly reduce nest habitat disuse on 80% of woodland and ferruginous hawk and burrowing owl habitats, and 46% of forest habitats.		

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Non-T/E Raptors Continued - Management-induced enhancement of herbaceous cover conditions would improve the abundance and diversity of non-game prey on up to 25% of grassland/shrubland habitats (soaring raptors) and 27% of woodland habitats (woodland raptors) and may increase nestling survival rates slightly. Similarly, reductions of browse use would enhance structural subcanopy development on up to 36% of pinyon-juniper woodlands.	**Non-T/E Raptors Continued** - Management-induced enhancement of herbaceous cover conditions would improve the abundance and diversity of non-game prey on up to 50% of grass and shrub habitats (soaring raptors) and 40% of woodland habitats (woodland raptors). Reductions of browse use would have the same effects as Alternative A.	**Non-T/E Raptors Continued** - Management-induced enhancement of herbaceous and woody subcanopy development would improve the abundance and diversity of non-game prey on grassland, shrubland, and woodland habitats at levels comparable to Alternative B.	**Non-T/E Raptors** - See above.	**Non-T/E Raptors** - See above.
Grouse - Herbaceous cover and forage availability enhancement would occur on 25% of public land grouse nest/brood habitats.	**Grouse** - Herbaceous cover and forage availability enhancement would occur on 63% of public land grouse nest/brood habitats.	**Grouse** - Herbaceous cover and forage availability could be enhanced on 76% of public land grouse nest/brood habitats.	**Grouse** - Through various management schemes, herbaceous cover and forage availability could be enhanced on 80% of public land grouse nest/brood habitats.	**Grouse** - Reducing big game objectives and horse population objectives, implementing grazing use goals on nest and brood ranges, and watershed improvements would enhance herbaceous cover and forage availability on up to 80% of public land grouse habitat.
Modified sagebrush habitats would reduce sage grouse nesting habitat by 12-37%, and brood and overall range by 13-41% over a 15-20 year period. Treatment of suboptimal sagebrush habitats may expand sage grouse range by 5-10% in the long term.	Modified sagebrush habitats would reduce sage grouse nesting habitat by 12-24%, and brood and overall range by 23% over a 15-20 year period. Habitat guidelines would relegate short term losses to Alternative A's midpoint values and emphasize treatment of suboptimal sagebrush stands. Reestablishing sagebrush on large disturbances would accelerate recovery of grouse nesting and brood cover.	Sagebrush modifications would be the same as Alternative B; however, application of habitat guidelines would relegate short term losses to Alternative A's low to midpoint values. Reestablishing sagebrush on larger disturbances or accumulations of smaller events would accelerate recovery of usable grouse habitat.	Modification of grouse habitats would influence grouse the same as Alternative C. Reestablishing sagebrush cover on larger disturbances would develop sagebrush canopies suitable for year-round grouse use, but does not abbreviate adverse impacts caused by small clumped events.	Modification of sagebrush habitat would reduce sage grouse habitat by 10% and overall summer and brood range to no more than 25% over a 15-20 year period.
Woodland harvest would expand blue grouse spring-fall habitats by 4%, but canopy treatments would reduce winter habitats by 8% and 33% in the short- and long-terms, respectively.	Woodland manipulations would not alter blue grouse habitat availability, but canopy treatments would reduce winter habitats by 2-3% and 10% in the short- and long- terms, respectively.	Harvesting 3% of BLM's coniferous forest base would not influence blue grouse winter habitats. Aspen harvests that enhance stand health would maintain or improve 20% of aspen-based blue grouse brood and summer habitats.	Harvesting forest products would influence blue grouse the same as described for Alternative C.	
From 11-15% of all grouse nesting habitat would be vulnerable to road-related disturbance.	Road density limitations would reduce the extent of sage grouse nesting habitat vulnerable to disruption by 5%, and would stabilize or reduce road-related disruption on 10-32% of associated nest habitat. Remaining sage grouse nesting habitat would be subject to increases in road-based influence.	Expanding road density limitations would reduce the potential disruption of sage grouse nesting activities by 5% and stabilize at 20% road-related nest disruption on all nest habitat.	Expanding road density limitations would influence sage grouse the same as described for Alternative C.	Expanding road density limitations would influence grouse as described in Alternative C.
Application of TL and NSO stipulations may prevent disruption of annual sage grouse breeding activities.	Application of TL and NSO stipulations would maintain annual sage grouse breeding activities, but extending lek protection to important peripheral features would maintain long term lek site characteristics and suitability.	Application of TL and NSO stipulations would maintain annual sage grouse breeding activities and protect lek site character at levels comparable to Alternative B. Application of a nest season TL would allow 68% of nest attempts to succeed within lek complexes.	Limiting road densities and applying TL, NSO, and CSU stipulations would influence grouse the same as Alternative C.	Applying TL, NSO, and CSU stipulations would influence grouse the same as described in Alternative C.
Oil shale and surface coal-mining operations would predispose 5-7% of affected blue and sage grouse range (including 5-11% of available nest and brood range) to long term loss.	Impacts from oil shale and surface coal mining would be the same as Alternative A.	Impacts from oil shale and surface coal mining would be the same as Alternative A.	Impacts from oil shale and surface coal mining would be the same as Alternative A.	

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Fisheries - Improvements to aquatic and riparian systems would extend to 50% of Colorado River cutthroat trout habitats (23% of all stream fisheries). Improvements to poor condition fisheries would elevate 45% of all fishery habitats to fair condition. No more than 20% of stream habitats would achieve good fishery conditions. Increased herbaceous ground cover on 30% of the Resource Area would improve adjacent and downstream fish habitat by decreasing upland sediment transport and increasing base flows to all streams. NEPA-derived stipulations designed to minimize or mitigate disruption of channel and floodplain features would maintain habitat conditions and trend. Oil shale development may lead to the loss of >50% of all stream fisheries, including 35% of Colorado River cutthroat trout fisheries.	**Fisheries** - Improvements to aquatic and riparian systems would extend to virtually all stream fisheries. All poor condition fisheries would be elevated to fair condition. Good fisheries conditions would be achieved or maintained on 30-40% of stream habitats. Increased herbaceous ground cover on 55% of the Resource Area would improve fish habitat by decreasing upland sediment transport and increasing base flows to all streams. NEPA-derived stipulations designed to minimize or mitigate physical disruption of habitat features would maintain habitat condition and trend. Localized impacts would persist where road abandonment or restricted vehicle use provide the only means to arrest habitat deterioration. Influences of oil shale development would be the same as Alternative A.	**Fisheries** - Fisheries management would be the same as Alternative B. However, protection standards for virtually all riparian communities, fragile or unstable soils, and Colorado River cutthroat trout habitats would be strengthened such that constant, additive gains toward fishery recovery goals would be achieved. Influences of oil shale development would be the same as Alternative A.	**Fisheries** - Same as Alternative C.	**Fisheries** - Same as Alternative C.
Special Status Wildlife - *Listed Species*: Endangered Species Act processes would remain effective in preventing federal actions from contributing to cumulative declines in threatened and endangered species populations or deterioration of associated habitat. Riparian improvements and protection would maintain or improve to proper functioning condition about 8% of the White River's designated critical habitat for listed Colorado River fishes, and provide for maintenance of floodplain cottonwood communities as bald eagle habitats along 6% of the White River. Application of timing limitations promotes selection of alternate cottonwood sites as established bald eagle roost and nest sites deteriorate. Improving herbaceous forage on grass and brushland ranges may enhance the prairie dog prey base on up to 8% of potential black-footed ferret habitat.	**Special Status Wildlife** - *Listed Species*: Endangered Species Act processes and special stipulations would provide relatively risk-free protection of listed species activities and habitats. Riparian improvements and protection would affect the habitat of Colorado squawfish and bald eagle as in Alternative A except, in addition, minimizing suppression of cottonwood regeneration and requiring that, if unavoidably involved, long term floodplain features and function be restored, the long term development and availability of riverine cottonwoods for bald eagle use is encouraged. Potential roost and nest substrate on BLM riverine tracts may increase by 50% in the long term. Establishment of ferret recovery areas would be preliminary to the establishment of a self-sustaining ferret population. Applied stipulations and road-density limitations within recovery areas would maintain site capacity for ferret reestablishment and reduce the potential for ferret mortality and disruption of reproductive activities. Minimizing disruption of prairie dog systems outside recovery areas would foster maintenance of dispersal corridors and alternate colonization sites. Improving herbaceous forage on grass and brushland ranges may enhance the prairie dog prey base on 52% of potential ferret habitat and increase the extent of suitable habitat by 13% in the long term.	**Special Status Wildlife** -*Listed Species* - Endangered Species Act processes and special stipulations would provide protection of listed species activities and habitats comparable to Alternative B. Riparian improvements and protection would affect the habitat of Colorado squawfish and bald eagle as in Alternative B except White River ACEC designation would better focus and integrate all land use activities toward sustained development and maintenance of floodplain associations and processes. Lease and special stipulations would prevent surface disturbance from impairing floodplain function or riparian expression. Management of ferret recovery areas would be the same as Alternative B except management emphasis would shift to enhancing, rather than maintaining the capability of the sites for ferret reestablishment. Disallowing land uses that adversely modify the extent or distribution of prairie dog colonies outside recovery areas would assure maintenance of dispersal corridors and intervening habitat for colonization.	**Special Status Wildlife** - *Listed Species* - Same as Alternative C.	**Special Status Wildlife** - *Listed Species* - 58,790 acres would be designated as black-footed ferret recovery areas. Disruptive activities within 1/2 mile of bald eagle nests, roosts, and concentration areas would not be allowed. 47,610 acres would be designated an ACEC in the East Douglas watershed in part to protect habitat for the Colorado River cutthroat trout. Other management would be the same as Alternative C.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Special Status Wildlife - *Candidate Species* - Applied stipulations deter physical disruption on 50% of BLM's Colorado River cutthroat trout habitats and minimize short term disruption on remaining fisheries sufficient to maintain improving trends at low development intensity. There are no effective means for controlling incompatible vehicular use or road proliferation in occupied drainages, nor the deterioration of fisheries habitats associated with accelerated sedimentation from road-induced bank, slope and channel instability. Riparian improvements and vegetation treatments promote improved fisheries conditions through small increases in base flow and reduced sediment yield. Extensive spruce-fir canopy treatments in occupied watersheds may induce prolonged channel adjustments deleterious to these fisheries. Impacts to ferruginous hawk and northern goshawk are integral with the raptor management summary. Vegetation manipulations would reduce loggerhead shrike nesting habitat by less than 5%. Plant community improvements may expand suitable nesting habitat by up to 11% in the long term. BLM management is ineffective in influencing sharp-tailed grouse populations and habitat, principally because of a limited and highly fragmented land base.	**Special Status Wildlife** - *Candidate Species* - Integrating program management would elevate 96% of Colorado River cutthroat fisheries to fair condition in the short term, and to good condition through plan life. Vegetation treatments would have the same influence on cutthroat fisheries as Alternative A except canopy manipulations in headwaters would not disrupt channel and floodplain stability. Conditions of Approval and special stipulations would minimize short term physical disruption and maintain improving trends regardless of land use intensity. Impacts to ferruginous hawk and northern goshawk are integral with the raptor management summary. In addition, maintaining prairie dog populations in ferret recovery areas would maintain important prey elements on 28% of ferruginous hawk habitat hosting 50% of known nesting territories. Vegetation manipulations would reduce loggerhead shrike nesting habitat by less than 5%. Plant community improvements may enhance prey availability on 82% of occupied habitat and expand suitable nesting habitat by up to 11% in the long term. BLM management's influence on sharp-tailed grouse would be the same as Alternative A.	**Special Status Wildlife** - *Candidate Species* - Colorado River cutthroat trout habitat recovery goals and methods would be the same as Alternative B except application of a lease stipulation within the East Douglas Creek ACEC would limit incompatible short-term watershed disturbance such that the long-term integrity and development potential of these systems would not be impaired. Conditioning all land use within the ACEC to complement or remain compatible with fisheries recovery objectives would ensure that gains in habitat quality are additive and accelerated improvement is realized through plan life. Impacts to ferruginous hawk and northern goshawk are integral with the raptor management summary. Management of ferret recovery areas would affect ferruginous hawks the same as Alternative B except that by preventing adverse alteration of prairie dog habitats outside recovery areas, an important prey component of the hawk's would be maintained across all breeding habitat. Impacts to loggerhead shrike and sharp-tailed grouse would be the same as Alternative B.	**Special Status Wildlife** - *Candidate Species* -See above.	**Special Status Wildlife** - *Candidate Species* -See above.
Wilderness - As stated in the *Craig District Final Wilderness Environmental Impact Statement* (EIS), Designating Bull Canyon, Willow Creek, and Skull Creek WSAs as wilderness would preserve their solitude, primitive and unconfined recreation, high scenic quality, and naturalness. Nondesignation of Black Mountain, Windy Gulch, and Oil Spring Mountain WSAs would result in the loss of solitude and naturalness.	**Wilderness** - Same as Alternative A.	**Wilderness** - Same as Alternative A.	**Wilderness** - Same as Alternative A.	**Wilderness** - Same as Alternative A.
Wild and Scenic Rivers - No river or stream segments would be recommended for wild and scenic river designation. With or without designation, BLM would manage only the streamside habitat that occurs on BLM land (about 22 percent of stream habitat). With or without designation, the 22 percent of streamside habitat on BLM lands would be managed to protect the free-flowing and outstandingly-remarkable values that resulted in river/stream segment eligibility.	**Wild and Scenic Rivers** - Same as Alternative A.	**Wild and Scenic Rivers** - Same as Alternative A.	Wild and Scenic Rivers - Same as Alternative A.	**Wild and Scenic Rivers** - Same as Alternative A.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Visual Resources - No BLM lands would be designated as VRM Class I; 460,700 would continue to be designated as VRM Class II; 403,100 acres would continue to be designated as Class III, and 1,415,800 acres would continue to be designated as VRM Class IV.	**Visual Resources** - A total of 41,250 acres would be designated as VRM Class I; 429,000 would be designated VRM Class II; 414,450 acres would be designated VRM Class III; and 1,403,320 acres would be designated as Class IV.	**Visual Resources** - A total of 41,250 acres would be designated as VRM Class I; 434,760 acres would be designated as VRM Class II; 839,170 acres would be designated as Class III; and 146,100 acres would be designated as Class IV.	**Visual Resources** - A total of 41,250 acres would be designated as VRM Class I; 412,250 acres would be designated as VRM Class II; 861,680 acres would be designated as Class III; and 146,100 acres would be designated as Class IV.	**Visual Resources** - Same as Alternative D.
Recreation - The Piceance Basin Special Recreation Management Area (SRMA) (210,000 acres) would provide specific and structured recreation opportunities in a defined area. The White River Extensive Recreation Management Area (ERMA) would provide unstructured and limited recreation opportunities and custodial management for all areas not designated as SRMAs.	**Recreation** - The Piceance Basin SRMA (210,000 acres) would provide specific and structured recreation opportunities. The proposed lower White River/Kenney Reservoir SRMA would provide floatboating, picnicking, wildlife viewing, and camping opportunities on 4,890 acres. The White River ERMA would provide unstructured and limited recreation opportunities and custodial management for all areas not designated as SRMAs.	**Recreation** - The proposed Rangely SRMA would provide mountain biking, boating, fishing, camping, picnicking, and environmental education/study on 410,800 acres. The proposed Black Mountain/Windy Gulch (26,470 acres) SRMA would provide structured opportunities for hunting, horseback riding, hiking, backpacking, wildlife viewing, and nature study. The White River extensive recreation management area (ERMA) would provide unstructured and limited recreation opportunities and custodial management for all areas not designated as SRMAs.	**Recreation** - No SRMAs would be designated. The entire resource area would be an ERMA. The Blue Mountain GRA and the White River ACEC within the White River ERMA would be targeted for hunting, mountain biking, scenic viewing, horseback riding, pleasure driving (Blue Mountain) and floatboating, canoeing, warm-water fishing, and camping (White River).	**Recreation** - Same as Alternative D.
Motorized Vehicle Travel - Motorized vehicles would be allowed *both on and off existing roads and trails* except in the Blue Mountain road closure area (6,260 acres) and the soils MPAs (16,490 acres). This area would be closed to all vehicles except for those with permitted uses.	**Motorized Vehicle Travel** - Motorized vehicle travel would be *limited to existing roads and trails*. The Blue Mountain road closure area would remain closed to all vehicles except for those with permitted uses.	**Motorized Vehicle Travel** - Motorized vehicle travel would be *limited to designated roads and trails*. The Blue Mountain road closure area, the Oak Ridge State Wildlife Area (9,300 acres), and fragile soils areas (791,300 acres) would remain closed to all vehicles except for those with permitted uses. Additional roads and trails would be closed and rehabilitated or closed during certain seasons. Roads would be constructed and other roads would be closed on an on-going basis, as needed, using the road density criteria listed in Chapter 2.	**Motorized Vehicle Travel** - Same as Alternative C except soils MPAs would not be closed and Coal Oil Basin would be designated as open to both on- and off-road vehicle travel.	**Motorized Vehicle Travel** - No areas would be identified as open, except to snowmobile use. Approximately 922,200 acres would be available for cross country travel from May 1 through September 30. The remainder of the year, travel within this area would be limited to existing roads and trails. 326,985 acres would have a limitation of travel only on existing roads, trails, and ways. 115,690 acres would have travel limitations to designated roads and trails to protect sensitive resources such as contained in ACEC.
Cultural Resources - An unknown number of cultural resources would be destroyed accidentally by surface-disturbing activities. Required cultural resource inventories and surface stipulations in this RMP would reduce the loss of significant cultural resources and scientific data. Surface stipulations (NSO) also would reduce the number of inventories conducted, thus decreasing the amount of information recorded. Increased access and visibility that would increase unauthorized collection and other vandalism.	**Cultural Resources** - Same as Alternative A except more acres would be protected by surface stipulations.	**Cultural Resources** - Same as Alternative A except more acres would be protected by surface stipulations.	**Cultural Resources** - Same as Alternative A except more acres would be protected by surface stipulations (see p. S-2).	**Cultural Resources** - Same as Alternative A.
Paleontological Resources - Although current data are inadequate to quantify the extent or significance of the loss of scientifically-significant fossil resources, the surface stipulations, including the CSU stipulation that requires inventories in Class I formations prior to approving surface-disturbing activities, would provide protection from disturbance activities.	**Paleontological Resources** - Same as Alternative A except for the acres of surface stipulations.	**Paleontological Resources** - Same as Alternative A except for the acres of surface stipulations.	**Paleontological Resources** - Same as Alternative A except for the acres of surface stipulations (see p. S-2).	**Paleontological Resources** - Same as Alternative A.

Alternative A	Alternative B	Alternative C	Alternative D	Proposed Management
Land Use Authorizations - Classifying 36,773 acres as avoidance areas and 44,583 acres as exclusion areas would increase development costs for some companies. Since development is not precluded in avoidance areas and exclusion areas are small and/or well scattered throughout the resource area, no projects would be foregone.	**Land Use Authorizations** - Classifying 69,082 acres as avoidance areas and 97,249 acres as exclusion areas (an increase of 32,309 acres and 52,666 acres, respectively, over Alternative A), would increase development costs for some companies. No projects would be foregone.	**Land Use Authorizations** - Classifying 1,000,858 acres as avoidance areas and 106,246 acres as exclusion areas (an increase of 964,085 acres and 61,663 acres, respectively, over Alternative A), would increase development costs for some companies. Given the number of acres classified as avoidance and exclusion and considering the potential for increased costs, some projects could be foregone.	**Land Use Authorizations** - Classifying 187,048 acres as avoidance areas and 106,246 acres as exclusion areas (increases of 150,275 acres and 61,663 acres, respectively, over Alternative A), would increase costs for some companies. Since development would not be precluded in avoidance areas and exclusion areas tend to be located in areas of low demand, few, if any, projects would be foregone.	**Land Use Authorizations** - Same as Alternative D.
Designating maximum acreage of formal right-of-way corridors would generally benefit utility companies.	Designation of the minimum acreage of formal right-of-way corridors may adversely effect utilities by limiting their flexibility in siting future major facilities.	The lack of designated right-of-way corridors could minimize flexibility in siting future major facilities.	Designation of a minimum acreage of formal right-of-way corridors could limit flexibility in siting future major future facilities. Conversely, having these corridors available would streamline the processing of applications if the corridors would meet the needs of proposed facilities.	
Socioeconomics - The cumulative impact on the local economy is likely to be beneficial. The actual impact is localized but not presently quantified.	**Socioeconomics** - Same as Alternative A.	**Socioeconomics** - Same as Alternative A.	**Socioeconomics** - Same as Alternative A.	**Socioeconomics** - Very similar to Alternative A.

CHAPTER TWO
CHANGES TO THE DRAFT RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

INTRODUCTION

The White River Resource Area, Draft Resource Management Plan and Environmental Impact Statement (DRMP) was published in October 1994. The public comment period for review of the document extended for a period of 168 days. Included within the comment period were four public hearings and numerous other public informational meetings. This chapter identifies changes to the DRMP resulting from oral testimony and written comments received from the public as well as correcting and clarification resulting from internal review. Only the changes to text, tables, or maps will be identified. The reader will need to utilize the DRMP to assist in the review of this chapter. Changes to the text will reference chapter, page, paragraph, and sentence. Table and map changes will reference the appropriate table or map number.

TEXT CHANGES

CHANGES TO CHAPTER ONE.

Page 1-5, paragraph 2, sentence 7, add "adjacent" between "all" and "land".

CHANGES TO CHAPTER TWO.

Page 2-10, paragraph 1, last sentence delete "best management".

Page 2-10, paragraph 4, sentence 1, add "A site specific" between "Development" and "environmental".

Page 2-10, paragraph 5, last sentence, add "appropriate" between "to" and "surface".

Page 2-11, paragraph 1, sentence 1, add "developed in the Piceance Basin RMP and" between "concept" and "described".

Page 2-19, second from last paragraph, last sentence, add "while maintaining the site above its conservation threshold" between objectives and would.

Page 2-19, last paragraph, add "The goal of determining a desired plant community would be management and/or maintenance of a landscape composed of a plant community mosaic representing successional stages and distribution patterns consistent with the natural disturbance and regeneration regimes." between the first and second sentence.

Page 2-23, first column, second paragraph, first sentence, add ", wilderness study areas (WSAs), and within designated areas of critical environmental concern (ACECs)." following GRA.

Page 2-42, second column, fourth paragraph, add "if a determination is made that the relocation action would benefit and promote recovery and would not further impact a T/E plant species." following relocated.

Page 2-44, second column, fourth paragraph, last sentence, add "where feasible." following relocated.

Page 2-48, paragraph 4, sentence 7, "of" should replace "or".

Page 2-53, first column, first paragraph, delete last two sentences and replace with "The improve category allotments would receive highest priority for public funding for needed rangeland improvements and livestock management facilities. The custodial category allotments would receive lowest priority for public funding for needed rangeland improvements."

Page 2-57, paragraph 2, sentence 1, change 50,970 to "50,732" and 82,120 to "80,865".

Page 2-57, paragraph 2, sentence 2, change 46,120 to "44,820" and 72,750 to "69,441.

Page 2-57, paragraph 3 should read "The need and opportunities for development of additional forage would be evaluated in integrated activity plans that would follow publication of the approved RMP. Table 2-39 shows big game population goals by alternative."

Page 2-57, paragraph 4, sentence 1, delete "The goal".

Page 2-57, paragraph 4, sentence 2, delete "develop" and add "ensure that" between "to" and "a".

Page 2-57, paragraph 4, sentence 2, delete "various" and add "selected" between "at" and "population".

Page 2-57, paragraph 5, sentence 2, "indicates" should be "indicate".

Page 2-57, paragraph 5, sentence 2, delete "individual activity plans for".

Page 2-57, paragraph 5, sentence 4, add "Actual forage" before "deficits".

Page 2-57, paragraph 7, sentence 1, "82,120" should be 80,865.

Page 2-57, paragraph 8, sentence 1, "72,750" should be 69,441.

Page 2-58, paragraph 2, sentence 2, add "using updated wildlife information" between "modified" and "as".

Page 2-62, paragraph 2, sentence 2, delete "modified" and add "updated with current information" between "be" and "as".

Page 2-65, paragraph 1, sentence 1, add "and disruption of important activities minimized" between "enhanced" and "by".

Page 2-65, paragraph 1, sentence 3, delete "areas" and replace it with "habitat".

Page 2-65, paragraph 3, sentence 1, add "in habitat" after "improvements".

Page 2-70, paragraph 1, sentence 1, add "permitted" between "all" and "surface-disturbing".

Page 2-70, paragraph 2, sentence 1, add "considered for reintroduction" between "be" and "in".

Page 2-75, paragraph 1, sentence 3, add "these" between "1976" and "may".

Page 2-78, paragraph 7, sentence 4, delete "Restrictions on shape" and add " Proposed projects may be modified or changed to reduce contrasts with the landscape by repeating the basic elements of line,".

Page 2-78, paragraph 7, sentence 7, delete sentence 7 and replace with "However, projects might be relocated or modified in visually sensitive areas as necessary to meet VRM class objectives."

Page 2-82, paragraph 5, sentence 2, delete "remainder".

Page 2-82, paragraph 5, sentence 6, delete sentence 6 and replace with "No other portions of the Resource Area were mapped for ROS settings".

Page 2-83, paragraph 7, sentence 2, delete the period after "bear" and add "hunting. However, other outfitter use or service would be encouraged".

Page 2-89, paragraph 4, sentence 2, delete "The Programmatic Agreement requires SHPO".

Page 2-89, paragraph 4, sentence 2, add ", under the agreement," between "Consultation" and "is".

Page 2-89, paragraph 4, add on to end of paragraph, "In general, consultation may involve:".

Page 2-89, paragraph 8, sentence 2, add "and regulations at 43 CFR 7.6-7.8." after "Guidelines".

Page 2-89, paragraph 8, sentence 4, add "and the regulations" between "standards" and "require".

Page 2-90, paragraph 1, sentence 1, delete "protection" and add "recovery and preservation".

Page 2-90, paragraph 1, sentence 1, delete "also" between "would" and "be".

Page 2-90, paragraph 6, sentence 2, delete "also" between "sites" and "would".

Page 2-92, paragraph 9, sentence 1, delete "protection" and add "recovery and preservation" between "the" and "of".

CHANGES TO CHAPTER THREE

Page 3-7, paragraph 1, add "concentrations of dissolved solids in the water (Warner, et al, 1985)." after "large".

Page 3-7, paragraph 3, delete last sentence.

Page 3-8, paragraph 1, sentence 2, add "or 94%" between "acres" and ")".

Page 3-8, paragraph 1, sentence 3, add "and" between "moderate," and "low".

Page 3-8, paragraph 1, sentence 4, delete "73" and replace with "77.4".

Page 3-8, paragraph 1, sentence 4, delete "467,330" and replace with "467,320".

Page 3-8, paragraph 1, sentence 4, delete "17" and replace with "18.6".

Page 3-8, paragraph 1, sentence 4, add a period after "potential" and delete rest of sentence.

Page 3-8, paragraph 2, delete and replace with, "Coal bed methane potential is based on those areas underlain by the coal bearing upper Cretaceous Mesaverde Formation. Approximately 1,736,240 acres within the resource area meet that criteria. Of this acreage, an estimated 535,060 acres (30.8 percent) are classified as high potential, 178,630 acres (10.3 percent) are classified as moderate potential, and 1,022,550 acres (58.9 percent) are classified as low potential. Industry sources indicate that coal bed methane reserves in the Piceance Basin (high potential area) approach 84 trillion cubic feet (Western Oil World December 1989).

In 1989, a total of 12,277,625 barrels of oil and 31,908,380 MCF of natural gas were produced from fields within the resource area."

Page 3-8, paragraph 4, sentence 2, "anticline" should read "Anticline".

Page 3-8, paragraph 4, sentence 1, add "secondary" between "to" and "water".

Page 3-8, paragraph 4, sentence 1, add "tertiary" between "and" and "CO_2".

Page 3-8, paragraph 7, sentence 1, "produce" should read "product".

Page 3-8, paragraph 8, sentence 1 & 2, delete.

Page 3-9, paragraph 1, sentence 5, delete "maintained to" and replace with "monitored for compliance with".

Page 3-9, paragraph 5, sentence 2, "potential" should be "political".

Page 3-12, paragraph 2, sentence 2, add "needle and thread," between squirreltail and western wheatgrass.

Page 3-23, paragraph 5, sentence 3, add "most current" between "(CDOW's)" and "longterm".

Page 3-23, paragraph 6, sentence 3, delete "no revision to the".

Page 3-23, paragraph 6, sentence 3, delete "necessary" and replace with "satisfactory".

Page 3-23, paragraph 7, sentence 1, add "the" between "system," and "general".

Page 3-24, paragraph 4, sentence 2, "recruitments" should read "recruitment".

Page 3-25, paragraph 4, sentence 4, delete "current".

Page 3-25, paragraph 4, sentence 4, delete "250 percent or".

Page 3-25, paragraph 4, sentence 4, "3,000" should be 6,000.

Page 3-25, paragraph 5, sentence 1, "5,849" should be "9,729".

Page 3-25, paragraph 5, sentence 1, "1,700" should be "3,600".

Page 3-29, paragraph 3, sentence 1, delete "primarily".

Page 3-29, paragraph 3, sentence 1, add "Resource" between "This" and "area".

Page 3-31, paragraph 4, sentence 1, delete space between "however," and "sympatric".

Page 3-32, paragraph 4, sentence 1, delete "3-23" and replace with "3-22A".

Page 3-32, paragraph 4, sentence 4, delete "3-23" and replace with "3-21".

Page 3-33, paragraph 2, sentence 4, delete "are probably visited occasionally" and replace with "likely support at least occasional hunting activity".

Page 3-34, paragraph 1, sentence 3, delete ", BLM".

Page 3-35, paragraph 2, sentence 1, add "in Colorado" between "River" and "does".

Page 3-36, paragraph 3, sentence 1, delete "trees" and replace with "woodlands".

Page 3-36, paragraph 3, sentence 1, delete "some" and replace with "many".

Page 3-36, paragraph 3, sentence 2, delete "four" and replace with "several".

Page 3-36, paragraph 3, sentence 2, delete "in the Piceance and Douglas Basins" and replace with "throughout the Resource Area".

Page 3-40, column 2, paragraph 3, sentence 1, change "15,560 acres" to "10,600 acres".

Page 3-43, paragraph 11, sentence 2, delete "G" and replace with "I".

Page 3-44, paragraph 11, sentence 1, add "counties" between "Colorado" and ",".

Page 3-45, paragraph 4, sentence 1, "blanco" should read "Blanco".

CHANGES TO CHAPTER FOUR.

Page 4-7, column 2, paragraph 4, sentence 1, change 86,843 to "485".

Page 4-10, column 1, paragraph 2, sentence 1, add "have the potential to" between all and increase. Delete "and" between erosion and thereby. Change increase to "increasing".

Page 4-10, column 2, paragraph 2, change development "would" to "could".

Page 4-17, column 2, paragraph 2, change "evaporation ponds" to "reserve pits", and change "ponds" to "pits".

Page 4-17, column 2, paragraph 3, first sentence should be moved to Cumulative Impacts on Groundwater section.

Page 4-20, column 1, paragraph 3, Delete last sentence dealing with oil and gas production declining 7 to 10 percent.

Page 4-20, second column, paragraph 3, change "Table 4-3" to "Table 4-4".

Page 4-30, "IMPACTS FROM PLANT COMMUNITIES MANAGEMENT", this section was revised for the Final RMP, refer to Final EIS/RMP, Chapter 4, Environmental Consequences section.

Page 4-33, second column, second paragraph, last sentence, add "not" between would and improve.

Page 4-142, insert the following section prior to the section titled: IMPACTS FROM WILD HORSE MANAGEMENT

IMPACTS FROM LIVESTOCK MANAGEMENT

Impacts from livestock management are similar under all alternatives. Livestock trample horizontal surfaces displacing artifacts both horizontally and vertically and destroying contexts. These impacts are especially severe where congregating and trailing occur on cultural resources. While exact numbers for impacts cannot be provided it is generally accepted that greater numbers of livestock increase the potential for adverse trampling effects. Livestock may also rub and scratch on standing features such as walls which may accelerate the deterioration and collapse of the standing structures. Mitigating measures applied to range improvement projects will reduce potential impacts from facilities construction associated with livestock management to an acceptable level".

Page 4-148, second column, first paragraph, delete last sentence and replace with ", 205,740 acres, and 107,420 acres, respectively."

Page 4-148, second column, delete second and third paragraph in their entirety.

Page 4-148, second column, fifth paragraph, delete last sentence starting with Table 4-14, and replace with ", 205,740 acres and 107,420 acres, respectively."

Page 4-150, second column, first paragraph. fourth sentence, replace "1993" with 1994 following Grumbine.

CHANGES TO CHAPTER FIVE.

None.

CHANGES TO APPENDIXES

CHANGES TO APPENDIX A

Page A-1, paragraph 1, & 2, should read "This appendix lists conditions of approval (COAs), designed to reduce or prevent environmental impacts. COAs would be used to design BLM-initiated projects and to develop proponent-initiated projects. They would often be prescribed and applied as a system of practices rather than a single practice.

These conditions of approval have been developed over time as mitigating measures in environmental documents and from commonly used practices that accomplished a desired goal in an environmentally acceptable manner. Additional conditions may be developed in the future as new techniques and advances in equipment technology occurs".

Page A-1, paragraph 3, sentence 1 replace "BMPs" with "COAs".

Page A-1, paragraph 3, sentence 2 replace "BMPs" with "COAs".

Page A-2, number 4, sentence 1, delete.

Page A-2, number 4, sentence 2, add "road" between "of" and "surfacing".

Page A-2, number 4, sentence 2, delete "will" and replace with "should".

Page A-2, number 11, delete.

Page A-2, number 12, new number "11".

Page A-5, number 8, sentence 1 should read "Sediment control structures or disposal pits, will be designed to contain a 100-year, 6-hour storm event".

Page A-5, number 9, sentence 1, delete "in" and replace with "near (within 1/4 mile)".

Page A-5, number 10, sentence 4 & 5, delete, and change fence height to 48 inches in herd management areas.

Page A-5, number 15, sentence 1, delete "drilled" and replace with "completed or plugged and abandoned."

Page A-7, number 20, delete.

Page A-7, number 21, renumber "20".

Page A-7, number 22, renumber "21".

Page A-7, number 22, sentence 2, delete.

Page A-8, number 3, add at end of paragraph, "Above ground surface pipelines will be considered by the authorizing office where site conditions or resource warrants".

Page A-9, "Protection of archaeological and paleontological sites during land disturbance" should read "Protection of archaeological and paleontological sites during surface disturbance activities."

Page A-9, number 2, delete.

Page A-9, number 3, renumber "2".

Page A-10. number 4, renumber "3".

Page A-10, number 5, renumber "4".

Page A-10, number 6, renumber "5".

Page A-10, number 7, renumber "6".

Page A-11, first column, remove heading "VEGETATION MANIPULATION" and relocate to second column above heading "PESTICIDE AND HERBICIDE APPLICATION".

Page A-11, first column, add the following paragraph immediately below the heading LIVESTOCK GRAZING: "These best management practices are not intended to be all encompassing and are presented here as examples. Allotment specific best management practices would be developed during activity plan preparation and would likely include some of these practices but with more site specific details. Best management practices developed in activity plans would be subject to further environmental analysis during development."

Page A-14, number 1, The following sentence should appear prior to "An Integrated Weed Management ...." All authorized users will be required to control or manage noxious and problem weeds as directed by the Area Manager.

Page A-14, Reclamation Number 7, Wording should be: All seed must be certified unless specifically waived by the Area Manager.

CHANGES TO APPENDIX B

Page B-3, Table B-1, change acreage figure under Alternative A to "7,200".

Page B-3, Table B-1, change acreage figure under Alternative D to "8,900".

Page B-4, Table B-1, NSO-03, change acreage figure under Alternative C to "791,300".

Page B-10, Table B-1, NSO-19, second column, add "Deer Gulch (1,810 acres)" and "Lower Greasewood (210 acres)" following "(2,680)"; sixth column (Alternative C), replace "4,310" with "6,330"; seventh column (Alternative D), delete "N/A See CSU-05" and insert "6,330".

Page B-11, Table B-1, NSO-21 (second row), second column, add "(1,440 acres), Duck Creek (3,430 acres)" following "Ryan Gulch"; sixth column (Alternative C), replace "1,440" with "4,870"; seventh column, replace "N/A" with "4,870".

Page B-29, Table B-2, row 1, cell 9, paragraph 4, add after last sentence, "Waivers will also be applied to delineated summer ranges below 2250 meter elevations".

Page B-30, Table B-3, row 2, cell 2, line 3, delete "soils" and replace with "slope".

Page B-31, Table B-3, row 2, cell 8, line 1, delete "slopes greater than 35 percent comprised of soils considered to be fragile and also for".

Page B-33, Table B-3, CSU-04, second column, delete "Designated ACECs- Deer Gulch, Lower Greasewood Creek" and replace with "Proposed ACECs- White River Riparian, Coal Oil Rim, Oil Springs Mountain, and East Douglas Creek[2]"; fourth and fifth columns, replace "2,020" with "N/A"; sixth and seventh columns, replace "2,020" with "70,030".

Page B-33, CSU-05, delete in entirety.

Page B-34, CSU-07, delete in entirety.

Page B-34, CSU-08, delete in entirety.

Page B-36, CSU-10, delete in entirety, stipulation changed to a lease notice (LN-3) in PRMP.

Page B-37, CSU-11, acreage figure of 58,790 should be changed to 53,830 in alternative B, C, and D.

Page B-43, CSU-16, delete in entirety, stipulation changed to a lease notice (LN-2) in PRMP.

Page B-44, CSU-18, delete in entirety, protection identified was in error.

Page B-45, Table B-4, row 3, cell 3, delete "and" and add after "River", "Chinle, Glen Canyon, Cedar Mountain, Morrison, Browns Park, and Mowry Shale Formations."

CHANGES TO APPENDIX E.

Page E-2, Table E-1, row 5, cell 4, delete "SRMA" and replace with "ACEC".

CHANGES TO APPENDIX I

Page I-25, delete last sentence.

TABLE CHANGES

Changes to Summary Table S-1

Page S-3, Table S-1, third row, third paragraph, delete first sentence that begins with Sediment.

Page S-4, Table S-1, add "by filing for water rights under current Colorado law." to the end of the first sentence in row two, Water Rights.

CHANGES TO TABLES IN CHAPTER ONE.

None.

CHANGES TO TABLES IN CHAPTER TWO.

Page 2-7, Table 2-5, row 3, cell 1, "Trail Canyon" should be changed to "Brush Creek".

Page 2-20, Table 2-17, first column, first row, "A-horizon", add footnote "[1] Applies to only those soil series which normally have an A-horizon".

Page 2-22, Table 2-18, second column, last row, add "other" between "invading" and "ecological".

Page 2-29, Table 2-22, A number of the figures in this table were updated with current data. The updated table is now Table 3-1 on page 3-8 of the PRMP.

Page 2-39, Table 2-27, sixth row, third column, delete in entire statement and replace with "All potentially impacting land use activities would be required to avoid all high, medium and low priority riparian habitats, unless it is determined through a site specific analysis that: (a) The activity would not degrade or forestall attainment of the proper functioning condition of the riparian area, or (b) Could mitigate impacts in a manner that would meet minimum objectives for the system if the riparian areas could not be avoided. Existing activity and/or facilities negatively affecting the proper functioning condition of a riparian or wetland habitat, as determined through site specific analysis, may be required to undertake remedial mitigation or relocate outside high and medium priority riparian habitats".

Page 2-39, Table 2-27, third column, seventh row, second sentence, add "if it is determined through a site specific analysis that the road is having an adverse impact upon the proper functioning condition of the riparian or wetland area." following zones.

Page 2-59, Table 2-39, combine "row 1" with "row 2". Deleting cell 1 and cell 4 in row 2.

Page 2-62, Table 2-41, row 1, cell 5, add "personal use" between "on" and "firewood".

Page 2-63, Table 2-41, row 2, cell 2, change "0-25 miles" to "0.25 mile".

Page 2-64, Table 2-41, row 1, cell 4, delete "see Appendix B" and add "But with different exception, modifications, and waiver language (see Appendix B)".

Page 2-64, Table 2-41, row 2, cell 4, delete "see Appendix B" and add "But with different exception, modifications, and waiver language (see Appendix B)".

Page 2-69, Table 2-43, row 1, cell 3, delete "by the year 2000" and add "within 10 years of RMP approval".

Page 2-71, Table 2-44, row 2, cell 4, add "on federal lands" between "actions" and "that".

Page 2-71, Table 2-44, row 2, cell 4, add "overall" between "the" and "extent".

Page 2-72, Table 2-44, row 1, cell 3, add "BLM lands within the" between "Manage" and "recovery".

Page 2-72, Table 2-44, row 1, cell 4, delete "lassos" replace with "lessees".

Page 2-73, Table 2-45, row 1, cell 4, delete "would be applied".

Page 2-73, Table 2-45, row 1, cell 4, delete "uses" and add "actions occurring on BLM" between "land" and "within".

Page 2-73, Table 2-45, row 2, cell 4, add "BLM lands within" between "on" and "the".

Page 2-74, Table 2-45, row 1, cell 4, delete "see Appendix B" and add "but with different exception, modification and waiver language (see Appendix B)".

Page 2-74, Table 2-46, row 1, cell 3, delete "by 1996" and add "within five years".

Page 2-74, Table 2-46, row 1, cell 3, delete "by 2000" and add "within 10 years of RMP approval".

Page 2-79, Table 2-51, row 3, cell 1, delete "Highway 132" and replace with "County Road 8".

Page 2-85, Table 2-56, row 2, under "Major Management Actions" add "vehicle" between "no" and "camping".

Page 2-86, Table 2-57, row 2, cell 2, move paragraph 2 to cell 4 under paragraph 1.

Page 2-86, Table 2-57, row 3, cells 3 & 4, delete.

Page 2-87, table 2-58, column 2, row 6; column 3, row 6; column 4, row 6; and column 5, row 6, change "6,260" to "7,600".

Page 2-87, table 2-58, column 2, row 7 change "N/A" to "3,000", column 3, row 7, change "N/A" to "3,000", column 4, row 7 and column 5, row 7, change "9,300" to 3,000".

Page 2-91, Table 2-61, row 2, delete.

Page 2-94, Table 2-63, column 1, row 13, change "site" to "District".

CHANGES TO TABLES IN CHAPTER THREE.

Page 3-9, Table 3-10, footnote, delete "22" and replace with "2.2".

Page 3-32, Table 3-23, delete "Table 3-23. No Minimum In-Stream Flow Requirements" and replace with "Table 3-22A. Minimum In-Stream Flow Appropriations".

Page 3-36, Table 3-24, Egg Laying Period "Mean" should read "April 13-23".

Page 3-36, Table 3-24, Hatching Period "Mean" should read "May 18-28".

Page 3-36, Table 3-24, Fledgling Period "Mean" should read "July 1-11".

Page 3-40, table 3-29, delete reference to "all WSAs" including "limited-existing trails", "40,633" and "wilderness value protection".

CHANGES TO TABLES IN CHAPTER FOUR.

Page 4-148, Table 4-14, delete in entirety.

MAP CHANGES

CHAPTER ONE.

None.

CHAPTER TWO.

Map 2-3, No Surface Occupancy Stipulations, has been modified. The revised map is included in the Final RMP as Map 3-1, No Surface Occupancy.

Map 2-4, Timing Limitations, has been modified. The revised map is included in the Final RMP as Map 3-2, Timing Limitations.

Map 2-5, Controlled Surface Use, has been modified. The revised map is included in the Final RMP as Map 3-3, Controlled Surface Use.

Map 2-11, Special Status Plants, has been modified. The revised map is included in the Final RMP as Map 3-4, Special Status Plants.

Map 2-12, Allotment Categorization, has been modified. The revised map is included in the Final RMP as Map 3-5, Allotment Categorization.

Map 2-13, Wild Horse Herd Management Areas and Herd Areas, has been modified. The revised map is included in the Final RMP as Map 3-6, Wild Horse Management Areas.

Map 2-21, Motorized Vehicle Travel, has been modified. The revised map is included in the Final RMP as Map 3-8, Motorized Vehicle Travel.

Map 2-23, Proposed Major Utility Corridors, has been modified. The revised map is included in the Final RMP as Map 3-12, Proposed Designated Corridors.

Map 2-26, Existing and Proposed Withdrawals and Water Reserves, has been modified. The revised map is included in the Final RMP as Map 3-13, Withdrawals.

Map 2-27, Fire Management Areas, has been modified. The revised map is included in the Final RMP as Map 3-14, Fire Management.

CHAPTER THREE.

None.

CHAPTER THREE
DETAILED DESCRIPTION OF THE PROPOSED MANAGEMENT PLAN

INTRODUCTION

The Proposed Resource Management Plan (PRMP) updates and integrates the Area's land use planning documents into one comprehensive plan that provides a framework for managing and allocating BLM administered lands and resources for the next 20 years.

In addition to identifying management direction, the PRMP meets other specific objectives, such as designating off highway vehicle use and analyzing the suitability of selected stream segments for inclusion into the National Wild and Scenic Rivers System.

The PRMP decisions are basically the same as the Preferred Alternative (Alternative D) in the DRMP. However, some changes have been incorporated that reflect BLM's analysis of public comments and internal BLM review. The PRMP represents a mix of actions that, in the judgement of the preparers, best resolves the issues and management concerns that resulted in the preparation of the plan. Under the PRMP, resource use would be managed under the multiple use concept within constraints identified to integrate ecological, economic, and social principles in a manner that safeguards the long term sustainability, diversity, and productivity of the land.

Monitoring will be a critical part of the plan implementation process. Information gained through monitoring will be used to test the effectiveness of the plan decisions and to help facilitate a more dynamic and responsive plan.

All actions proposed in this plan would comply with applicable state and federal laws, regulations, and policies.

AIR QUALITY MANAGEMENT

Objective

BLM actions shall be implemented in a manner to minimize impacts to air quality.

Management

At a minimum, BLM actions shall comply with all applicable federal, state, and local air quality laws, regulations and implementation plans. For example, prescribed burns must comply with BLM Manual Section 7733 - *Air Quality Maintenance Requirements to minimize air quality* impacts from resulting particulates (smoke). This procedure requires obtaining an approved open burning permit from the state prior to implementation. Site specific project plans affecting BLM and adjacent lands would be reviewed to assure compliance with the above objective. Future impacts from BLM actions would be assessed prior to implementation. Mitigating measures would be incorporated into project proposals when necessary to reduce potential impacts.

Implementation

BLM actions shall be implemented in a manner to minimize impacts to air quality.

Actions include but are not limited to:

1) Cooperation with the State of Colorado to meet the goals identified in the State Implementation Plan.
2) Limiting unnecessary emission from existing and point or non-point pollution sources.
3) Preventing significant air quality deterioration in selected areas.

SOILS MANAGEMENT

Objective

Prevent impairment of soil productivity due to accelerated soil erosion and physical or chemical degradation resulting from surface use activities. Stabilize and rehabilitate watersheds where accelerated erosion and degradation have resulted in unacceptable resource conditions.

Management

Proposed surface-disturbing activities would be analyzed to determine suitability of soils to support or sustain such activities. Activities would be designed to minimize soil loss by applying conditions of approval listed in Appendix C. Activities proposed on steep slopes or fragile soils would be subject to special surface stipulations designed to reduce or prevent watershed problems. The surface stipulations are no surface occupancy (NSO) and controlled surface use (CSU). Appendix B includes additional information about these surface stipulations. Table 2-2 of the Draft RMP, lists applicable acres for each surface stipulation for soils by alternative.

Fragile watershed areas that are contributing to water quality problems in the Colorado River Basin would be identified for treatment to reduce or prevent accelerated erosion and salt contributions to the Colorado River.

Implementation

Conditions of approval listed in Appendix C would be used in the design of all BLM-initiated surface-disturbing activities and for developing conditions for all new land use authorizations.. Legal descriptions for acreage identified in Appendix B would be placed in a data base. The data base would be utilized by CSO personnel to attach special surface stipulations to all new oil and gas leases.

Watershed treatments would be included in integrated activity plans.

HYDROLOGY MANAGEMENT

Surface Water

Objective

Maintain and improve both water quality and quantity to be compatible with existing and anticipated uses and to comply with applicable state and federal water quality standards.

Management

Maintain or improve the condition of fragile watersheds which are major BLM land contributors of sediment and salinity to the Colorado River System.

Protect and improve the condition of streams that lack channel stability and those streams that have been identified as not meeting state water quality standards.

Compliance and consistency with the state non-point source management plan, state water quality standards, and the *Clean Water Act* (CWA) is mandatory. The CWA places responsibility for protecting water quality with the states and requires federal agency compliance. The Colorado Non-point Source Management Program was developed to provide an implementation strategy for treatment of water quality problems identified in the Colorado Non-point Source Assessment Report. To comply with these requirements, conditions of approval (COA) and other measures would be undertaken to reduce pollutant loadings. Appendix C contains COAs that would be applied as appropriate, to approved authorizations.

The state also has adopted water quality standards and effluent limitations. These are included in the basic standards and methodologies for surface water and apply to all state waters. Any water discharged on the surface by industry is controlled by the State of Colorado's National Pollutant Discharge Elimination System (NPDES) permits that are issued in accordance with the Classification and Numeric Standards. As required by the *Clean Water Act*, Colorado has also adopted an Anti-degradation Policy which applies to both surface and groundwater. The policy requires state waters to be maintained at existing quality unless it can be demonstrated that a change is necessary. Other committed mitigation includes compliance with Office of Surface Mining regulations for coal leasing, State Water Quality Standards and U.S. Army Corps of Engineers Section 404 permit requirements.

Fragile watersheds are listed in Table 2-3 of the Draft RMP. The decisions developed in existing watershed activity plans (WAPs) would be implemented. Additional fragile watersheds would be identified for WAPs and incorporated into integrated activity plans (IAP).

Table 2-4 in the Draft RMP lists perennial streams that do not meet state water quality standards. These streams are contributing to sediment and increased salinity in the Colorado River Basin and are considered priority stream segments. They have been identified to receive special treatments and management considerations that will be developed through IAPs. Treatments would include the following: (1) Design BLM-initiated projects and require companies to design their projects using conditions of approval listed in Appendix C; (2) use Appendix B stipulations as conditions of approval for land use authorizations and stipulations on oil and gas leases; and (3) prepare activity plans that address watershed treatments.

Encourage the establishment of an association of public land users to help coordinate, monitor and recommend mitigation measures for actions affecting water resources.

Implementation

All BLM initiated projects would be designed using conditions of approval listed in Appendix C. Companies would be required to use the conditions of approval listed in Appendix C when designing their proposed projects. Surface stipulations listed in Appendix B would be attached to all new oil and gas leases and other surface-disturbing activities.

Integrated activity plans would be developed that address watershed treatments. Private landowners and other state and federal land management agencies would be encouraged to participate in the preparation of these activity plans.

Ground Water

Objective

Ensure the integrity of aquifer systems in both quantity and quality.

Management

Condition BLM projects and commodity extraction activities that may affect usable subterranean water to prevent degradation by toxins and other impurities.

Implementation

Design BLM-initiated projects using the conditions of approval in Appendix C. Companies would also be required to use conditions of approval listed in Appendix C in designing their proposed projects. Place appropriate conditions of approval on groundwater usage and disposal. All activities and associated mitigation would be consistent with State and Federal laws.

Encourage the establishment of an association of public land users to help coordinate, monitor and recommend mitigation measures for actions affecting groundwater resources.

Water Rights

Objective

Protect water sources that support BLM resource programs by obtaining legal water rights as necessary. Continue to work with the State of Colorado to identify and survey streams having high public values.

Management

Water rights would be acquired for use of water in support of BLM programs. Recommendations would be made to the Colorado Water Conservation Board for instream flow surveys to ensure proper protection of flow-dependent resources on BLM stream segments. Table 2-5 in the Draft RMP identifies high priority stream segments currently suitable for instream flow surveys. On high priority cold water fisheries that already have instream flows, BLM would work with the Board, when possible, to obtain a more senior right. The BLM will file appropriate documents to acquire instream flow rights when necessary.

Implementation

All BLM-permitted projects would be designed in accordance with the appropriate BLM manual(s). When site-specific conditions require supplemental guidance, the COAs listed in Appendix C would be applied as minimum standards.

BLM would identify suitable depleted or dry oil and gas wells for conversion to water wells. The identification would occur at the time a Notice of Intent to Abandon is received. Operators/Lessees of the identified wells would be required to use the appropriate COAs listed in Appendix C to plug back to the aquifer of interest prior to receiving a release of liability on the selected well.

Watershed activity plans would be incorporated into integrated activity plans. A comparison of decreed water rights versus cumulative water demand would be conducted as required by allotment, recreation, wildlife, riparian, and wilderness planned actions. In locations where land management demands exceed the decreed supply by more than 25 percent, water right filings would be initiated to bring demand in line with supply.

Private landowners and other state and federal land management agencies would be encouraged to participate in preparing the activity plans.

Water Depletions

Objective

Assure BLM administered projects are in compliance with USFWS Programmatic Biological Opinion for minor water depletions in the Colorado River Basin.

Management

Water depletions in the upper Colorado River Basin resulting from BLM-permitted projects would be calculated using guidelines listed in Table 2-6 of the Draft RMP. Compensation for depletions in the form of a one-time payment per project would be made to the recovery implementation program for endangered fish species in the upper Colorado River Basin. Water depletions resulting from existing BLM approved projects would be exempt from compensation so long as progress continues to be made in the recovery of the endangered fish species.

Based on a BLM and U.S. Fish and Wildlife Service (USFWS) programmatic biological assessment (PBA), formal consultation required by Section 7 of the *Endangered Species Act* (ESA) would not be required for individual water-depleting projects in the upper Colorado River Basin until those projects reach a cumulative total of 2,900 acre-feet. Formal consultation would be required, however, for individual projects that would deplete more than 125 acre-feet per year or adversely impact water quality.

Implementation

The NEPA document prepared for any proposed project would calculate depletions and make a determination of whether formal Section 7 consultation would be required. The water depletion would be recorded in the Resource Area office, and a report listing the annual water depletions would be submitted annually to the BLM Colorado State Office. Only those projects for which BLM has discretionary decision-making authority would be recorded.

BLM would initiate formal Section 7 consultation upon or prior to: (1) reaching or exceeding a cumulative water depletion total of 2,900 acre-feet; (2) permitting a single project that could result in average annual depletions exceeding 125 acre-feet; and (3) authorizing projects that would adversely impact water quality.

Each payment would be accompanied by a cover letter that identifies the project, the biological opinion that requires payment, amount of payment enclosed, check number, and any special conditions identified in the biological opinion relative to disbursement or use of the funds.

MINERALS MANAGEMENT

Oil and Gas

Objective

Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values.

Management

The three categories of lands that would affect oil and gas leasing are:

1) Non-discretionary no lease areas (83,720 acres). Non discretionary lands include the six wilderness study areas and the National Park Service's Harper's Corner Road withdrawal;

2) areas available for leasing with special stipulations (1,552,958 acres). Appendix B contains a list of the special stipulations that would apply to this category of land. The stipulations include no surface occupancy (143,083 acres), timing limitations (912,455 acres), and controlled surface use (725,339 acres). Overlap occurs between the acreages of these three types of stipulations ; and

3) areas available for leasing utilizing standard lease terms (168,486 acres). The standard lease terms and conditions are included on the lease form and give the Area Manager the authority to modify operations at the time they are proposed. The appropriate COAs contained in Appendix C can be used to mitigate site specific impacts on resources not needing special stipulation protection.

Lease notices have also been developed to help alert prospective lessees of special resources that may be present and need consideration when planning operations. These items are typically limitations that already exist in law, regulation, or operational order.

Implementation

Surface stipulations and lease notices would be entered into a computer data base by legal description. The BLM Colorado State Office leasing section personnel would utilize the data base to append applicable stipulations and notices to new leases.

An environmental analysis document would be prepared for all Applications for Permit to Drill (APD) and Sundry Notices (SN) proposing new surface disturbance or unique and unusual downhole workover operations. A decision would be made through the environmental document whether to deny or approve the planned operation, or to modify or waive an existing lease stipulation.

Exemptions are handled administratively in accordance with the language included in the specific stipulation. Mitigation developed through the analysis process would be added to the APD or SN as a Condition of Approval. It should be noted that a stipulation could be excepted, modified, or waived as stated in the stipulation, without preparing an RMP amendment.

Oil Shale

Objective

Provide for a prudent and planned future leasing and development program for the oil shale resource.

Management

The oil shale management decisions developed in the Piceance Basin Resource Management Plan (March 1985) are carried forward into this document. A summary of those decisions follows. A total of 223,860 acres would be available for oil shale leasing. Of this amount, 39,140 acres would be available for open pit development. An additional 70,820 acres would be made available for multimineral (oil shale, nahcolite, and dawsonite) leasing following development of acceptable multimineral recovery technology.

At the discretion of the Secretary of Interior, research lease tracts would be considered within the multimineral zone, based on the merits of the technology proposed. The Secretary of Interior could also propose research tract development to further the goals of a federal energy policy. No definitive limits on research tract size would be set forth at this time. No commercial-scale operations would be permitted on a research tract lease. However, if the research tract technology successfully demonstrates an adequate multimineral reserve recovery, the Secretary of Interior would have the discretion of expanding the research tract into a commercial multimineral lease.

All oil shale leasing and development would be subject to the carrying capacity concept described in the DRMP and developed in the Piceance Basin Resource Management Plan. Additional NEPA analysis would be required prior to any lease offering.

Implementation

The two existing prototype leases would be developed subject to their approved Detailed Development Plans. Future leasing would be dependent upon promulgation of final regulations for the administration of federal oil shale resources. The regulations would provide procedures for delineating and selecting tracts to be offered for competitive bid. Proposed open pit lease tracts would need to include a contingency plan for handling disposal problems associated with overburden and spent shale. Additional leasing would not be considered until the existing federal lease tracts and private oil shale projects were being diligently developed or a national energy crisis materialized. Appropriate surface stipulations identified in Appendix B would be incorporated into the mine plan approval process.

Sodium

Objective

Facilitate the orderly and environmentally sound development of the sodium resources occurring on public lands.

Management

The decisions developed for the sodium minerals in the Piceance Basin Resource Management Plan are carried forward into this document with the following exceptions: 1) The Piceance Dome area (42,420 acres) would not be available for leasing, and 2) the multimineral zone (70,820 acres) would be reserved for multimineral leasing. A summary of the other decisions follow: 1) Approximately 106,760 acres of sodium resource would be available for leasing; 2) lease offerings would be scheduled based on demand and progress in developing the 16,620 acres currently under lease; 3) lands within the multimineral zone would be available for noncommercial research tracts that would test technology for multimineral recovery; 4) research tracts could be re-delineated into commercial lease tracts upon the successful demonstration of multimineral recovery.

Implementation

The existing leases would be managed under the terms and conditions of the lease and approved mine plans. Additional environmental documentation would precede the offering of new leases. Sodium development would be tied to the carrying capacity thresholds identified in the Piceance Basin RMP. Appropriate surface stipulations identified in Appendix B would be incorporated into the mine plan approval process.

Coal

Objective

Ensure that federal coal resources identified as acceptable for further consideration for coal leasing, are available for exploration, leasing and development.

Management

The 1981 Coal Amendment to the White River Resource Area Land Use Plan, conducted a suitability review of recoverable coal deposits. The decisions pertaining to coal resources developed in that document are carried forward into this PRMP. The Coal unsuitability criteria found at 43 CFR 3461 were not reapplied at the time this PRMP was developed. The decisions developed in the 1981 Amendment are summarized as follows. Of the 172,700 acres to which the unsuitability criteria were applied, 11,470 acres were found to be unsuitable for coal mining, 43,380 acres were determined to be suitable for underground mining only, and 117,850 acres were suitable for both surface and underground mining. Decisions proposed in this document would affect an additional 600 acres that would be unavailable for leasing based on multiple use resource conflicts. In addition, 10,060 acres have been leased since the 1981 Amendment was released. This leaves 150,570 acres that are carried forward for coal leasing consideration in this PRMP.

Implementation

Coal leases are issued through the competitive leasing process. In previous land use planning documents, leasing was based on production goals from delineated tracts within defined coal regions. The coal region concept was dropped in the 1980s in favor of leasing on application. Leasing on application involves the submittal of an application, preparation of an environmental analysis document, a public hearing on the application and consultation with the Governor's Office. The acreages carried forward would likely change when coal leasing applications are received because the unsuitability criteria would be reapplied at that time. If the application satisfactorily meets

the requirements of these steps, a lease sale is held subject to 43 CFR 3422. The appropriate surface stipulations identified in Appendix B would be applied to the lands identified as acceptable for further consideration for coal leasing. After these lands were leased, the stipulations would be incorporated into the mine plan through mitigation developed jointly between the lessee, BLM, and the State of Colorado.

Mineral Materials

Objective

Facilitate the orderly and environmentally sound development of mineral material resources.

Management

Mineral materials can broadly be defined as sand and gravel, outcrops of shale and sandstone, common varieties of clay, talus slope cobbles and boulders, or virtually any rock material weathering at the surface, including soil. Therefore, most of the surficial deposits of inorganic materials occurring in the Resource Area could be considered to fall under mineral materials management. The occurrence of good quality sand and gravel is relatively rare on BLM administered lands. The BLM does not have a reliable inventory of these deposits, consequently, disposal actions are confined to applications received from individuals, companies, or state and local governments.

Suitable sand and gravel deposits in the Rangely area would be classified as a high mineral material demand area. An inventory would be initiated and mineral materials within this area would be given top priority for development.

Implementation

Environmental analysis would be conducted on all applications received for mineral material disposal actions. Withdrawals, WSAs, riparian areas, and NSO areas identified in the stipulations in Appendix B would be closed to disposal actions and these closed areas encompass approximately 221,500 acres. All applications occurring in one or more of the above areas would be denied. Applications occurring in areas outside those closed areas (approximately 1,643,480 acres) would be subject to the appropriate Timing Limitation and Controlled Surface Use Stipulations contained in Appendix B. Appropriate Conditions of Approval contained in Appendix C would also apply. An inventory of sand and gravel deposits in the Rangely area would be initiated.

Locatable Minerals

Objective

Ensure that lands containing locatable minerals are available for location under the Mining Law of 1872.

Management

The geologic environment in the Resource Area is not favorable for the occurrence of locatable minerals. However, BLM lands not withdrawn or segregated from mineral entry under the Mining Law of 1872 would be open to mining claim location. Several withdrawals and reserves exist that limit the availability of lands for entry. Of the approximate 1,648,770 acres that would be available for location, 997,450 acres are currently withdrawn or unavailable to some extent. The Coal withdrawal of 1910, closes 366,570 acres to nonmetalliferous minerals only, as does 5,480 acres of Federal Water Reserves. The Oil Shale Withdrawal closes 625,400 acres to all mining claim location. If the three wilderness study areas that were recommended to be carried forward as wilderness are designated as wilderness, the Wilderness Act withdraws those areas from location. This would add 41,250 acres to the lands that are unavailable for location.

Implementation

Mining claimants are required to notify the BLM of intentions to develop the claim. All surface disturbing activity occurring on the claim would be subject to the appropriate stipulations identified in Appendix B as well as the Conditions of Approval contained in Appendix C. All Plans of Development would go through an environmental analysis to identify impacts and mitigating measures. All remaining oil shale mining claims would be processed to patent or contested by the year 2000.

HAZARDOUS MATERIALS MANAGEMENT

Objective

To protect the public lands from contamination by hazardous materials, and provide for removal/remediation if public lands become contaminated.

Management

The BLM would comply with all federal and applicable state environmental laws and regulations pertaining to hazardous substances. Actions would be taken to minimize wastes, prevent pollution generated or released on BLM lands, and to minimize the generation, transportation, storage and disposal of hazardous wastes resulting from BLM-approved projects.

All releases on or affecting BLM lands will be required to receive aggressive cleanup and restoration action. All responsible parties releasing hazardous materials would be sought and would be required to conduct site assessments and provide remediation. Where this could not be effectively accomplished, the costs of such actions would be recovered through appropriate civil/criminal court action under applicable environmental laws.

The BLM would take an active role in developing and implementing strategies to minimize waste and prevent pollution on BLM lands and facilities.

Locations of hazardous wastes on BLM lands will be identified through ongoing inventory. High-risk uses of the BLM lands would not be authorized, and unavoidable risks would be managed so as to minimize threats to public health and the environment.

The use of BLM lands for disposal of solid wastes or the treatment, storage, or disposal of hazardous wastes would be prohibited. A demonstrated need for such lands would be reviewed on a case-by-case basis, and where the proposed sites meet all applicable geologic, hydrologic, soil-related, and other applicable environmental requirements, the lands may be conveyed under proper authority, prior to use, for disposal activities.

BLM land users would be urged to include pollution prevention considerations into the siting, design, construction, and operation of

their facilities. Disclosure of the use and disposal of hazardous materials will be required for all BLM actions and authorized uses of the BLM lands.

The BLM would avoid generating or accumulating hazardous wastes. Wastes would be disposed of only at treatment/storage/disposal facilities that are on the Environmental Protection Agency's most current list of approved facilities. The BLM will keep up-to-date inventories of applicable hazardous materials and would closely coordinate with appropriate local emergency planning committees.

Suitable sites would be identified for bio-remediation activities. These sites would be located near major oil and gas development areas such as the White River Dome, Elk Springs, and Rangely. The sites would be located where geologic, hydrologic, and soil-related conditions are conducive to effective bio-remediation activities and where other resource values would not be adversely affected.

Implementation

All of the above actions would become effective and/or take place upon signature of the approved RMP and record of decision.

VEGETATION MANAGEMENT

Plant Communities

Objective

Maintain healthy, diverse and sustainable rangeland and woodland plant communities which provide food, fiber and enjoyment for human use and well being commensurate with the lands capabilities to produce and which conserve healthy, diverse populations of native plants.

Maintain a landscape composed of a plant community mosaic representing successional stages and distribution patterns consistent with the natural disturbance and regeneration regimes. Conserving a site's ability to produce vegetation is key to sustainability.

Management

Management actions would be required to maintain a site's conservation threshold. This is the point at which soil erosion accelerates due to a management influence beyond the site's ability to maintain natural productivity. Management actions would be required to maintain a site above it's conservation threshold. Any plant cover or community which is capable of maintaining the site above the conservation threshold while meeting other land use objectives would be considered a desired plant community (DPC).

Ecological site inventories would be conducted on rangeland and woodland plant communities to determine ecological status. The inventory would be used to determine the potential plant communities that could be supported on a specific site. Of the several plant communities that could be supported on a site, the community that would best meet land use objectives while maintaining the site above it's conservation threshold would be selected as the desired plant community (DPC).

Site specific desired plant communities would be determined in integrated activity plans or similar activity plans prepared following publication of the approved RMP. The goal of determining a desired plant community would be management and/or maintenance of a landscape composed of a plant community mosaic representing successional stages and distribution patterns consistent with the natural disturbance and regeneration regimes. At a minimum, the selected DPC would have to conserve the potential of the site to produce vegetation on a sustainable basis (conservation threshold). It also would have to provide a combination of plant species that would achieve a healthy system as determined by the rangeland health evaluation matrix (Table 2-17 of the Draft RMP).

Table 2-18 of the Draft RMP lists management goals for some types of plant communities. Acceptable DPCs would be an ecological status of high-seral for all rangeland plant communities. An exception would be for wildlife habitat areas where specific cover types are needed. The required cover type in those wildlife habitat areas would be the DPC. The ecological status of a DPC in specified wildlife habitat areas could be lower than high seral. In which case, the DPC would be managed, at a minimum, to maintain an at risk rating (Table 2-17 of the Draft RMP) and have a stable to improving trend in ecological status.

Specific DPC goals for Rangelands - Grassland, Saltbush, Greasewood, and Sagebrush Plant Communities are as follows:

1) Manage present plant composition as DPC on all areas classified as: (a) the PNC, high-seral and healthy mid-seral; (b) sagebrush rangelands with a high- to mid-seral plant community providing suitable habitat for deer winter range, sage grouse, and antelope.
2) Improve the present plant species composition on unhealthy or at risk rangelands to a healthy plant community within 10 years on all areas with a mid-seral and within 20 years on all areas with a low-seral plant community.

Specific DPC goals for Rangelands - Mountain Shrub Plant Communities are as follows:

1) Manage present plant composition on all areas occupied by PNC, high-seral, or healthy mid-seral plant communities as DPC.
2) Manage mature vigorous stands of deciduous shrubs on all blue grouse ranges and on all deer critical summer ranges as the DPC.
3) Manage younger age stands of deciduous shrubs on 30 percent of this plant community as DPC through use of compatible treatment methods.
4) Improve plant composition to a healthy plant community within 10 years for all low-seral plant communities.

Specific DPC goals for Woodlands - Pinyon-Juniper Woodland Plant Community are:

1) Manage present plant composition as DPC within: (a) ACECs, WSAs, RVAs, (b) deer winter ranges to meet animal cover requirements, (c) woodland raptor nesting habitat.
2) Manage forage-producing plant communities on pinyon-juniper woodland sites that have been treated or burned. Retreatment of these areas would be subject to appropriate wildlife mitigation.
3) Reduce the pinyon-juniper tree component where pinyon or juniper has dominated or is invading other ecological sites.
4) The above goals would be considered in the selection of DPCs during activity plan development.

Vegetation in selected areas would be disturbed by permitted surface-disturbing activities or would be manipulated to achieve an improved ecological condition and/or improved forage production. Table 2-19 of the Draft RMP lists the acres of vegetation types projected for disturbance or manipulation over the life of the Final RMP

(approximately 20 years). The projected acreages of manipulations and the treatment method identified in Table 2-19 are only estimates of what could be treated and the method of treatment. The actual acreage treated and treatment method to be utilized would be identified during development of activity plans and evaluated in a site specific environmental analysis. Table 2-20 in the Draft RMP lists the estimated amount of disturbance or manipulation that would require reclamation using the recommended seed mixes listed in Appendix C.

Only native plant species would be used for reseeding of disturbed areas within the Blue Mountain/Moosehead geographic reference area (GRA), within wilderness study areas (WSAs), and within designated areas of critical environmental concern (ACECs). In the remainder of the Resource Area, native plant species would be strongly encouraged for reseeding disturbed areas that are not threatened by establishment of exotic or noxious plant species. Naturalized plant species would be allowed for reseeding on "at risk" and "unhealthy" rangelands and grazable woodlands.

An estimated 50 percent of the rangeland and wildlife improvements in pinyon/juniper communities and 10 percent of rangeland and wildlife improvements in mountain shrub communities would use recommended seed mixtures for revegetation. An estimate of 90 percent of all mineral development disturbances would be revegetated at some point in time using recommended seed mixes.

An average of 50 percent of the annual above ground forage production would be reserved for maintenance of the plant's life cycle requirements, watershed protection, visual resource enhancement, and food and cover requirements of small game and nongame wildlife species. The remaining 50 percent of the forage base would be allocated among predominant grazing users.

Forage allocations made in the record of decision for the 1981 White River Resource Area Grazing Management *Final Environmental Impact Statement* would remain the same. Please see Table 3-1 on page 3-8, for updated allocation figures.

Increased forage needs for the increase in big game populations experienced since the 1981 allocation would be provided, as long as the rangelands and grazable woodlands upon which the increased allocation would be based are in a "healthy" or "at risk" rating with all "at risk" lands having an improving trend index. Specific forage allocations for additional forage needs to support the proposed big game population increases would be evaluated in site specific integrated activity plans. Interim increased forage needs for wild horses would come from current livestock forage allocations within affected herd areas.

Implementation

Activities would be analyzed to determine whether the objectives for a particular plant community could be met. Activities would be considered if they could meet the plant community objective. Activities that could not meet the plant community objective would be denied or modified so that they could meet the objective.

Ecological status would be determined following publication of the approved RMP by use of BLM ecological site inventory procedures. Specific objectives and/or DPCs for plant communities would be developed in integrated activity plans. Priorities for inventory would be the same as those for implementation of integrated activity plans.

Specific surface disturbances or vegetation manipulations would be identified in project plans or activity plans with site specific analysis conducted in an environmental analysis. Use of native or non-native plant species in reclamation would be addressed in site-specific project analysis.

Changes in the 1981 forage allocations would be identified in activity plans or integrated activity plans. The average 50 percent above ground annual forage production available for allocation is based upon the following grazing utilization levels on key forage plant species averaged on a grazing allotment basis:

Key Species--Grass

— 40 percent averaged utilization for the grazing period from April 1 to June 15 each grazing year.

— 40 to 60 percent averaged utilization for the grazing period from June 15 to September 15 each grazing year.

— 60 percent averaged utilization for the grazing period from September 15 to March 31 each grazing year.

Key Species--Browse

— 40 percent averaged utilization for the grazing period from April 1 to September 30 each grazing year.

— 50 to 60 percent averaged utilization for the grazing period from October 1 to March 31 each grazing year.

It is recognized that these utilization levels are used as averages to identify an appropriate allocation mix among grazing/browsing animals. Site specific occurrences of over utilization may occur and may create resource conflicts that can not be resolved by changing the forage allocation mix. Specific resource conflicts will be identified and corrective management sought through development of activity plans or integrated activity plans.

Noxious and Problem Weeds

Objective

Manage noxious weeds in the White River Resource Area so that they cause no further negative environmental, aesthetic or economic impact.

Management

In concert with private landowners and state and local governments, use all available integrated pest management techniques including biological, mechanical and chemical methods for the management of noxious weeds. Management would be consistent with the Record of Decision, *Vegetation Treatment on BLM Lands in Thirteen Western States* EIS and the priorities established therein. A key element of management would be the preventative measure of designation of weed-free zones. Noxious and problem weeds to be managed would include, but not be limited to, all species listed in the Draft RMP, p. 2-32.

Implementation

In accordance with the White River Resource Area Noxious Weed Management Plan, noxious weeds would be managed with particular emphasis on a coordinated, cooperative approach. Implement practices that would prevent or reduce the extent and occurrence of noxious and problem weeds throughout the Resource Area.

Table 3-1 Range Forage Allocation by Geographic Reference Area

Grazing User	1981 Grazing EIS Allocation (Alternative A)				Alternative B			Alternative C			Alternative D		
	Short-Term		Long-Term		Animal Populations [1]	AUM Required [2]	Difference (Surplus+ or Deficit-) [3]	Number Animal [4]	AUMs Required [5]	Difference (Surplus+ or Deficit-) [3]	Number Animal [6]	AUMs Required [7]	Difference (Surplus+ or Deficit-) [3]
	Number Animals	Number AUMs	Number Animals	Number AUMs									
Blue Mountain/Moosehead Geographic Reference Area													
Livestock	--	9,850	--	12,973	--	12,973	0	--	12,973	0	--	12,973	0
Pronghorn	7	3	7	3	17	7	-4	22	9	-6	22	9	-6
Deer	1,478	3,087	1,918	3,897	1,887	3,080	+817	2,124	3,467	+430	2,124	3,467	+430
Elk	47	148	52	156	445	1,648	-1,492	327	1,213	-1,057	327	1,213	-1057
Wild Horses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,532	13,088	1,977	17,029	2,349	17,708	-679	2,473	17,662	-633	2,473	17,662	-633
Wolf Creek/Red Wash Geographic Reference Area													
Livestock	--	19,197	--	19,197	--	19,197	0	--	19,197	0	--	19,197	0
Pronghorn	183	175	188	183	175	159	+24	223	206	-23	223	206	-23
Deer	1,007	1,067	1,314	1,354	3,821	4,483	-3,129	4,300	5,043	-3689	4,300	5,043	-3,689
Wild Horses	0	0	0	0	0	0	0	0	0	0	0	0	0
Elk	38	165	41	173	1,130	2,320	-2,147	831	1,706	-1,533	831	1,706	-1,533
Total	1,228	20,604	1,543	20,907	5,126	26,159	-5,252	5,354	26,152	-5,245	5,354	26,152	-5,245
Crooked Wash/Deep Channel Geographic Reference Area													
Livestock	--	12,554	--	14,998	--	14,998	0	--	14,998	0	--	14,998	0
Pronghorn	29	21	29	21	22	11	+10	23	12	+9	23	12	+9
Deer	8,659	8,940	9,493	9,545	4,376	4,603	+4,942	4,676	4,916	+4,629	4,676	4,916	+4,629
Elk	137	380	152	405	1,950	4,881	-4,476	1,431	3,582	-3,177	1,431	3,582	-3,177
Wild Horses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	8,825	21,895	9,674	24,969	6,348	24,493	+476	6,130	23,498	+1,471	6,130	24,498	+1,471
Danforth Hills/Jensen Geographic Reference Area													
Livestock	--	10,924	--	10,924	--	10,924	0	--	10,924	0	--	10,924	0
Pronghorn	--	--	--	--	--	--	--	--	--	0	--	--	0
Deer	2,439	4,646	2,599	4,813	2,132	4,432	+381	1,863	3,958	+855	1,863	3,958	+855
Elk	866	2,103	855	2,115	953	2,882	-767	911	2,759	-644	911	2,759	-644
Wild Horses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3,305	17,673	3,484	17,852	3,085	18,238	-386	2,774	17,641	+211	2,774	17,641	+211
Piceance Basin Geographic Reference Area													
Livestock	--	44,701	--	58,410	--	58,410	0	--	58,410	0	--	58,410	0
Deer	28,889	35,739	32,435	39,187	18,700	22,032	+17,155	16,678	20,036	+19,151	16,678	20,036	+19,151
Elk	498	1,296	578	1,450	2,164	5,209	-3,759	1,378	3,311	-1,861	1,378	3,311	-1,861
Wild Horses	100	1,500	100	1,500	50	1,500	0	170	2,550	-1,050	100	1,500	0
Total	29,487	83,236	33,113	100,547	20,914	87,151	+13,396	18,226	84,307	+16,240	18,156	83,257	+17,290
Douglas/Cathedral Geographic Reference Area													
Livestock	--	29,259	--	30,306	--	29,259	0	--	29,259	0	--	29,259	0
Pronghorn	--	--	--	--	--	--	--	--	--	0	--	--	0
Deer	2,922	6,096	3,767	7,592	11,724	21,313	-13,721	9,385	17,061	-9,469	9,385	17,061	-9,469
Elk	198	653	218	705	1,236	3,805	-3,100	648	2,162	-1,457	648	2,162	-1,457
Wild Horses	40	600	40	600	20	600	0	150	2,250	-1,650	40	600	0
Total	3,160	36,608	4,025	39,203	12,980	54,977	-15,774	10,183	50,732	-11,529	10,073	49,082	-9,879

[1] Shows increases (1990 data) in big game animal populations.
[2] AUMs needed to sustain 1990 big game populations.
[3] Surplus or deficit is compared with Alternative A long-term allocations.
[4] Reflects Colorado Division of Wildlife (CDOW) most current long term big game population objectives and proposed increase in wild horse populations.
[5] AUMs needed to sustain most current long term CDOW population objectives on Public Land.
[6] Shows CDOW most current long term big game population objectives.
[7] AUMs needed to sustain most current long term CDOW population objectives on Public Land.

Riparian Areas

Objective

Achieve an advanced ecological condition on all high and medium priority riparian habitats except where resource management objectives, including proper functioning condition, require an earlier successional stage. The goal would be to have 75 percent of all riparian areas in the Resource Area in proper functioning condition within five years of approval of the RMP, Record of Decision.

Management

The functioning condition of riparian-wetland areas is a result of interaction among geology, soil, water, and vegetation. Definitions of riparian functioning condition as used in this document include:

Proper Functioning Condition (PFC): Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to help: 1) dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; 2) filter sediment, and aid floodplain development; improve flood-water retention and groundwater recharge; 3) develop root masses that stabilize streambanks against cutting action; 4) develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature needed for fish production, waterfowl breeding, and other uses; and 5) support greater biodiversity.

Nonfunctional Condition: Riparian-wetland areas that clearly are not providing adequate vegetation, landform, or large woody debris to dissipate stream energy associated with high flows and thus are not accomplishing 1 through 5, as listed above. The absence of physical attributes, such as a floodplain, are indicators of non-functioning condition.

Functional - At Risk: Riparian-wetland areas that are in functioning condition but an existing soil, water, or vegetation attribute makes them susceptible to degradation.

All high and medium riparian areas would be inventoried to determine their ecological status, functioning condition, and potential riparian plant community. Desired riparian plant community for high and medium priority riparian would be developed in activity plans or integrated activity plans. Draft RMP Tables 2-24 and 2-25, respectively, list high and medium priority riparian habitats. Table 2-26 of the Draft RMP lists low priority riparian habitats.

640 acres of high and medium priority riparian areas would need to be improved.

Streambank stabilization projects would be identified and initiated through activity plans.

Systems and land improvements that optimize animal distribution and reduce livestock concentration in important riparian areas would be identified and developed in activity plans.

Wildlife habitat improvements recommended in the Piceance Basin RMP would continue to be developed through activity plans.

Fenced exclosure on Trapper's Creek would be maintained to exclude livestock until riparian objectives are achieved. Once objectives are achieved, limited grazing use could be allowed inside exclosure to maintain riparian objectives.

The need for additional exclosures and other riparian improvement projects would be identified during development of activity plans and allotment management plans that would address the improvement objectives developed for priority riparian habitats. These plans would use best management practices needed to achieve desired improvement on a particular riparian habitat.

All potentially impacting land use activities would be required to avoid priority riparian habitats, unless it is determined through a site specific analysis that:

a) The activity would not degrade or forestall attainment of the proper functioning condition of the riparian area;
b) Impacts could be mitigated in a manner that would meet minimum objectives for the system if the riparian areas could not be avoided.

Existing activity and/or facilities that are negatively affecting the proper functioning condition of a riparian or wetland habitat may be required to undertake remedial mitigation or relocate outside high and medium priority riparian habitats at the time authorizations are renewed or amended.

Existing roads may be relocated outside of riparian zones if it is determined through a site specific analysis that the road is having an adverse impact upon the proper functioning condition of the riparian or wetland area.

Grazing practices (such as the Conditions of Approval identified in Appendix C) that protect public health and welfare; maintain, restore, or improve water quality; and result in water quality that meets or exceeds state water quality standards would be implemented through approvals of permits and leases for all high and medium priority and all non-functional low priority riparian habitats.

Where assessments or other data reveal that key resources or watershed functioning requirements are not being met because of livestock overuse, the authorized officer would adjust grazing use and may require total rest on all non-functioning riparian habitats and all high and medium priority habitats functioning at risk.

Development of springs, seeps, and other project improvements would be designed to maintain or improve the ecological and hydrological values of those sites.

Riparian-wetland objectives would be met by locating livestock management facilities (corrals or holding facilities, wells, pipelines, fences) or livestock management practices (salting and supplemental feeding) outside riparian-wetland areas. Existing livestock management facilities or practices that do not meet management objectives would be relocated or removed from all riparian habitats that are non-functioning or functioning at risk.

Use or residual vegetation targets would be established through activity plans for all high and medium priority and all non-functioning riparian habitats to accomplish the following:

a) Maintain, improve, or restore both herbaceous and woody species to healthy and vigorous condition and facilitate reproduction and maintenance of different age classes in the desired riparian-wetland and aquatic plant communities;
b) Leave enough vegetation biomass and plant residue (including woody debris) to allow adequate sediment filtering and dissipation of stream energy for bank protection.

Implementation

Site specific resource management practices for riparian habitats would be developed as integrated activity plans or individual activity plans (allotment management plans) are developed. The plans would outline the management needed to meet riparian area objectives. The order in which management actions would be applied would be based on the following criteria:

—Fisheries present

—Special status species habitat

—Potential for system improvement

—Potential for persistent water flow

—System, condition, trend, and vulnerability

—Management potential

—Amount of BLM land

—Presence of other riparian-dependent values

Activities proposed within riparian habitats would be analyzed to determine whether the identified management objectives could be met. Those activities that would not meet objectives would be modified to meet the objectives or would be denied.

Riparian and wetland habitats would be identified and a decision made to closed those areas to off road motorized vehicle travel during the development of the travel management plan.

Forest product permits and mineral material disposal permits would not be issued within riparian or wetland areas.

Threatened And/Or Endangered Plant Species

Objective

Promote the protection and recovery of federally listed and proposed threatened or endangered plant species, participating to the extent practicable in achieving applicable recovery plan objectives. Ensure that land use and other multiple uses are compatible with or complementary to the protection, maintenance or enhancement of all candidates for listing and all listed threatened or endangered plant species and their habitats so as to avoid the need for subsequent more restrictive listings.

Management

On the ground surveys conducted by a qualified botanist, would be required prior to approval of all surface disturbing activities within areas of known or potential habitats for these species. No activities would be allowed within specified distances of plant populations discovered through the inventory process.

A No Surface Occupancy (NSO) stipulation would be placed on all surface-disturbing activities proposed within known and potential habitat of federally-listed T/E plants and candidate T/E habitat (approximately 45,400 acres). New T/E plant habitat mapped as a result of future surveys would also be protected by an NSO stipulation. This stipulation would apply to all surface-disturbing activities within known and potential habitat.

The NSO stipulation could be excepted by the area manager if an environmental analysis and results of the on-the-ground survey indicates that plants would not be affected. Informal consultation with U.S. Fish and Wildlife Service would be conducted during preparation of the environmental analysist. Formal consultation with the U.S. Fish and Wildlife Service would be conducted if the analysis disclosed a finding of possible impact to a listed species.

Known and potential T/E habitat would be closed to mineral material disposal actions.

Existing roads and public utilities (pipelines, power lines, and communication facilities) within known T/E habitat would be relocated if a determination is made that the relocation action would benefit and promote recovery and would not further impact a T/E plant species. All known and potential T/E habitat would be exclusion areas for public utilities.

Motorized vehicle travel within existing and proposed ACECs for T/E plants would be limited to designated roads and trails. Roads or trails not designated for use would be abandoned and reclaimed. Off road motorized vehicle travel would be prohibited in these areas.

Three areas (Dudley Bluffs, Yanks Gulch/Upper Greasewood Creek, and Raven Ridge) totaling 6,430 acres of BLM and split estate land occupied by T/E plants or candidate T/E plants would continue to be designated as Areas of Critical Environmental Concern (ACECs) and Colorado natural areas. Three additional areas (Ryan Gulch, Raven Ridge Addition, and Duck Creek) totaling 8,230 acres of BLM and split estate land occupied by T/E plants or candidate T/E plants would be designated as ACECs (see ACEC Section, this chapter). The designated and proposed Raven Ridge ACECs would be exclusion areas for public utilities.

As part of the recovery plan for *Lesquerella congesta* and *Physaria obcordata*, a high priority would be placed on acquiring surface and subsurface ownership of known habitats on private and state lands. BLM would also pursue, through exchange, ownership of known private land habitat candidate T/E plants.

Implementation

An environmental analysis would be completed based on the results of a plant survey prior to approval of surface disturbing or potentially impacting activity within known or potential habitat for a listed, proposed or candidate plant species. Informal consultation with U.S. Fish and Wildlife Service would be conducted during preparation of the environmental analysis. Formal consultation with the U.S. Fish and Wildlife Service would be conducted if the analysis disclosed a finding of possible impact to a listed species.

The BLM Colorado State Office would place a NSO stipulation on oil and gas leases issued in both known and potential T/E habitat. The White River Resource Area Office would attach the NSO stipulation to all other surface-disturbing land use authorizations issued in known and potential T/E habitat. New plant habitat would be identified by conducting on-the-ground plant surveys in previously unsurveyed areas prior to approving authorizations. Any newly-identified habitat would be added to the NSO data base maintained in the Resource Area and State Office.

BLM would cooperate with the Colorado Natural Areas Program, the Colorado Natural Heritage Program, and the U.S. Fish and Wildlife Service to evaluate species status and distribution and to monitor effectiveness of protection and conservation measures for T/E and special status plant species.

Sensitive Plants and Remnant Vegetation Associations

Objective

Provide for the conservation, protection and management of plant species designated as BLM sensitive species. Ensure that land use is complementary to the protection, maintenance or enhancement of BLM sensitive plant species and their habitats so as to avoid the need for subsequent listing and protection under the Endangered Species Act.

Provide for the conservation, protection and management of selected occurrences of high priority remanent vegetation associations (RVAs) and unique plant communities.

Management

On the ground surveys for BLM sensitive plant species, conducted by a qualified botanist, would be required prior to approval of any surface disturbing or potentially impacting land use on all areas of known or potential habitats for these species.

A NSO stipulation would be placed on all surface disturbing activities proposed within habitat of BLM sensitive plants and RVAs (approximately 4,520 acres). New sensitive plant locations, mapped as a result of future surveys, would also be protected by an NSO stipulation.

The Area Manager could except the NSO stipulation if a suitable location could be found through an on-the-ground survey and if a finding of no impact could be made through evaluation from an environmental analysis.

BLM sensitive plants and RVAs locations would be closed to the disposal of mineral materials.

Motorized vehicle travel within known locations of sensitive plants and high priority RVAs, outside areas designated as ACECs, would be allowed only on existing roads and trails. Travel within designated ACECs would be allowed only on designated roads and trails. Roads not designated for use within ACECs would be abandoned and reclaimed.

Six areas (Deer Gulch, Lower Greasewood Creek, South Cathedral Bluffs, Dudley Bluffs, Yanks Gulch/Upper Greasewood Creek, and Raven Ridge) totaling 6,740 acres, that are occupied by BLM sensitive plants and RVAs would continue to be designated as ACECs and Colorado natural areas. Seven additional areas (Soldier Creek, South Cathedral Addition, Raven Ridge Addition, White River Riparian, Coal Oil Rim, Moosehead Mountain, and Oil Spring Mountain) totaling 48,130 acres, would be designated as ACECs for protection of sensitive plants and RVAs upon approval of this RMP.

Maintaining genetic integrity of native species in ACECs and RVAs is an important management consideration. Reclamation of surface disturbance resulting from authorized activities within ACECs and RVAs should use only locally gathered, or genetic stock from locally gathered, native species. In those cases where locally gathered native species are not available, the impact of using non-local native species on the genetic integrity of native species within ACECs and RVAs must be evaluated and mitigated through site specific environmental analysis.

Surface and subsurface ownership of known locations of high priority sensitive plant species and RVAs occurring on private or state-owned lands adjacent to ACECs would be identified for possible acquisition through exchange. Known locations of high priority sensitive plant species and RVAs within ACECs would not be available for disposal.

Implementation

The BLM Colorado State Office would attach a NSO stipulation to oil and gas leases issued in sensitive plant and RVA locations. The White River Resource Area Office would attach an NSO stipulation to all surface-disturbing land use authorizations issued in BLM sensitive and RVA locations.

The NSO stipulation would be attached to land use authorizations to the extent such protection would not unduly hinder or preclude the exercise of valid existing rights. If the NSO stipulation would hinder or preclude the exercise of valid existing rights, protection would be applied through conditions of approval (see Appendix C) which would require reclamation of disturbed areas with native species or efforts geared to reproducing sensitive species on the disturbed habitat.

New plant habitat could be identified by the requirement to conduct on-the-ground plant surveys in previously unsurveyed areas of potential habitat, prior to approving the authorizations for surface-disturbing activities. Newly-identified plant habitat would be added to existing maps and stipulation data bases.

The BLM would cooperate with Colorado Natural Areas Program and other interested parties to monitor the effectiveness of conservation and protection measures for BLM and Colorado sensitive plants and high priority RVAs.

FORESTRY MANAGEMENT

Timberlands

Objective

Determine the sustainable annual allowable timberland harvest level on suitable commercial and non-commercial timberlands.

Manage all timberlands to maintain productivity, extent, forest structure and for the enhancement of other resources.

Provide special management consideration for special or unique forest/ woodland areas.

Management

Due to the limited nature of Douglas-fir, Lodgepole and Spruce/fir, a commercial timber harvest program would not be developed. If demand or other resource objectives warrant, a commercial harvest program could be developed in which harvest would be limited to four acres per year. Establish a ten cord per year personal use limit on dead and down spruce and Douglas-fir within the Piceance, Douglas/Cathedral, and Danforth/Jensen GRAs.

No allowable harvest limit would be established for aspen. A ten cord per year personal use limit for aspen firewood would be established in the Danforth/Jensen, Piceance, and Douglas/Cathedral GRAs. A harvest limit of 50 saplings and 200 seedlings per year would be established for aspen. Permits would be limited to the Danforth Hills/Jensen areas.

Manage for older forests by preserving existing old growth. Sales would be precluded in sensitive areas having fragile soils or areas of high slumping potential, wilderness study areas, and habitat for candidate and listed T/E plant species. Regeneration of cut areas would occur by natural means. If planting becomes necessary, only local species and genotypes would be used. Fragmentation would be minimized by aggregating cutting units which reflect the natural age distribution of the area. An attempt would be made to mimic natural edges and gaps during tract design and layout.

Coal Oil Rim and Moosehead Mountain would be designated as ACECs to protect timberlands (aspen) and woodlands.

Implementation

Commercial and non-commercial timber stands would be inventoried for condition, and production capability. Management prescriptions to maintain and enhance these forests, or to achieve the desired plant community, would be determined during preparation of activity plans. In the case of disease or insect infestation, a determination of the need for treatment would be made. Reasonable treatments would be developed and implemented. Management prescriptions would require site specific environmental analysis.

There would be no harvest within areas containing T & E or sensitive plant species, Wilderness Study Areas, special management areas, Research Natural Areas, Outstanding Natural Areas, Recreation sites, special habitats such as rocky outcrops, wetlands, or riparian areas.

All permits for harvest of woodland products would be subject to provisions and specifications listed in BLM Manual Handbook 5420-1 and Conditions of Approval listed in Appendix C. All restrictions and specifications will be included on, or attached to the permit authorizing harvest.

Although no harvest is proposed within ACECs, the forestry/woodland restrictions would concur with the individual ACEC plan. The goal of forest/woodland management is the enhancement of the values for which an ACEC is designated.

Woodlands

Objective

Determine annual allowable woodland harvest level on suitable/commercial woodlands. Determine allowable use levels on non-commercial woodlands.

Manage all woodlands to maintain productivity, extent, forest structure and for the enhancement of other resources.

Management

Piceance and Douglas/Cathedral Geographic Reference Areas (GRA) would be the exclusive commercial firewood harvest areas. Approximately 27,600 acres of suitable woodland would be available for commercial harvest in these areas. This includes those lands classified for intensive management. Based on a 300-year rotation for clearcutting, the annual allowable harvest would be 45 acres. Based on a 100-year rotation for selective cutting, the annual allowable harvest would be 136 acres. The allowable harvest would be monitored as a decadal limit which would allow for yearly fluctuations.

Woodlands removed as a result of commercial development (oil shale, oil and gas, sodium) would be appraised and purchased prior to removal.

Suitable commercial woodlands removed by commercial development, wild fire, or vegetation modification would be considered as part of the allowable cut.

Commercial permits would not be issued for the harvest of oak.

Commercial permits would be issued for Pinyon and Juniper Christmas Trees and transplants, within the Douglas/Cathedral, Piceance, Crooked Wash/Deep Channel, Wolf Ridge/Red Wash, and Danforth/Jensen GRAs. No harvest would be permitted within the White River and Blue Mountain GRAs.

Juniper posts and poles would have the following annual commercial harvest limits by GRA:

1. Douglas/Cathedral GRA - 1,500 posts/poles
2. Piceance GRA - 1,500 posts/poles
3. Crooked Wash/Deep Channel - 500 posts/poles
4. Wolf Ridge/Red Wash - 200 posts/poles

Posts and poles would not be commercially harvested in the other GRAs.

A total of 493,190 acres of pinyon/juniper woodlands within the Resource Area have been classified as noncommercial. These woodlands are not considered in the allowable harvest and would not be managed for commercial firewood production. Non-commercial woodlands would be available for manipulation to enhance other resource values. Prior to undertaking other removal techniques (chaining, dozing, prescribed fire), woodland products would be made available to the public through sales or free use.

Non-commercial woodlands removed as a result of commercial development (oil shale, oil and gas, sodium) would be appraised and purchased prior to removal.

Private use permits for the harvest of firewood would be issued for the Piceance, Danforth/Jensen, Wolf Ridge/Red Wash, Crooked Wash/Deep Channel and Douglas/Cathedral GRAs only. Within the Piceance GRA, all personal use harvesting would be restricted to designated harvest areas. No Resource Area wide harvest limits would be set for private use; harvest would be restricted to dead and down wood only, with the exception of specifically marked green tree harvest areas. Annually the limit per household for firewood would be six cords.

Oakbrush firewood permits would be issued based on a 20-cord per year, Resource Area wide limit. Harvest would be limited to the Piceance, Douglas/Cathedral, and Danforth/Jensen GRAs.

Personal use permits for posts and poles would be issued subject to the harvest limits (inclusive) and locations (GRAs) as shown for Commercial Posts and Poles.

Private use permits would be issued for Christmas trees and transplanting within the Douglas/Cathedral, Piceance, Crooked Wash/Deep Channel, and Wolf Ridge/Red Wash GRAs. Limits for personal use are three Christmas trees and 30 transplants per year per household. No permits would be issued for the Blue Mountain and White River GRAs.

Minor demand exists for the harvest of brush transplants, primarily rabbitbrush, serviceberry, and chokecherry. Permits for collection of these species would be issued without limit. Harvest would be permitted within the Douglas/Cathedral, Piceance, Crooked Wash/ Deep Channel, Danforth/Jensen, and Wolf Ridge/Red Wash GRAs.

Basic concepts to be followed in maintaining forest health are: Sales would be precluded in sensitive areas having fragile soils or areas of high slumping potential, wilderness study areas, and habitat for candidate and listed T/E plant species. Regeneration of cut areas would occur by natural means. If planting becomes necessary, only local species and genotypes would be used. Fragmentation would be minimized by aggregating cutting units and tract design and layout would attempt to mimic natural edges and gaps.

Implementation

Sale preparation and actual volumes of wood sold would be dependant on funding and demand. Over the counter sales would remain the highest priority for the sale program.

Commercial and non-commercial woodlands would be inventoried for condition, and production capability. Management prescriptions to maintain and enhance these woodlands, or to achieve the desired plant community, would be determined at the activity planning level, either through an integrated activity plan or an allotment management plan. In the case of disease or insect outbreak, there would be a determination of the need for treatment, and reasonable treatments conducted. Management prescriptions would require site specific environmental analysis. Mitigation, and stipulations identified during preparation of the environmental assessment would be made a part of any treatment.

There would be no harvest within areas containing T/E or sensitive plant species, wilderness study areas, special management areas, research natural areas, outstanding natural areas, recreation sites, special habitats such as rocky outcrops, wetlands, or designated riparian reserves/management areas.

All permits for harvest of woodland products would be subject to provisions and specifications listed in BLM Manual Handbook 5420-1 and Conditions of Approval listed in Appendix C. All restrictions, specifications would be included on, or attached to the permit authorizing harvest.

Although no harvest is proposed within any of the ACECs, the forestry/ woodland decisions would concur with the individual ACEC management plans. The goal of forest/woodland management within ACECs is the enhancement of the values for which an ACEC is designated.

LIVESTOCK GRAZING MANAGEMENT

Objective

Provide a healthy public rangeland condition capable of supplying forage on a sustained yield to meet the demand for livestock grazing.

Provide for adequate forage plants growth and/or regrowth opportunity necessary to: 1) replenish the plants food reserves; and 2) produce sufficient seed to meet the reproduction needs necessary to maintain an ecological presence in the plant community.

Manage livestock grazing to maintain or enhance a healthy rangeland vegetative composition, species diversity, and other resource values.

Management

Livestock grazing would be managed as described in the 1981 *Rangeland Program Summary* (RPS) (BLM 1981), which is the Record of Decision for the 1981 *White River Grazing Management Final Environmental Impact Statement* (Grazing EIS), and the RPS updates issued in 1981 and 1984. These documents address five major actions: (1) allocation of forage among predominant grazing animals and other uses, (2) initiation of intensive grazing management, (3) continuation of exiting intensive grazing management practices, (4) minimum period of rest for each allotment, and (5) range improvements to enhance rangeland productivity and management. These documents and management actions are incorporated and summarized in this document.

The forage allocations made in the 1981 *Rangeland Program Summary* for livestock would continue until sufficient data exists to require modification. A total of 126,490 AUMs would be allocated to livestock in the short term (10 to 20 years). It is estimated a total of 146,060 AUMs could be allocated to livestock over the long-term (over 20 years) through increases in sustainable rangeland production resulting from vegetation manipulations, improved livestock distribution and management, and improved rangeland health.

Adjustments in livestock levels were made after issuing the RPS in April 1981. Most adjustments were completed by the end of 1986. Additional adjustments were made between 1987 to the present based upon results of additional monitoring studies and losses of BLM land acreage. Livestock grazing use levels have been reduced from 160,310 AUMs authorized in 1980 to the present level of 126,490 AUMs. The current allocation of 126,490 AUMs would continue for the short term.

Monitoring studies would continue to be conducted on 81 grazing allotments to evaluate the effects of activity plan development and, if necessary, to further refine livestock grazing levels. Additional adjustments in livestock grazing levels, as a result of increases or decreases in forage, would follow procedures outlined in 43 CFR 4110. Increases in available forage would be apportioned among competing uses, by: 1) filling the suspended livestock grazing preferences for the allotment; 2) providing big game wildlife forage needs; and 3) increasing wild horse forage allocations. This process may be modified during development of integrated activity plans. Increases or decreases in available forage would be apportioned in proportion to the allocation levels developed in the integrated activity plan.

The 144 grazing allotments affected by this RMP have been placed in one of three management categories that define intensity of management: (1) improve, (2) custodial, and (3) maintain. The intent of categorization is to concentrate funding and on-the-ground management efforts on those allotments where grazing management is most needed to improve the resources or resolve serious resource conflicts. The livestock grazing section in Chapter 3 of the Draft RMP, explains each of these categories and lists criteria used in the categorization process. Table 2-36 in the Draft RMP lists the total allotments in each category. Table D-1, in Appendix D of the Draft RMP, lists the individual allotments in each category. Allotment categories are depicted on Map 3-5.

The 54 allotments placed in the improve category were identified for development of allotment management plans (AMPs). The AMPs direct livestock management through decisions about grazing systems, season-of-use, number and kind of livestock, range developments or vegetative treatments required to meet resource objectives designed to improve and maintain healthy rangelands and to resolve conflicts with other public land uses.

To date, AMPs have been developed for 19 improve category allotments involving 664,680 acres of BLM land. These allotments authorize a livestock grazing use level of 58,650 AUMs (Appendix D, Table D-1 of the Draft RMP). AMPs for the remaining 35 allotments in the improve category would be developed as time and funding permit. Current livestock grazing levels and management practices would continue to be authorized on the 36 maintain and 54 custodial category allotments. The improve category allotments would receive highest priority for public funding for needed rangeland improvements and livestock management facilities. The custodial category allotments would receive lowest priority for public funding for needed rangeland improvements.

Allotments could be moved from one category to another as new information becomes available, resource conditions change, or management activities are implemented, based on the category criteria listed in Chapter 3 of the Draft RMP. Development of integrated activity plans would include all allotments within the activity plan boundaries regardless of current management category.

A minimum rest requirement (period of no livestock grazing) would be developed for each allotment as integrated activity plans are developed. This period of rest is the minimum time required to restore plant vigor, improve watershed conditions, and improve rangeland conditions. Minimum rest periods would be incorporated into grazing systems during activity plan preparation.

A majority of the BLM land is used by livestock during the spring and early summer growing periods. Grazing use normally occurs late enough in the growing season (elevations below 7,000 feet) that forage plants do not regrow prior to their dormancy in early summer. Without regrowth prior to dormancy, the forage plants do not mature to set seed and replenish food reserves. Minimum rest periods have been developed and will be proposed for the spring and early summer growing periods. These rest periods are intended to provide an interval of nonuse for the forage plants so that they can fulfill the basic physiological requirements for maintenance of growth, vigor, and adequate reproduction. In addition, the rest period would reduce livestock trampling damage to plants and soil during wet soil conditions after the spring thaw. The frequency of the proposed rest periods would be based on the present rangeland conditions of each allotment. It is anticipated that there would be more frequent spring rests proposed for early-seral rangelands than for Mid- or late-seral rangelands.

Rest can be provided in an alternate year sequence or on a yearly basis. Minimum rest for a range area may be satisfied in two ways: (1) the entire area would not be grazed by livestock; or (2) the area may be subdivided to permit livestock use on one or more subunits, while the remaining unit or units are left unused.

Range improvements are necessary to control livestock use and improve rangeland conditions. Anticipated improvement needs would include approximately 200 miles of fencing and about 700 water developments including reservoirs, wells, springs with associated troughs, tanks and pipelines. The estimated number of acres of pinyon-juniper, sagebrush-mountain browse, and greasewood that would be manipulated to improve rangeland conditions is shown in Table 2-37 of the Draft RMP.

Livestock trailing use would be authorized to and from BLM grazing allotments along established trails on 9,600 acres of BLM land. Established trails include the White River Trail, Victory Trail, Dragon Trail, Yellow Jacket Trail, Ute Trail, and Staley Mine Trail, all collectively known as the White River Trail Allotment 6699. Crossing permits will be authorized on public land outside established trails on a case-by-case basis, based upon the applicant's need.

Livestock grazing permits/leases would be issued on BLM rangeland fenced within the Oak Ridge and Jensen State Wildlife Areas and the Little Hills Experiment Station under the following conditions.

—Livestock permittee has authorization to graze livestock on adjoining state lands.

—Livestock grazing use would enhance or maintain wildlife habitat values and objectives developed for the three areas.

—Livestock grazing would be suspended or eliminated if livestock use has either achieved wildlife habitat objectives or are detracting from habitat objectives developed for the three areas.

Changes in the kind of livestock to domestic sheep would not be authorized on grazing allotments north of U.S. Highway 40, unless an environmental assessment demonstrated that there would be no impacts to the Rocky Mountain Bighorn Sheep populations in Dinosaur National Monument. Existing domestic sheep allotments north of U.S. Highway 40 would continue to be authorized for domestic sheep grazing. If these allotments are converted to cattle grazing by application of the grazing permittee, they would be required to demonstrate that no impact would occur to bighorn sheep before reverting back to domestic sheep grazing.

Implementation

Activity plans prescribing grazing management activities would be written and implemented for all allotments in the improve category. Development of integrated activity plans would include all allotments within the activity plan boundaries regardless of current management category. Minimum rest periods would be incorporated into grazing systems during activity plan development. These plans would include necessary NEPA analysis. Needed rangeland improvements would be identified in activity plans and subject to NEPA analysis on the activity plan or the specific project proposal.

Changes in management categories would be supported by a documented analysis showing the basis for the change.

WILD HORSE MANAGEMENT

Objective

Manage for a wild horse herd of 95-140 animals on 190,130 acres within the Piceance- East Douglas Herd Management Area (HMA) so that a thriving ecological balance is maintained for all plant and animal species on that range.

Management

Removal and disposition of horses would be such that a healthy, viable breeding population with a diverse age structure would be maintained.

The North Piceance and West Douglas Herd Areas would be managed in the short-term (0-10 years) to provide forage for a herd of 0 to 50 horses in each herd area. The long term objective would be to remove all wild horses from these areas.

The boundary of the Piceance-East Douglas HMA would be expanded to include the Greasewood allotment (presently a part of the North Piceance Herd Area).

The wild horse herd population would be managed such that range condition would improve, both in the short and long term.

Implementation

Develop a cooperative management agreement for dealing with wild horses, with the private surface owner of 13,900 acres of patented oil shale claims that lie within the Boxelder allotment and Pasture C, of the Square S allotment.

Update and revise the Piceance and East Douglas Herd Management Area Plan.

Monitoring studies would be conducted to help determine the appropriate management level (AML) for the HMA. The long term AML would be adjusted based on the results of monitoring.

WILDLIFE HABITAT MANAGEMENT

Big Game

Objective

Ensure that big game habitats on public land provide components and conditions necessary to sustain big game populations at levels commensurate with multiple use objectives and state-established population objectives.

Maintain or enhance the productivity and quality of preferred forages on all big game range.

Provide the forms, distribution and extent of vegetative cover and forage that satisfy the physiological and behavioral requirements of big game and encourage efficient use of available forage supplies.

Reduce the duration, extent, and intensity of manageable forms of animal harassment during crucial timeframes, and avoidance-induced disuse of suitable habitats considered limited in supply and/or critical in fulfilling special functions.

Management

Big game forage allocations would remain the same as that allocated in the 1981 *Grazing Management Environmental Impact Statement* and subsequent Rangeland Program Summary (RPS) in locations where rangelands and grazable woodlands are in a healthy state and where at-risk rangelands and grazable woodlands are improving. The grazing EIS allocated 71,600 AUMs to 1926 elk, 51,526 deer, and 224 pronghorn.

Under proposed management, 69,441 AUMs would be required to support CDOW's most current big game population objectives, involving 5526 elk, 39,026 deer, and 268 pronghorn (Table 2-39 in the Draft RMP details big game populations by GRA). The production, quality or availability of preferred big game forage would be enhanced (see Table 2-19 in draft) as necessary to accommodate prescribed big game population objectives. Forage deficiencies would be remedied, where possible, through various habitat treatments and livestock management techniques (see Table 2-19 of draft). When alternate opportunities are unavailable or exhausted, forage allocations would be reevaluated in those areas where at-risk rangelands and grazable woodlands are in a downward trend (see Plant Communities Section, Chapter 2 of draft) or where riparian, rangelands, and grazable woodlands are not functioning properly.

Vegetation manipulations (e.g. habitat and rangeland improvements and woodland sales), animal redistribution or reduction techniques, and modified livestock grazing management would be used to:

-reduce use of Utah serviceberry and mountain mahogany current annual growth (CAG) to <70 percent dormant season use and <10 percent growing season use on all deer and elk winter ranges.

-eliminate growing season use of key woody forage on deer and pronghorn severe winter ranges and winter concentration areas.

-reduce the proportion of heavily hedged key browse (i.e. Cole browse survey method) on deer severe winter range to $\leq$35 percent

-maintain cumulative use of other important woody forages (e.g. saltbush, sagebrush) on deer and elk winter ranges and all pronghorn ranges at rates consistent with sustained plant vigor.

Forage and cover enhancement measures (see Table 2-19 of draft) would be used to help resolve forage conflicts, reduce excessive use, enhance or augment forage availability or quality, or redistribute animal use.

Significant reductions in essential winter forage bases would be minimized by limiting cumulative treatment of suitable sagebrush forage types on deer winter ranges and pronghorn overall ranges. This limitation would apply to 50 percent of suitable habitat within 1 mile radii, and not to exceed 20 percent of total type within individual GRAs. Treatment of suitable sagebrush forage types on deer severe winter ranges and pronghorn winter ranges would be confined, where possible, to suboptimal stands and excess cover types. Cumulative reductions of suitable forage types would be limited to 20 percent within 1 mile radii where involvement is unavoidable.

All vegetation manipulations would be subject to the following design guidelines to maintain or enhance favorable distribution of big game cover:

-achieve an approximate 60:40, forage to cover ratio on the basis of 1.0 mile radii across all deer and elk ranges. Distribute cover, such that 600-1200 feet of effective security cover remains available within 600 feet of any point in the treatment area.

-reserve or allow development of coniferous canopies $\geq$70 percent (or densest available) and >300 feet in width on $\geq$10 percent of all elk/deer winter ranges and on $\geq$20 percent of severe winter ranges on the basis of 1.0 mile radii.

-retain a minimum 300 feet of untreated buffers interconnected with other forms of cover around specialized use areas and travel lanes.

Water sources would be installed on pronghorn overall range and deer and elk critical summer ranges as need or public demand dictates. Developments would normally be integrated with range improvement or riparian restoration efforts.

Long-term seral or type conversions of all aspen, Douglas-fir, spruce-fir, and deciduous shrub communities would be avoided to the extent practicable. Where unavoidable, special stipulations would be applied requiring reclamation measures necessary to maintain site potential and restore desired composition and seral stage of the former community. Seral manipulations of Douglas-fir, spruce-fir, and aspen would be limited to those projects specifically designed or conditioned to achieve objectives pertaining to stand perpetuation, enhancement of interstand diversity, and riparian improvement. A CSU stipulation (see Appendix B) would be imposed on all land use activities that involve aspen, serviceberry and chokecherry communities north of Highway 40 as a means of maintaining the distribution, condition, and functional capacity of high priority wildlife habitats.

Livestock redistribution techniques would be employed to defer concentrated use of aspen and other special use habitats of deer and elk until after August 15.

Stipulations listed in Appendix B would be applied to all BLM-conducted and permitted surface-use activities in big game habitats. Permitted land use activities that may disrupt animal behavior or habitat utility during sensitive time frames would be subject to timing limitations on severe winter ranges (all species), elk and pronghorn production areas, and deer and elk summer ranges designated as critical habitat. A NSO stipulation would be applied to the Oak Ridge State Wildlife Area as a means of precluding the effects of mineral development on locally significant big game habitats and populations. Maps 3-1, 3-2, and 3-3 show locations of no surface occupancy (NSO), timing limitations (TL), and controlled surface use (CSU) stipulations, respectively. Mitigation measures would be applied as conditions of approval to existing land use authorizations involving surface-disturbing activities to emulate the intent of these stipulations to the extent allowable. Conditions of approval would not violate valid existing rights.

Road abandonments and seasonal closures during periods of animal occupation would be used to the extent practical to limit effective road densities to an average maximum 1.5 miles/square mile on big game critical habitats and 3 miles/square mile on remaining big game ranges. Restrictions may be temporarily excepted to achieve special management needs (e.g. increase harvest). These road density objectives would be implemented through site specific travel management or integrated activity plans. Special conditions of approval would be applied through the environmental analysis process to preclude or discourage continued vehicular traffic on linear rights-of-way within closed areas. The Moosehead Road Closure Area and BLM lands within the Oak Ridge State Wildlife Area would continue to be closed to general motorized vehicle travel.

Habitat conditions sufficient to support a minimum winter deer population of 24,900 on BLM Land in Piceance Basin would be maintained as a critical threshold that, once met, may constrain further mineral leasing and development.

Coal decisions made in the *Coal Amendment to the White River Resource Area Land Use Plan* (BLM 1981) and the *Piceance Basin Resource Management Plan* (BLM 1987) would be carried forward. The acreage identified as unsuitable for further coal leasing based on wildlife issues would be modified with updated wildlife information as expressions of interest in coal leasing are received. Modifications would be based on reapplication of coal unsuitability criteria and would be done in coordination with the Colorado Division of Wildlife.

Implementation

Monitoring would be conducted following publication of the approved RMP to determine which rangelands are healthy, at risk, and/or not properly functioning.

Recommendations for enhancing or increasing the big game forage base or revising forage use allocations among predominant grazers would be considered through integrated activity plans.

Habitat treatment and management guidelines would be developed during NEPA analysis of individual project proposals and would be integrated, where appropriate, with approved project design. These projects would normally be implemented through approved activity plans (e.g. Allotment Management Plans) prior to development of integrated activity plans. Integrated activity plans would prescribe management for all resources present. Big game habitat treatment and management objectives would be incorporated with the planning and development of all Integrated Activity Plans. Similarly, road density objectives would be implemented through a travel management plan or integrated activity plans developed subsequent to this RMP. The Piceance Basin Habitat Management Plan would be revised incrementally through the development of integrated activity plans.

NSO, TL and CSU stipulations would be applied, where appropriate, to all permitted surface use activities through various use authorization or leasing processes. The form and intent of these protective stipulations would be applied to surface use activities associated with existing land use authorizations as mitigation measures or conditions not violate valid existing rights.

Exception and modification provisions (see Appendix B) provide some flexibility in implementing the stipulations and allows site-specific tailoring of prescriptions to gain effective protection of identified values without unnecessarily hindering other forms of public land use. These provisions provide the opportunity to integrate new or innovative technologies and information to better manage, protect, or compensate for wildlife related values or otherwise promote the accumulation of information necessary to better identify, assess, and manage wildlife values.

Raptor

Objective

Maintain the short-term utility and promote the continued long-term development and availability of suitable raptor habitats. This includes prey base, nest sites, and other special habitat features to help stabilize or allow increases in regional raptor populations.

Management

Land use activities that involve long-term, undesirable reductions or fragmentation of aspen, spruce-fir, Douglas-fir, or oakbrush communities would be avoided to the extent possible. This would be accomplished through relocation and design modifications developed on a site-specific and case-by-case basis. Where unavoidable, special reclamation measures would be required to accelerate reestablishment of former plant community characteristics.

Permitted land use activities within 1/4 mile of functional nest sites of cavity, cliff, and ground-nesting species and within 1/2 mile of functional nest sites of special status and tree-nesting species, would

be subject to relocation or design modifications to preclude, or reduce to acceptable levels, long-term reduction or deterioration of nest and foraging habitat.

Where practical, trees suitable for long and short term cavity excavation will be reserved during woodland clearing or thinning practices at levels equal to or greater than the following:

-pinyon-juniper: 1-12" diameter tree/acre or comparable.

-other conifer types: 2-12" diameter trees/acre or comparable.

-aspen: 3-12" diameter trees/acre or comparable.

Development proponents would be required to perform raptor nest inventories in affected nest habitats when proposed land use influence exceeds 100 acres. Where possible, inventories would allow for a full nesting sequence for investigation prior to project implementation.

Disruptive land use activities would not be allowed within the following specified radii of active raptor nest sites during the period from nest territory establishment to dispersal of young from nest.

-non-special status species: 1/4 mile.

-special status species: 1/2 mile.

-ferruginous hawk: 1 mile.

Disruptive surface occupation or adverse habitat modification would be prohibited within 1/4 mile of functional nest sites of special status species (i.e. ferruginous hawk, northern goshawk) and 1/8 mile of other members of the raptor group.

New construction or modification of above ground electric transmission facilities would be required to incorporate the most current raptor protection guidelines. Where appropriate, conductor separation methods would be employed rather than designing features that discourage perching.

The saltbush-sagebrush-juniper community north of the White River from Utah to Pinyon Ridge would be designated as a BLM Key Raptor Area. This would serve to administratively highlight the areas breeding population of candidate-status ferruginous hawks.

Implementation

Existing information on raptor nest locations would be verified, and supplemental surveys conducted on a project-driven basis. Nest habitat character associated with project proposals would also be evaluated on this basis to evaluate opportunities for modifying, excepting, or waiving stipulation provisions, and develop project design modifications or alternatives.

Habitat treatment and management guidelines would be applied during the NEPA process as mitigation measures or conditions of approval. Modified implementation features for individual project proposals would be integrated with approved project design. These projects would normally be implemented through approved activity plans (e.g. allotment management plans) prior to development of integrated activity plans. Raptor habitat treatment and management objectives would be incorporated with the planning and development of all integrated activity plans, and integrated with other resource management objectives.

NSO and TL stipulations would be applied, where appropriate, to all permitted surface use activities through various use authorization or leasing processes. These protective stipulations would be applied to surface use activities associated with existing land use authorizations as mitigation measures or conditions of approval during the NEPA process. Conditions of approval would not violate valid existing rights.

Exception and modification provisions (see Appendix B) provide some flexibility in implementing the stipulations. They also allow site-specific tailoring of prescriptions to gain effective protection of identified values without unnecessarily hindering other forms of public land use. These provisions provide the opportunity to integrate new or innovative technologies and information to better manage, protect, or compensate for wildlife related values. They would also promote the accumulation of information necessary to better identify, assess, and manage wildlife values.

BLM would assume responsibility for conducting nest and habitat surveys on certain smaller projects and on those projects initiated by the BLM.

Grouse

Objective

Restore, maintain, or enhance habitat conditions and features conducive to the maintenance or expansion of native grouse populations. Reduce disruption of important seasonal use activities associated with production and recruitment.

Management

Vegetation treatments would be implemented to improve and restore grouse habitat utility. Suitable sage grouse habitats would be enhanced or expanded by manipulating suboptimal sagebrush stands, or converting stands with undesirable composition to suitable cover types. Adapted forms of succulent forbs may be included in seed mixes applied to surface disturbances on grouse brood ranges. Seed mixes would be subject to the reseeding conditions established for each GRA as identified in Appendix C.

Riparian, livestock, and water management techniques would be designed to enhance riparian and wet/mesic meadow habitat on all grouse brood ranges.

Livestock and big game management techniques would be used to maximize the extent of brood and nest habitat that retain ≥50 percent herbaceous growth by weight through 15 September on all grouse brood and nest habitats. Livestock redistribution techniques would be employed to defer concentrated use of aspen and other special use habitats until after mid-August.

Surface occupation and long term conversion or adverse modification of the following sage grouse habitats would be avoided:

-sagebrush stands with ≤50 percent canopy and ≤30" in height, and ≤2 miles from a lek.

-sagebrush stands with ≤30 percent canopy and ≤30" in height >2 miles from a lek on occupied summer ranges.

-any sagebrush stand on slopes ≤20 percent in defined winter concentration areas.

-sagebrush stands on slopes ≤20 percent showing evidence of winter use.

Vegetation treatment widths should not exceed 200 feet. Treatment areas should be interspersed with equal or larger intervals of suitable cover. Cumulative adverse manipulations would not be allowed to exceed 10 percent of suitable nest habitat within 2 miles of a lek.

Comparable or superior varieties of sagebrush could be established, where necessary, within occupied sage grouse ranges on sagebrush conversion or removal sites exceeding 500 acres. The extent and level of reestablishment would not exceed 20 percent of converted acreage at mature canopy densities of ≤15 percent.

Long-term seral or type conversions of all aspen, Douglas-fir, spruce-fir, and deciduous shrub communities would be avoided, where possible. Where unavoidable, special stipulations requiring reclamation measures to maintain site potential, restore desired plant composition, and/or accelerate development of the community's desired seral stage would be applied. Seral manipulations of aspen and conifer types would be limited to those specifically designed to enhance or perpetuate stand diversity or achieve riparian management objectives. Where practical, manipulation extent would maintain a minimum 50 percent of individual stands in mature to over-mature age class.

Disruptive surface use activities would be prohibited in the following areas during the seasonal use periods:

-winter concentration areas (December 16 through March 15).

-nesting habitats, when 10% or more of suitable nesting habitat associated with an individual lek is adversely influenced (April 15 through July 7).

Surface occupation or habitat modification within 1/4 mile of active strutting grounds would be prohibited.

A CSU stipulation would be applied to all permitted land use activities that involve the modification of aspen, serviceberry and chokecherry communities north of Highway 40 as a means of maintaining the distribution, condition, and functional capacity of high priority wildlife habitats.

The establishment or augmentation of sharp-tailed and ruffed grouse would be considered in appropriate habitats on a case-by-case basis.

Implementation

Habitat treatment and management guidelines would be applied during NEPA planning and analysis of individual project proposals. Guidelines would be integrated, where appropriate, with approved project design. Grouse habitat treatment and management objectives would be incorporated into the planning and development of future activity plans.

NSO, TL and CSU stipulations would be applied, where appropriate, to all permitted surface use activities through various use authorization or leasing processes. These protective stipulations would be applied to surface use activities associated with existing land use authorizations as mitigation measures or conditions of approval during the NEPA process. Conditions of approval would not violate valid existing rights.

Exception and modification provisions (see Appendix B) provide some flexibility in implementing the stipulations. They also allow site-specific tailoring of prescriptions to gain effective protection of identified values without unnecessarily hindering other forms of public land use. These provisions provide the opportunity to integrate new or innovative technologies and information to better manage, protect, or compensate for wildlife related values. They would also promote the accumulation of information necessary to better identify, assess, and manage wildlife values.

Augmentation or reestablishment of native grouse would be subject to supplementary NEPA analysis and planning.

Fisheries

Objective

Promote improvement and recovery of current, historic, and potential stream fisheries as a means of increasing populations of sport and native fishes.

Develop and maintain facilities capable of supporting warm-water fisheries.

Increase recreation fishing opportunities within the Resource Area.

Management

Stream fisheries greater than or equal to 1/4 mile in length that possess reasonable public access, would have riparian/channel conditions improved, or maintained to no less than fair condition within 10 Years of RMP approval.

Impoundments offering conditions suitable for pond fisheries (i.e. Peterson Draw Reservoir, Divide Creek Reservoir) would be maintained and have aquatic conditions enhanced by: 1) controlling excessive aquatic plant growth; 2) establishing desirable shoreline vegetation; 3) restoring reservoir depth; and/or 4) controlling sediment input.

Acquisition of aquatic habitats with existing or potential fisheries values, would be pursued in cooperation with willing landowners.

Acquisition of water rights necessary to meet minimum instream flow requirements of cold water fisheries would continue to be pursued in cooperation with Colorado Division of Wildlife and Colorado Division of Water Resources.

Public access to landlocked BLM Land fisheries exceeding 1/2 mile in length and >1.5 miles from vehicular access would be pursued.

Implementation

Impacts to stream fishery conditions would be assessed and identified during individual NEPA-related project analysis. Unavoidable short-term damage to, or deterioration of, stream fishery conditions would be minimized by applying site-specific conditions of approval to all permitted forms of surface use activity. Conditions of approval would not violate valid existing rights.

Habitat maintenance and improvement objectives would be achieved by formulating protection and enhancement measures through the NEPA analysis process. These measures would also be developed during the preparation of activity plans. Such measures would be integrated with authorized project design. Enhancement measures would also be incorporated during updates or as amendments to existing activity plans. Stream habitat treatment and management objectives would be incorporated into the planning and development of all integrated activity plans.

Examples of protection and improvement measures that could be developed and applied to stream fisheries would include, but not necessarily be limited to: 1) modification of livestock grazing strategies; 2) reestablishment of riparian vegetation; 3) installation of in-stream structures and fencing; 4) providing off-channel livestock waters; 5) controlling beaver populations; 6) requiring the installation of reserve pit liners or use of fluid containment systems; 7) modification of project/facility designs or locations; and 8) implementation of special reclamation techniques to prevent or reduce off-site contaminant and sediment yield.

Special Status Species

Objectives

Contribute to the recovery of special status animals (i.e. listed, proposed, or candidate T/E; BLM sensitive) in an effort to ultimately remove these species from special status consideration.

Maintain or restore special status animal populations, and the suitable extent and/or utility of important habitats on public lands.

Ensuring that federally authorized actions do not adversely disrupt or compromise important biological activities or contribute to increased mortality or depressed production or recruitment into a breeding population.

Maintain or improve, to proper functioning condition, bank, channel and floodplain processes associated with designated critical habitats for listed and candidate fishes of the Upper Colorado River Basin.

Management

Black-footed ferret: Fifty-two thousand fifty acres of BLM-administered surface in the Lower Wolf Creek drainage and 6,740 acres of BLM-administered surface in Coyote Basin would be designated as black-footed ferret recovery areas. Designated recovery areas would be available for the reestablishment of viable black-footed ferret populations pending final habitat suitability analysis and successful development of a cooperative reintroduction and management plan. These areas, depicted in Map 2-15 of the DRMP, include both BLM and split estate lands (53,830) as well as private lands (4,960 acres), because all land owners would ultimately be involved with a successful reintroduction effort.

Federal lands within designated ferret recovery areas would be managed to enhance black-footed ferret survival and recruitment and maintain or enhance the capability of these sites to achieve ferret recovery objectives. Motorized vehicle use in ferret recovery areas would be limited to existing roads and trails prior to development of a travel management or appropriate integrated activity plan. Road and trail densities established for ferret recovery areas would be implemented through these plans such that vehicle use would limited to designated routes and with effective road and trail density goals of 1.5 miles per square mile.

Land use actions on federal lands that reduce the overall extent or distribution of prairie dog ecosystems, or that alter the effective continuity or general densities of prairie dogs within a prairie dog complex, would be allowed only if the integrity of prairie dog ecosystems for associated species would be maintained. The remaining extent of the prairie dog complex outside designated recovery areas would remain available as habitat for associated species, including ferret dispersal and colonization provided conflicts with valid rights are reconciled.

Predator control agreements would be revised to include stipulations that would preclude unacceptable losses of nontarget wildlife, including black-footed ferret.

Bald Eagle: Mature cottonwood canopies suitable for bald eagle roost, perch, and nest substrate would be developed or maintained.

Management practices that maintain or improve overall riparian conditions and development opportunities would be emphasized on BLM administered lands within the 950-acre White River ACEC.

Federal land actions within the White River ACEC would be conducted in a manner consistent with the maintenance or enhancement of bald eagle riverine habitat suitability and utility. Authorized surface disturbance or use within the ACEC would be contingent on the following conditions: 1) mature and regenerating cottonwood communities would be avoided to extent reasonably possible; 2) special reclamation techniques would be required to accelerate recovery and/or reestablishment of habitat commensurate with deterioration; 3) long-term site potential as a properly functioning riverine riparian community would be maintained or restored; 4) short and long term utility as bald eagle habitat would be maintained.

Acquisition of riverine habitats along the White River possessing high potential for cottonwood "potential natural community" as bald eagle nest and roost substrate would be given a high priority for acquisition from willing landowners.

Disruptive forms of permitted land use within 1/2 mile of identified winter roosts and concentration areas and active nest sites during respective use periods would not be allowed. Disruptive surface occupation or adverse habitat modification within 1/4 mile of functional nest sites and identified winter roosts and concentration areas would be prohibited.

Colorado River cutthroat trout: Channel and riparian conditions on streams occupied by Colorado River cutthroat trout would be improved from poor to fair condition within 5 years of RMP approval. These areas would be improved to good condition within 10 years of RMP approval. Condition would be determined using the Riparian Ecosystem Scorecard evaluation system or its equivalent. Management would emphasize vegetatively-derived bank stability and woody riparian development and would be applicable to about 15 miles of stream in the East Douglas, Trapper's, and Big Beaver Creek drainages.

BLM authorized land uses within the East Douglas, Trapper's, and Big Beaver watersheds which adversely influence long-term riparian, channel, or aquatic conditions associated with Colorado River cutthroat trout fisheries would be prohibited.

A 47,610-acre ACEC would be established on that portion of the East Douglas Creek watershed encompassing 90 percent of this Resource Area's BLM-administered Colorado River cutthroat trout fisheries. ACEC designation would serve to coordinate all land uses in a manner compatible with or complementary to stream habitat recovery. ACEC objectives include the limiting of motorized vehicle use to designated roads and trails and maintaining or reducing effective road and trail densities to 1.5 miles per square mile. Road related objectives would be implemented through a travel management or integrated activity plan.

Acquisition of water rights necessary to meet minimum instream flow requirements of Colorado River cutthroat trout would be pursued in cooperation with the Colorado Division of Wildlife and Division of Water Resources. Acquisition of stream habitats with existing, or potential for, Colorado River cutthroat trout fisheries would be given a high priority.

Implementation (General)

BLM would continue to consult with the USFWS on federally authorized actions that may affect listed or proposed threatened or endangered species. Project-specific conservation measures derived through the consultation process would be applied to BLM-permitted actions as conditions of approval or mitigation measures through BLM's various use authorization and permitting processes.

NSO, TL and CSU stipulations associated with black-footed ferret, bald eagle, Colorado River cutthroat trout, ferruginous hawk, and northern goshawk (see Appendix B), would be applied, where appropriate, to all permitted surface use activities through various use authorizations and leasing processes. These protective stipulations would be applied on a case-by-case basis during the NEPA process to surface use activities associated with existing land use authorizations as mitigation measures or conditions of approval.

Exception and modification provisions (see Appendix B) provide some flexibility in implementing the stipulations and allows site-specific tailoring of prescriptions to gain effective protection of identified values without unnecessarily hindering other forms of public land use. These provisions provide the opportunity to integrate new or innovative technologies and information to better manage, protect, or compensate for wildlife related values or otherwise promote the accumulation of information necessary to better identify, assess, and manage wildlife values.

Habitat treatment guidelines and improvement objectives would be applied during NEPA planning and analysis of individual project proposals. These projects would normally be implemented through approved activity plans. Special status species habitat treatment and management objectives would be incorporated into the planning and development of all activity plans, and integrated with other resource management concerns. The identification and management of important habitat features and components associated with candidate species not specifically featured in this RMP (e.g. sharp-tailed grouse, loggerhead shrike, candidate non-game fishes) would be fully considered during the NEPA process, or during the IAP or ACEC management plan process. Management considerations for these species would likely appear integral with riparian and plant community objectives. Road density objectives, where appropriate to fishery and wildlife issues, would be implemented through a travel management plan or integrated activity plans developed subsequent to this RMP.

Species-specific Implementation

Black-footed ferret: Direct reintroduction of black-footed ferret in this Resource Area would be contingent on the successful development of a ferret reintroduction and management plan. Plan development would involve the mutual and cooperative efforts of all affected stake-holders (e.g. affected landowners and land use interests). Subsequent approval of this Plan may supersede or modify certain land use decisions and objectives included in this RMP. Notification would be provided to mineral lessees via Lease Notice of potential conservation measures necessary to avoid black-footed ferret mortality and maintain or enhance habitat suitability in prairie dog habitats outside designated ferret recovery areas. Other permitted forms of land uses would be subject to same provisions as provided for in BLM's various land use authorization and permitting processes.

Bald eagle/Colorado River cutthroat trout: Management objectives specifically directed at improving Colorado River cutthroat trout fisheries and bald eagle riverine habitats would be achieved primarily through: 1) modified livestock grazing practices; 2) installation of limited fencing and in-stream structures; 3) reestablishment of riparian vegetation; 4) controlling beaver populations; 4) upland vegetation treatments (see Table 2-19 in DRMP); 5) increasing the availability of upland (off-channel) livestock waters; 6) modification of project/ facility designs or locations; and 7) imposing special reclamation techniques as conditions of approval or mitigating measures on surface disturbing activities.

WILDERNESS MANAGEMENT

Objective

Manage the wilderness study areas to avoid impairment of their suitability until they are either designated as wilderness or released for other uses. Manage designated wilderness areas to preserve ecosystems and wilderness qualities in perpetuity.

Management

All six WSAs and the proposed additions to the WSAs (81,190 acres) would be managed in a manner that would not impair their suitability for wilderness designation. Certain activities such as oil and gas leasing and mineral material sales would not be allowed in WSAs until they are released from consideration as wilderness. Valid existing rights such as grazing, mining, and mineral leases that existed when FLPMA was approved on October 21, 1976, may continue in the same manner and degree as on that date, even if the use would impair wilderness suitability.

The boundaries of Bull Canyon, Willow Creek, and Skull Creek WSAs would be modified as shown in the Craig District *Wilderness Study Report* (BLM 1991), the PRMP assumes these areas would be designated by Congress as wilderness and they would be managed under the provisions of the *Wilderness Act*. It is also assumed that the Black Mountain, Windy Gulch, and Oil Spring Mountain WSAs would not be designated as wilderness. These assumptions are based on recommendations submitted to Congress in the *Craig District Wilderness Study Report* (BLM 1991).

Management for those WSAs not recommended for wilderness designation is based on the assumption that these WSAs would be released from wilderness consideration by Congress. Black Mountain and Windy Gulch WSAs would receive no special management. The areas would be open to the following uses: mineral leasing, locatable mineral development, livestock grazing, public utilities, and recreation use. Motorized vehicles would be allowed only on designated roads and trails. Other land management practices may be allowed such as prescribed fire and wildlife habitat enhancement projects subject to surface stipulations. The landscape would be managed as VRM Class II. Refer to Appendix E of the Draft RMP. Oil Spring Mountain would be designated as an ACEC. Refer to Management of Areas Of Critical Environmental Concern in this chapter.

Management of the Bull Canyon, Willow Creek and Skull Creek WSAs, should they not be designated as wilderness, is outlined in Appendix E of the Draft RMP.

Implementation

Projects proposed within WSAs would be analyzed to determine whether their actions would impair the suitability of such areas for wilderness designation. With the exception of valid existing rights, projects that would impair wilderness values would be denied. Projects that would enhance wilderness values may be considered with appropriate stipulations.

A wilderness management plan would be written for each area designated as wilderness. Designated wilderness areas would be managed under the provisions of the *Wilderness Act* to preserve wilderness character and provide for the public purposes of recreational, scenic, scientific, educational, conservation, and historical use. Areas not designated as wilderness would be released from wilderness review and managed as described above.

WILD AND SCENIC RIVER MANAGEMENT

Objective

Identify and evaluate all river and stream segments and determine eligibility and suitability for Wild and Scenic River (WSR) designation under the Wild and Scenic Rivers Act.

Management

Of the 13 river and stream corridors inventoried for wild and scenic river characteristics, eight were found eligible for consideration. Interim classifications were assigned to each eligible river or stream section to guide interim protective management of these segments. Refer to WSR Study Report in Appendix J of the Draft RMP.

None of the eight eligible river and stream segments have been recommended as suitable for wild and scenic river designation. Therefore, all river and stream segments evaluated in the White River Resource Area would be released from further consideration for WSR designation. No special management has been identified to protect WSR qualities for river and stream segments except as outlined in other sections of the proposed plan.

BLM lands along the White River have been proposed for designation as an area of critical environmental concern (ACEC) and the Cathedral Creek complex would be included in the Cathedral Bluffs ACEC. Threatened and endangered fish species would be protected in all river and stream segments as mandated by the *Endangered Species Act*.

Implementation

All river and stream segments in the White River Resource Area would be dropped from further consideration and management as WSRs following the signing of the final RMP and record of decision.

VISUAL RESOURCE MANAGEMENT

Objective

Manage public lands in a manner which would protect the quality of the scenic or visual resource values of these lands.

Management

Visual resource management (VRM) classes would be assigned to the various landscapes in the Resource Area. These classifications correspond to the management objectives in an area and indicate the level of acceptable change that could occur within the class. VRM classes are shown on Map 2-18 of the Draft RMP. Management actions or projects should repeat the basic elements of line, form, color, and texture to help them blend in with the landscape and maintain the VRM class or level of change to the landscape. The following is a list of the number of acres within each class under the proposed plan:

Class I	39,390 acres
Class II	412,250 acres
Class III	861,680 acres
Class IV	146,100 acres

Implementation

Visual resource management classes would become effective upon signature of the approved RMP and Record of Decision. No further planning would be required to implement the decisions. Proposed management actions and projects would be evaluated for consistency with VRM classification objectives. Management actions and projects that would noticeably change the characteristic landscape would be modified to blend in with the characteristic landscape, would be denied, would be moved to another more suitable location or otherwise altered to meet VRM objectives. Stipulations or other management actions would be placed on permits, APDs, projects, etc. to prevent impairment of the visual resource as appropriate to meet VRM class objectives.

The areas of primary concern include: all VRM Class I and II areas; Canyon Pintado NHD; and corridors along Highways 13, 40, 64 and 139.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Objective

Designate and protect identified areas that contain important historic, cultural, scenic and natural values as Areas of Critical Environmental Concern (ACECs). Protection shall include:

1) Maintain environmental quality to prevent undue degradation to the values that make the site or locale unique.
2) Allow for multiple uses of ACECs within the context of maintaining special values in the ACECs.
3) Manage ACECs in cooperation with interested agencies, landowners, and other parties to prevent degradation of the special values in the ACECs.
4) Place special management emphasis on ACECs with other significant values such as threatened and/or endangered species, National Register of Historic Places eligibility, National Natural Landmark status and other compatible designations.

Management

The existing area of critical environmental concern (ACEC) designations (8,740 acres) would continue. Additional proposed ACECs (90,380 acres) would be designated as shown in Table 2-53, of the Draft RMP. Map 3-15 displays the locations of existing and proposed ACECs.

Surface stipulations would be applied to each ACEC (see Appendix B) to protect resources of concern for which the ACEC was designated. The stipulations would be either controlled surface use (99,060 acres), no surface occupancy (26,770 acres), or combinations of both. Timing stipulations for wildlife also overlap with 98,100 acres of the ACECs. These stipulations would apply to protect the affected resource whether or not the area were designated as an ACEC. Appendix F of the Draft RMP describes other management that would apply within each of the ACECs as Alternative D.

Maintaining genetic integrity of native species in ACECs and RVAs is an important management consideration. Reclamation of surface disturbance resulting from authorized activities within ACECs and RVAs should use only locally gathered, or genetic stock from locally gathered, native species. In those cases where locally gathered native species are not available, the impact of using non-local native species on the genetic integrity of native species within ACECs and RVAs must be evaluated and mitigated through site specific environmental analysis.

Implementation

ACEC designations would become effective upon signature of the approved RMP. ACECs would be managed as outlined under Alternative D of Appendix F in the Draft RMP, until individual activity plans could be developed.

Existing ACEC activity plans (Dudley Bluffs, South Cathedral Bluffs, and Raven Ridge) would be revised to be consistent with decisions contained in the approved RMP. As integrated activity plans are initiated, existing and new ACECs occurring within those plan areas would be incorporated into that activity plan process. The integrated activity plan would then replace the need for an individual ACEC activity plan.

RECREATION

Objective

Provide a broad spectrum or diversity of resource-dependant recreation opportunities to meet public land visitors demand by: 1) provideing services to the visiting public; 2) maintaining high quality facilities to meet public needs and demand; and 3) improve public understanding and support of BLM programs through communication and partnerships.

Management

The entire White River Resource Area would be managed as the White River Extensive Recreation Management Area (ERMA). No Special Recreation Management Areas (SRMA) are identified in the proposed plan. The White River ERMA would be managed custodially to provide unstructured recreation opportunities. Certain management actions and objectives would be applied in the ERMA. A diversity of outdoor recreation opportunities and activities, with resulting experiences and benefits would be maintained and protected. Two areas within the ERMA (the Blue Mountain Geographic Reference Area (GRA) and the White River ACEC) would be managed to provide specific recreation activity opportunities and physical, social, and managerial settings for targeted recreation experiences and resulting benefits. Map 2-20 in the Draft RMP shows recreation opportunity spectrum (ROS) management classes that would be maintained in the Blue Mountain GRA and White River ACEC. Targeted activities, settings, experiences and major management actions for the Blue Mountain and White River Areas are listed below.

Blue Mountain GRA (North)

Targeted Activities: Trophy big game and upland bird hunting; mountain biking; scenic viewing; horseback riding; pleasure driving; wildlife viewing.

Settings to be Maintained: (1) Physical: SPNM, SPM, RN, R; (2) Social: SPNM, SPM, RN; (3) Managerial: SPNM, SPM, RN.

Benefits/Experiences: Manage to provide experiences and benefits related to (1) individual - cultural/historical/rural life-style learning, quality of life/satisfaction, and challenge, (2) socio-cultural - environmental sensitivity, (3) economic - local economic growth/ stability, and (4) environmental - enhanced environmental ethic.

Major Management Actions: Acquire access and key inholdings; manage as VRM Class II; encourage private sector development of a 30-50 unit tent campground somewhere along Harper's Corner Road or develop camping facilities in partnership with DNM; accommodate RV camping in town of Dinosaur; identify/develop mountain bike routes; pursue a scenic byway partnership.

Blue Mountain GRA (South)

Targeted Activities: Wilderness hiking and backpacking (backcountry recreation); trophy big game and upland bird hunting; mountain biking; scenic viewing; horseback riding; pleasure driving; and wildlife viewing.

Setting to be Maintained: (1) Physical - SPNM, SPM, RN, R; (2) Social - P, SPNM, SPM, RN, R; (3) Managerial - P, SPNM, SPM, RN.

Benefits/Experiences: Manage to provide experiences and benefits related to (1) individual - tranquility, solitude, nature and cultural learning, physical health and maintenance, sense of adventure, aesthetic appreciation, and challenge, (2) socio-cultural - environmental sensitivity, (3) economic - local economic growth/ stability; and (4) environmental - enhanced environmental ethic.

Major Management Actions: Acquire WSA access and key inholdings; manage as VRM Classes I and II; encourage private sector development of a 30-50 unit tent campground somewhere along Harper's Corner Road or develop camp facilities in partnership with DNM; accommodate RV camping in town of Dinosaur; allow low impact recreational camping from June 15 through August 15 in the Moosehead Mountain road closure area; designate/develop mountain bike routes connecting to Yampa Valley Trail in DNM, Harper's Corner Road to Town of Dinosaur, and Moosehead Mountain to Skull Creek Rim.

White River ACEC (Meeker to Kenny Reservoir)

Targeted Activities: River floatboating (open canoeing) and fishing, camping.

Settings to be Maintained: (1) Physical - RN, R; (2) Social - RN; (3) Managerial - RN.

Benefits/Experiences: Manage to provide experiences and benefits related to (1) individual - cultural/historical/rural life-style, quality of life/satisfaction, family orientation; (2) socio-cultural-environmental sensitivity; (3) economic- local and regional economic growth/stability, and (4) environmental - enhanced environmental ethic.

Major Management Actions: Provide river access; retain BLM lands; establish launch sites/parking and interpretive facilities; allow camping only in designated sites (sites to be determined when developing integrated activity plans); provide user ethics and information; monitor use; VRM Class II.

White River ACEC (Kenny Reservoir to Shavetail Bridge)

Targeted Activities: Open canoeing; cold- and warm-water fishing; camping.

Settings to be Maintained: (1) Physical - R, MU; (2) Social - RN; (3) Managerial - RN.

Benefits/Experiences: Manage to provide experiences and benefits related to (1) individual - cultural/historical/rural life-style, quality of life/satisfaction, family orientation; (2) socio-cultural- environmental sensitivity; (3) economic - local and regional economic growth/stability, and (4) environmental - enhanced environmental ethic.

Major Management Actions: Provide river access; retain BLM lands; establish launch sites/parking and interpretive facilities; allow camping only in designated sites (sites to be determined when developing RAMPs or integrated activity plans); develop watchable wildlife sites and trails at Kenny Reservoir in partnership with others; develop rock art interpretive site at reservoir; develop boat launch/parking above Shavetail Bridge; monitor river use; provide user ethics and information; VRM Class II.

White River ACEC (Shavetail Bridge to Utah Border)

Targeted Activities: River floatboating; open canoeing; warm- and cold-water fishing; camping.

Settings to be Maintained: (1) Physical - SPM; (2) Social - SPNM; (3) Managerial - SPNM.

Benefits/Experiences: Manage to provide experiences/benefits related to (1) individual - independence, tranquility, solitude, scenery, (2) socio-cultural - environmental awareness/sensitivity, (3) economic - local and regional economic growth/stability, and (4) environmental - enhanced environmental ethic.

Major Management Actions: Acquire shoreline tracts; manage VRM Class II; retain existing BLM public lands; monitor river use; provide user ethics and information; encourage private sector development of canoe livery and shuttle service; camping only in designated sites (sites to be designated when developing integrated activity plans); coordinate management with Utah BLM.

Implementation

The ERMA delineation would become effective upon signature of the approved RMP and record of decision. Specific management of the White River ERMA would be included in individual project plans or in integrated activity plans written following publication of the approved RMP. An environmental assessment would be prepared for each project plan or integrated activity plan.

Recreation information would be provided to the public through maps, brochures, publications or other means to ensure public awareness of available recreation opportunities, to promote public health and safety, prevent resource deterioration by promoting user ethics, and mitigate conflicts. Locations, access, opportunities, management objectives, safety, user ethics, interpretive, educational, and other information would be highlighted in publications or provided through other means. A sign plan would be completed, implemented and maintained to identify public lands, provide direction, locations, safety and interpretation information.

Access to public lands would be acquired, developed, and maintained where demand, recreational values, and sufficient size warranted legal and/or physical access. This access would be acquired through easement, agreement, exchange or other means. Geographic areas identified for access acquisition are discussed in the Access Section.

Lands would be identified for possible acquisition where: (1) There is high demand for highly valued recreation opportunities, (2) key areas are needed to block public lands for management purposes, (3) to mitigate conflicts, (4) recreation development may occur such as trailheads, boat launch sites, camp areas, interpretive sites, and (5) the area of interest contain willing sellers.

Facilities would be provided and maintained to accommodate visitor health and safety and allow use of public lands resources. Parking areas, trailheads, sanitary facilities, camp areas, kiosks and other limited facilities to support trails, interpretative sites, and watchable wildlife sites would be developed in partnerships with the private sector.

A recreation-tourism community partnership(s) would be pursued. The purpose of the partnership(s) would be to protect natural and cultural resources, develop recreation resources, and enhance local economic growth and stability through rural recreation/tourism development. Partnerships would involve land managers, state & local governments and interests, the tourism industry, other agencies, and local interests.

Special recreation permits (SRPs) would be issued to qualified commercial guides and outfitters based on need and demand for services. Use limits or allocations would be made based on services provided, prior use history, responsiveness, and proven responsibility of applicants. Allocations may also be used to resolve conflicts, protect resources, or reduce impacts to resources, clients and other public land users. Commercial operations would be encouraged to diversify the services and opportunities offered on the public lands. Permits would be issued to competitive events and other services as required.

Manage and monitor resources and visitor use to ensure protection of sensitive resources and continued availability of recreation opportunities and experiences. Provide an on-the-ground presence particularly during the intensive big game hunting seasons and in areas with sensitive resources during high use periods.

ROS classes in the ERMA would not be specified.

Picnicking/camping sites will be developed at Divide Creek Reservoir and Peterson Draw Reservoir.

Overnight camping on public lands within the Oak Ridge State Wildlife Area would be prohibited.

Develop a cultural resource interpretive program, for sites in the Canyon Pintado, Duck Creek & Colorow Wickiup areas, Moosehead Mountain ACEC, Dragon Trail, and Dripping Rock Cave areas, among others, in conjunction with the cultural resource program.

Develop Watchable Wildlife and other interpretive sites in partnership with other entities and as support and demand dictate (e.g. Kenny Reservoir, Harpers Corner Road, trails & trailheads, overlooks, roadside historic or point of interest sites, geology & paleontology sites, etc).

Develop motorized and non-motorized trails (e.g. mountain bike, hiking, horseback, ATV, 4-wheel drive, snowmobile, etc.) as demand/ needs dictate. Trails may include but are not limited to: Rangely Loop, Dinosaur, Ute, Dominguez-Escalante, Scenery Gulch, Cathedral Bluffs, and China Wall/Lion Canyon/Lobo Mountain Trails. Develop links to other trails: Yampa Valley Trail, Kokopelli's Trail, Uinta Railroad into Utah, etc.

To develop a non-motorized quality hunting area, no motorized vehicles would be allowed in Cow Creek, Timber Gulch and Hay Gulch areas from August 15 to November 30. Vehicle use may be permitted during this time for permitted purposes.

MOTORIZED VEHICLE TRAVEL MANAGEMENT

Objective

Manage motorized vehicle travel on public lands to provide for public needs and demands, protect natural resources and the safety of public land users, and minimize conflicts among various users of public lands. The entire Resource Area would be designated as either open, limited, or closed to off highway vehicle use.

Management

Management presented here is "interim" until such time that a comprehensive travel management plan can be developed. It is anticipated that a travel management plan would be initiated upon approval of this document.

No areas within the White River Resource Area would be designated as open to off highway vehicle use. However, the Resource Area is open to winter snowmobile use, except within the Moosehead road closure area, Oak Ridge State Wildlife Area, and the six Wilderness Study Areas.

Map 3-8 delineates the interim OHV designations within the Resource Area.

Motorized vehicles would be limited to existing roads, ways and trails on most of the public lands in the Resource Area from October 1 through April 30 each year. The limitation is necessary to prevent damage to soil, water, vegetation, wildlife, and other sensitive resources during periods when the ground is generally wet from rain or snow. The limitation is also necessary to limit the creation of new roads and trails in areas that will not sustain them. Vehicle use would not be restricted in these areas outside of this time period. Exceptions to the limitation are: 1) Vehicles may be allowed to travel up to 300 feet from an existing road, way or trail to park, camp, gather firewood, etc. as long as no damage is caused to resources; 2) hunters may use motorized vehicles to retrieve downed big game at any time as long as damage to resources does not occur; 3) physically challenged individuals may be allowed to continue travel off existing roads and trails during the limited months and 4) emergencies involving threats to life and property. Approximately 922,200 acres are included within this designation.

Motorized vehicle travel is limited to existing roads, ways and trails all year in identified fragile soil areas, the black-footed ferret reintroduction areas, the Texas-Missouri-Evacuation Creek cultural Resource Area, and in areas with potential habitat for Threatened and Endangered or sensitive plant species. These overlapping areas cover approximately 326,985 acres.

Motorized vehicle use is limited to designated roads and trails in ACECs (88,860 acres, Map 3- 9) to protect sensitive resources, in the Indian Valley/Keystone Ranch area (10,790 acres, Map- 3-11) to comply with a court ruling, and in the Canyon Pintado National Historic District (16,040 acres, Map 3-10) to protect fragile cultural resources.

The Cow Creek/Timber Gulch/Hay Gulch areas (7,390 acres) would be closed to motorized vehicle use from August 15 through November 30 each year in order to establish non-motorized quality hunting areas.

All six Wilderness Study Areas (WSAs) are designated as closed until such time that Congress either designates them as wilderness or releases them for other uses. Those areas designated as wilderness (assume the Bull Canyon, Willow Creek and Skull Creek WSAs will be designated by Congress) would remain closed to motorized vehicle use to prevent damage to resources and wilderness values within these areas (41,250 acres). Vehicle use in the remaining WSAs released from wilderness consideration by Congress (Black Mountain, Windy Gulch, and Oil Spring Mountain) would be limited to designated roads and trails (39,946 acres).

Public Lands in the Moosehead Mountain Road Closure Area (6,909 acres) and Oak Ridge State Wildlife Area (2,918 acres) would be designated as closed to motorized vehicle use to prevent damage to watershed resources and wildlife habitat.

These limitations would remain in effect until a site specific travel management plan can be completed. The travel management plan would be a public process and would be developed to determine where and if any roads and trails will be closed; identify public needs such as construction of motorized or nonmotorized trails; determine the need for open areas; or other changes as necessary. Criteria would be integrated or otherwise developed to achieve established resource objectives, such as stabilizing or reducing disruption of big game habitat use (i,e., effective road density limitations) and preventing damage to riparian and aquatic habitats, and would be used to aid in adjusting designations within the Resource Area.

Implementation

OHV designations would be in effect with the signing of the final RMP and record of decision.

Roads and trails within designated areas (WSAs, ACECs and other limited or closed areas) would have maps prepared for public distribution and would be marked on the ground with signing.

All known roads and trails in the White River Resource Area have been identified using aerial photographs taken in 1993 and 1995. These roads and trail have been entered into a computer data base. Map 3-7 shows all these known existing roads, trails and ways within the Resource Area. The information entered into the data base was the best available at the time, therefore, some of the maps may contain errors. The errors would be corrected as they are noted and at the time a travel management plan would be prepared.

All roads and trails would be numbered to be consistent with BLM policy and the transportation system. The numbered roads and trails and the computer data base would be updated and maintained on a regular basis.

As proposals for construction of new roads or trails are received, NEPA documentation would be prepared to analyze impacts and determine appropriate designations and potential for replacement of other roads. Criteria will be developed as part of the travel management planning process to aid in the determination for changing particular road and trail designations, or adding/ closing roads and trails. All road closures would be announced in the *Federal Register* but would not require an RMP amendment. The computer data base would be maintained and updated as changes are made.

The following definitions were used in the development of the above management actions. They will also be used in developing the travel management plan:

OPEN: The open designation means an area where all types of vehicle use is permitted at all times, anywhere in the area subject to the operating regulations and vehicle standards.

LIMITED: An area designated as limited means an area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: numbers of vehicles; types of vehicles; time or season of use; permitted or licensed use only; use on existing or designated roads and trails; and other restrictions.

CLOSED: An area designated as closed means an area where off-highway vehicle use is prohibited. Use of OHVs in closed areas may be allowed for certain reasons such as emergencies and in conjunction with other valid resource uses. Specific permitted use within closed areas shall be subject to the approval of the Area Manager.

ROAD: A road is defined as a transportation facility constructed and used primarily by vehicles having four or more wheels, and maintained for regular and continuous use.

WAY: A way is a roadlike feature used by vehicles having four or more wheels, but not declared a road and which receives no maintenance to guarantee regular and continuous use. A way is maintained solely by the passage of vehicles.

TRAIL: A trail is a facility that is used primarily for foot traffic, beasts-of-burden, ATVs or motorcycles, bicycles, and various special equipment or machinery generally used for individual travel. Facilities used by jeep or four-wheel drive vehicles are classified as roads or ways.

Administrative measures will be relied on most for enforcement actions, ie, signing, education, on site discussions with users, and self enforcement by users. Law enforcement personnel will be relied on only if necessary.

CULTURAL RESOURCE MANAGEMENT

Objective

Encourage responsible scientific utilization of cultural resources. Protect and preserve examples of cultural and historical resources in accordance with existing laws and regulations.

Develop a program for recreational/educational (i.e. Adventures in the Past, Recreation 2000) use of cultural resources.

Management

All federal undertakings, as defined by regulation at 36 CFR 800, on BLM administered lands, shall be subject to review to consider cultural resources. The review process includes a records search and/or field inventory, as needed, to identify and evaluate any cultural resources that may be affected by the proposed undertaking. All cultural resources identified would be evaluated in consultation with the State Historic Preservation Officer (SHPO) and/or Advisory Council on Historic Preservation (ACHP), as appropriate to determine their significance in American history or prehistory. Evaluation criteria are listed at 36 CFR 60. Consultation shall be carried out under the terms of the Programmatic Agreement between the SHPO, BLM, and ACHP. The Programmatic Agreement (PA) and 36 CFR 800 specify that consultation shall be completed prior to approving expenditure of federal funds or prior to issuing any licenses or permits.

Designate the Canyon Pintado National Register Historic District (CPHD), as an avoidance area for major new rights-of-way for powerlines, pipelines, roads, etc. to protect cultural resources.

The boundaries of CPHD would be revised to conform to aliquot part legal descriptions and the extent of known cultural resources. The boundary adjustment could be consistent with the original nomination.

Establish and implement a patrol/protection plan for cultural resources occurring within 1/2 miles of all designated roads and trails, county roads and State highways.

Increased protection of cultural resources in the Texas-Missouri-Evacuation Creek areas would be accomplished with a controlled surface use stipulation or conditions of approval to control placement of surface developments.

Implementation

All ground disturbing activities outside of existing disturbance within the CPNHD would be monitored by an approved and qualified archaeologist for the following conditions:

1) Activity occurs in the vicinity of known resources.

2) Activity occurs in the alluvial bottoms along Douglas Creek and its tributaries.

3) Activity occurs in deep alluvial soils.

Protection of cultural resource values in the Texas-Missouri-Evacuation Creek area would be accomplished by:

1) limiting ohv use to existing roads and trails.

2) designate the area as an avoidance area for major new rights-of-way for pipelines powerlines, etc.

3) Controlled Surface Use restrictions to surface disturbing actions in the area.

Cooperative agreements would continue with qualified entities, such as the Archeological Research Institute, for research and/or educational use of cultural resources.

Permits would be required for all third party consultants conducting work in the field. Applicants for permits must meet the eligibility requirements at 43 CFR 7.6 and BLM manual 8151.

Permits for excavation shall be awarded to applicants meeting requirements of 43 CFR 7.6 and BLM manual 8151. Excavation will only be permitted for sites immediately threatened by development, that are subject to uncontrolled vandalism, cannot be preserved in place, or are threatened by serious natural erosion. All site excavations must be performed in accordance with an approved plan as specified by the Secretary of Interior's Standards as published in 48 FR 44716 et seq.

To the maximum extent practicable, all materials collected from a given site shall be curated together at the same facility.

To the maximum extent practicable, all materials collected during inventory and/or excavation shall be curated within the State of Colorado, consistent with the above requirements to keep collections from a given site together.

All curation facilities must meet, or demonstrate diligence in working toward meeting, regulations for curation of federally owned artifacts as published at 36 CFR 79.

In cooperation with the recreation program, develop an interpretation/ public education program.

Approximately three acres in and around the Duck Creek Wickiup Village, listed on the National Register of Historic Places, shall be protected with a no surface occupancy stipulation.

PALEONTOLOGICAL RESOURCE MANAGEMENT

Objective

Protect scientifically noteworthy paleontological resource values from indiscriminate loss.

Make paleontological resources available for scientific, educational, and appropriate recreational purposes.

Management

As funding and proposed projects allow, survey Class I areas for locations of noteworthy fossil localities. Identify appropriate fossil bearing formations for classification as noteworthy (Class I), or not noteworthy for formations needing further data for adequate evaluation. Identify areas suitable for the noncommercial collection of common fossils.

Require all third party paleontology consultants to be permitted to conduct work on BLM administered lands, in accordance with applicable laws and regulations.

Implementation

Excavation of noteworthy fossils shall be by permit only. Scientifically noteworthy fossils would include, but not necessarily be limited to, vertebrate fossils and any plant or invertebrate fossils as determined from the appropriate paleontological literature and in consultation with paleontologists knowledgeable about the fossils under consideration.

Permit applicants must meet minimum qualifications as specified by the BLM.

All collected materials discovered during inventory or excavation shall be curated in facilities that meet, or demonstrate diligence in working toward meeting the DOI requirements of DM 411, appropriate requirements at 36 CFR 79.

Whenever possible and practical, collected materials shall be curated at facilities within the borders of the State of Colorado.

Designate the Black's Gulch fossil site as an ACEC to protect scientifically important fossil resources.

Designate the Coal Draw Paleontological locality/site as an ACEC to protect scientifically important fossil resources.

Designate an addition to the existing Raven Ridge ACEC as a paleontological ACEC to protect scientifically important fossil resources.

Scientifically noteworthy fossil bearing formations shall include but not necessarily be limited to: the Chinle, Glen Canyon, Morrison, Cedar Mountain, Mowry Shale, Parachute Creek Member of the Green River Formation, Wasatch and Browns Park Formation. Also, in the Rangely area, the Mesaverde Group and Uinta Formation are noteworthy. Formations or members of formations may be added or removed from this list as additional data become available.

Excavation permits are issued under authority of the Federal Land Policy and Management Act (FLPMA) of 1976 to paleontologists, museums or universities, for scientific/educational purposes.

Class I formations having good, safe outcrops likely to produce scientifically important fossils should be surface surveyed. Surveys will not be conducted in Class I areas having vertical to near vertical (unsafe) slopes, areas of soil development and areas covered with much vegetation as these areas are unlikely to produce recoverable fossils.

Applicants wishing to collect common invertebrate fossils in areas that may produce vertebrate fossils or fossils of scientific interest would also need to have a valid permit.

Organizations that charge fees for guided tours that take people out to collect common invertebrate or plant fossils for personal use shall be required to have an appropriate Special Recreation Permit. These organizations shall be required to report any vertebrate fossils uncovered during the course of their tour/trips on BLM lands.

LANDS AND REALTY MANAGEMENT

Land Use Authorizations

Objective

To make public land available for the siting of public and private facilities through the issuance of applicable land use authorizations, in a manner that provides for reasonable protection of other resource values.

Management

All authorizations granted prior to completion of this RMP represent prior existing rights which are not diminished by this document. These authorizations will continue in effect, pursuant to their terms and conditions, and the regulations under which they are authorized.

The following areas totaling 205,740 acres would be classified as avoidance areas for the permitting of land use authorizations:

landslide areas (35,700 acres);

lands surrounding raptor nests (31,250 acres);

sage grouse leks (5490 acres);

bald eagle roost/concentration areas (830 acres);

Deer Gulch ACEC (1810 acres);

Lower Greasewood Creek ACEC (210 acres);

Dudley Bluffs ACEC (1630 acres);

Yanks Gulch/Upper Greasewood Creek ACEC (2680 acres),

Ryan Gulch ACEC (1440 acres);

White River Riparian ACEC (950 acres);

Coal Oil Rim ACEC (3210 acres);

Oil Spring Mountain ACEC (18,260 acres);

East Douglas Creek ACEC (47,610 acres);

Duck Creek ACEC (3420 acres);

lands supporting BLM sensitive plants/RVAs (4520 acres);

Harper's Corner Road (2530 acres);

Oak Ridge SWA (9300 acres);

riparian areas (970 acres);

Canyon Pintado National Historic District (16,040 acres),

The following areas, totaling 107,420 acres, would be classified as exclusion areas for land use authorizations:

Wilderness Study Areas (41,250 acres);

South Cathedral Bluffs, and Addition (1330 acres);

Raven Ridge, and Addition (4980 acres); Moosehead Mountain (8940 acres); Black's Gulch (800 acres) and Coal Draw (1840 acres) ACECs;

known habitat for listed/candidate plants (1440 acres);

potential habitat for listed/candidate plants (46,840 acres),

The remainder of the Resource Area (approximately 1,142,740 acres) would be considered open for land use authorizations.

The following right-of-way corridors which are displayed on Map 3-12, would be designated based on topography, soils, existing and proposed areas with special designations, threatened and endangered species habitats, relative percentages of public versus private ownership (these corridors are specifically not intended as designations of private land), industry input (e.g. the 1992 edition of the Western Regional Corridor Study), and the degree to which a potential corridor is currently occupied:

NATE SPRINGS DRAW: This corridor runs from Rangely to U.S. Highway 40, about half way from Blue Mountain to Massadona. It is approximately 1 mile wide, and would accommodate all linear facilities.

ELK SPRINGS-DINOSAUR: This corridor parallels U.S. Highway 40, from Elk Springs to the Utah State Line. It is approximately 2 miles wide, and would accommodate all linear facilities.

BLUE MOUNTAIN-BONANZA: This corridor follows the Craig to Bonanza 345 kV powerline. It is approximately 2 miles wide, and would accommodate all linear facilities.

RANGELY-VERNAL: This corridor parallels U.S. Highway 64 from Rangely to the Utah State Line. It is approximately 2 miles wide, and would accommodate all linear facilities.

DRAGON TRAIL-ATCHEE RIDGE: This corridor follows the route once proposed as the Rangely Loop segment of the Northwest Pipeline Expansion Project. It runs south from Rangely, to the vicinity of Baxter Pass, is approximately 1 mile wide, and would accommodate all buried linear facilities.

MEEKER-RANGELY: This corridor parallels U.S. Highway 64 from Rangely to the east. It is approximately 1 mile wide, and would accommodate all linear facilities.

HIGHWAY 64-RYAN GULCH: This corridor follows Rio Blanco County Roads 122, 24X, and 24. It is approximately 1 mile wide, and accommodates all buried linear facilities.

COLLINS GULCH SOUTH: This corridor runs south from Magnolia Camp. It branches, and follows the proposed TransColorado, and Union Sales routes. It, and each fork, are approximately 1 mile wide, and accommodate all buried linear facilities.

MAGNOLIA-CASCADE: This corridor runs from Magnolia Camp to Cascade Gulch. (The segment from Cascade Gulch to the head of West Rifle Creek has been eliminated.) It is approximately 1 mile wide, and accommodates all buried linear facilities.

COLOROW-GREASEWOOD: This corridor follows the Uintah Basin Lateral, and Rocky Mountain Natural Gas pipelines, from the base of Colorow Mountain to Magnolia Camp. (The segment from Colorow Mountain to Price Creek has been eliminated.) It is approximately 1 mile wide, and accommodates all buried linear facilities.

POWELL PARK-MAGNOLIA: This corridor runs from Magnolia camp to Powell Park. It is approximately 1 mile wide, and accommodates all buried linear facilities.

MEEKER NORTH: This corridor runs north from near the east end of Powell Park. It is approximately 1 mile wide, and accommodates all linear facilities.

PARK CANYON-MAGNOLIA: This corridor generally follows the Uintah Basin Lateral. It deviates at Little Horse Draw to avoid a highly congested area. It terminates, without including the segment across Rabbit Mountain to the Utah State Line, in order to allow maximum flexibility in crossing private land. It is approximately 1 mile wide, and accommodates all buried linear facilities.

All corridors previously designated would be dropped unless included above.

Communication site rights-of-way would be limited to currently occupied sites. An exception would be granted for non-commercial, private mobile, or microwave facilities by pipeline/power companies or land management entities, in support of their primary business, where no existing site can be shown to meet the applicant's needs. The site at Moosehead Mountain would not be available for any additional uses.

Applications for land use authorizations (e.g. rights-of-way, leases, and permits) would be considered on a case-by-case basis. Necessary NEPA documentation would be prepared for all such actions. Actions proposed in open areas and in designated corridors would normally be authorized subject to the use of conditions of approval (see Appendix C), all applicable surface use stipulations listed in Appendix B, and any site specific stipulations identified through the NEPA process. Development would be allowed in avoidance areas under these same conditions where no feasible alternative could be identified.

Land use authorizations would be denied in exclusion areas, with the exception of short-term land use permits involving no development, and projects that are consistent with management objectives for the area.

Unauthorized uses of the public lands would be eliminated or properly authorized. In all cases, the BLM would recover monetary considerations and ensure adequate rehabilitation of the public lands.

Implementation

Open areas, avoidance areas, and exclusion areas would become effective upon signature of the approved RMP and record of decision. Corridors for the siting of future, major linear rights-of-way would be designated, and/or undesignated, also upon signature of the approved RMP and record of decision. Necessary NEPA documentation would be prepared for all applications. Applicants would be encouraged to make early contacts for all planned actions, in order to identify preferred routes and potential conflicts.

Land Tenure Adjustments

Objective

To provide for adjustments in land ownership to acquire important resources/values, meet local needs, resolve unauthorized uses, and improve efficiency in public and private land management.

Management

Approximately 11,503 acres of public land meet the sale criteria under Section 203 of the *Federal Land Policy and Management Act* (FLPMA) and are determined to be Category 1 lands: they are suitable for disposal by any means, including, but not limited to, sale, exchange, or jurisdictional transfer. These lands are listed by legal description in Appendix I of the Draft RMP, as those lands suitable for all forms of disposal under Alternative D. In addition to these previously described lands, the following public lands are considered to be suitable for disposal under all authorities including Section 203 of the Federal Land Policy and Management Act of 1976, but not the Desert Land Act or the General Allotment Act:

T. 1 N., R. 95 W., Sixth principle meridian
Sec 28: Lot 29

T. 1 S., R. 94 W.
Sec 4: Lot 1, SENE, E1/2SE
Sec 9: E1/2E1/2
Sec 16: E1/2E1/2
Sec 21: NENE
Sec 22: NWNW

T. 5 S., R. 102 W.,
Sec 8: S1/2SE
Sec 9: SWSW
Sec 10: W1/2NW, NWSE
Sec 13: NENE
Sec 16: S1/2NW
Sec 23: SENW

The above described lands comprised approximately 578 acres.

Approximately 1,282,017 acres of public lands not specifically identified for disposal or retention are designated Category 2 lands. These lands would be available for disposal, on a conditional and case-by-case basis, through boundary adjustment, state indemnity selection, Recreation and Public Purposes Act applications, or other appropriate statutory authority. Where lands lie adjacent to those held by other resource/land management agencies, preference would be given to transfers to these agencies. Disposals would not be made under Section 203 of *FLPMA*, the *Desert Land Act*, or the *General Allotment Act*. Proposals would be evaluated based on the criteria identified in Appendix I of the Draft RMP. Land disposals or exchanges would be considered when the result would be consolidated ownership, improved management of natural resources, or serving the public interest consistent with the provisions of Section 206 of FLPMA. Specific Category 2 tracts for disposal or exchange are not identified.

Approximately 162,380 acres of public lands are not suitable for disposal of any kind. These are designated as Category 3 lands, and include wilderness study areas (WSAs) and areas of critical environmental concern (ACECs). These Category 3 lands, which are identified for retention, are listed in Appendix I of the Draft RMP, Alternative D.

Public access rights would be reserved on all disposal tracts controlling access to BLM lands. Exchanges involving oil shale or other valuable mineral lands would be allowed where the public interest would be well served, BLM's criteria for fee exchange policy and leasable and saleable minerals would be met, and an equal value determination could be made (see analysis in Appendix I of the Draft RMP).

Map 2-24 in the Draft RMP shows Category 1 disposal tracts and Category 3 retention lands.

Acquisition of non-Bureau lands may be pursued through exchange, purchase or donation, where the acquisition would serve to enhance the BLM's objectives and special emphasis programs. For purchase

or donation, acquisitions would generally be limited to inholdings within designated areas. Fourteen factors, listed in Appendix I of the Draft RMP, would be considered in evaluating acquisitions through exchange, purchase, or donation.

Implementation

Category 1 Lands. Proposals for the disposal of Category 1 lands will be considered, generally on a case by case basis. While these parcels may be sold, exchange would be the preferred method of disposal in most cases. Concerns of adjacent owners, current users, and local governments will be considered prior to disposal. An environmental assessment or other appropriate NEPA documentation would be prepared for all such proposals. BLM would not acquire private lands near Category 1 lands.

Category 2 Lands. BLM will consider proposals to exchange Category 2 lands for private or state lands, and may propose such actions to other land owners. Appropriate NEPA documentation would be prepared for all proposals. Applications under the *Recreation and Public Purpose Act* or *Airport and Airways Act* would be considered on a case-by-case basis. Applications under Section 203 of *FLPMA*, the *Desert Land Act*, or the *General Allotment Act of 1887* would not be allowed. Boundary adjustments or exchanges with other agencies are the preferred method for disposal of land adjacent to lands managed by these agencies. Acquisition of lands within and around Category 2 lands may take place.

Category 3 Lands. Proposals to purchase or exchange BLM lands identified as Category 3 will be denied. BLM could pursue purchase of private lands near Category 3 lands or could consider exchanging Category 1 or Category 2 BLM lands for such private lands.

Access Management

Objective

To enhance access to public lands and resources.

Management

Public and/or administrative access would be pursued in areas of BLM lands having high resource values with limited or no public or administrative access. Administrative and public access would be obtained through acquisition of easements, acquisition of land through exchanges, road construction or renovation, or by other appropriate means.

Lands identified for public access enhancement include: 1) large blocks of inaccessible BLM lands or lands with currently limited/restricted public access; 2) smaller blocks of high demand or high interest BLM lands; and 3) lands that would tie major open routes together. Map 2-25 of the Draft RMP shows some of the broad areas where public access needs to be enhanced, administrative access is needed, or both public and administrative access is needed. These areas are not all inclusive, however, and access activities may take place throughout the Resource Area on a case by case basis, as opportunities arise.

The type and degree of access acquired would be consistent with the management direction for, or emphasis of, the area to be accessed.

Implementation

Priorities for acquiring access would be identified for all areas needing access, generally through the transportation planning/integrated activity plan process. Plans would identify specific tracts of land or roads needed for public or administrative access. All access plans will include necessary NEPA documentation.

Withdrawals

Objective

To eliminate unnecessary segregations of public lands.

Management

Recommendations would be made for the revocation of all BLM public land withdrawals which are no longer needed. Recommendations would also be made for continuation of withdrawals which are still needed for the purposes for which the original withdrawal was made. These recommendations are as follows:

Oil Shale - Continue, modify to allow for exchanges and other discretionary actions.

Coal - Revoke in its entirety (366,570 acres).

Classification and Multiple Use Act - Revoke in its entirety (2340 acres).

Public Water Reserves - Continue in its entirety (5480 acres).

Water Power - Continue in their entirety (3620 acres).

BLM lands withdrawn and managed by other agencies, which may at some future time be returned to BLM management would be reviewed at that time. Appropriate recommendations will be made based on a determination of the lands suitability for return.

No new withdrawals would be proposed in this RMP.

Implementation

Recommendations for continuation or revocation, would be made pursuant to BLM Manual 2355, as appropriate. See Table 2-68 page 2-104, 105 of Draft RMP.

Water Power and Reservoir Management

Objective

To protect and manage eligible waterpower/reservoir sites located on public lands.

Management

All lands which are determined by professional engineering evaluation to have potential for waterpower and reservoir resources development are assigned to one of three categories: (1) lands suitable for intensive management of waterpower and reservoir resources sites, (2) lands suitable for restricted management of waterpower and reservoir resources sites, and (3) lands which are unsuitable for management as waterpower and reservoir resources sites.

Public lands withdrawn as waterpower and reservoir resource sites would be managed as sites suitable for restricted management.

Implementation

Professional engineering evaluation of all waterpower and reservoir sites would be reviewed, and recommendations would be made to modify, continue, or revoke the withdrawal affecting the site. Eligible waterpower and reservoir sites would be protected from adverse effects to the value of the site.

FIRE MANAGEMENT

Objective

Fire would be managed to protect public health, safety and property as well as allowing fire to carry out important ecological functions. Develop suppression priorities, identifying management restrictions, and determining appropriate fire suppression strategies. Utilize prescribed fire, both natural and management ignited, to protect, maintain and enhance ecosystems, economic values, and multiple use resource management programs.

Management

For wildfire activities, full consideration would be given to: 1) an aggressive fire safety program, 2) the least expenditures of public funds for effective suppression, 3) the methods of suppression least damaging to resources and the environment, and 4) the integration of cooperative suppression actions with other agencies or with other qualified suppression organizations. No wildfire situation would require the unnecessary exposure of firefighters and equipment to dangerous situations.

Prescribed fire, which includes both management and natural ignition sources (Map 3-14), could be used to achieve agency land or resource management objectives as defined in the prescribed fire plans. These fires would be conducted under prescription, and in a predetermined area that would produce the intensity of heat and rate of spread required to accomplish specific management objectives. Prescribed fires would be conducted by qualified personnel and with a pre-approved prescribed fire plan. Prescribed fires would be monitored to ensure that objectives are achieved and the fire would not exceeded the prescription.

The following constraints would be applied to all fires on public lands:

1. Fire lines would be placed outside existing riparian areas on both intermittent and free flowing streams. On streams without riparian habitat, the fire lines would not be constructed across the stream. Blackline would be used as fire lines.
2. Fire lines would be rehabilitated to the satisfaction of a resource advisor in order to prevent gully formation and runoff collection and to discourage animal trailing. Rehabilitation would include water barring, the placement of woody material on the fire line, seeding and recontouring. Refer to Best Management Practices in Appendix A.
3. Areas within riparian zones that have been completely burned with an intense fire would be reseeded to achieve vegetation objectives as identified in the vegetation section.
4. Stream crossing locations would be limited to existing roads and trails.
5. Burns in fragile soils and watershed areas (see Soils and Water sections, this chapter) would be reseeded with grass mixtures identified in Appendix C.
6. The use of heavy equipment for fire line construction would be implemented only upon approval by the Area Manager. Prior to fire suppression in Canyon Pintado Historical District or the Texas Creek/Evacuation Creek cultural area, the archaeologist would be consulted concerning hand line construction or base camp location.

Implementation

A new FMAP and environmental assessment would be written following approval of the RMP. Management priorities and restrictions identified above will be considered in the development of the FMAP. A fire operational plan would consider the location of natural barriers, historical burn scars, hazardous fuel build-up areas, and natural and man-made features which would be considered in determining whether a control, confine or contain strategy would be employed. The plan would use Initial Attack Analysis (IAA) to assist fire managers in fire budgeting by identifying cost plus resource net value changes. The FMAP would be reviewed and revised on a five year interval unless deemed necessary to complete a revision in less than five years.

Prescribed fire would be a potential tool to mitigate fuels and hazards, and to benefit other natural resource programs. Integrated activity plans would identify areas and conditions where prescribed natural fire would be managed to achieve resource objectives. Prescriptions would be prepared for these areas, and natural burning would be managed within prescription; burns outside the prescription would be suppressed as wildfire as per current USDI and BLM manual guidance. Prescribed burn plans, including NEPA documentation, would be approved for specific fire dependent species and or fuel reduction objectives. In all cases, management ignited and prescribe natural fires would be monitored to ensure that the prescription achieved the objectives.

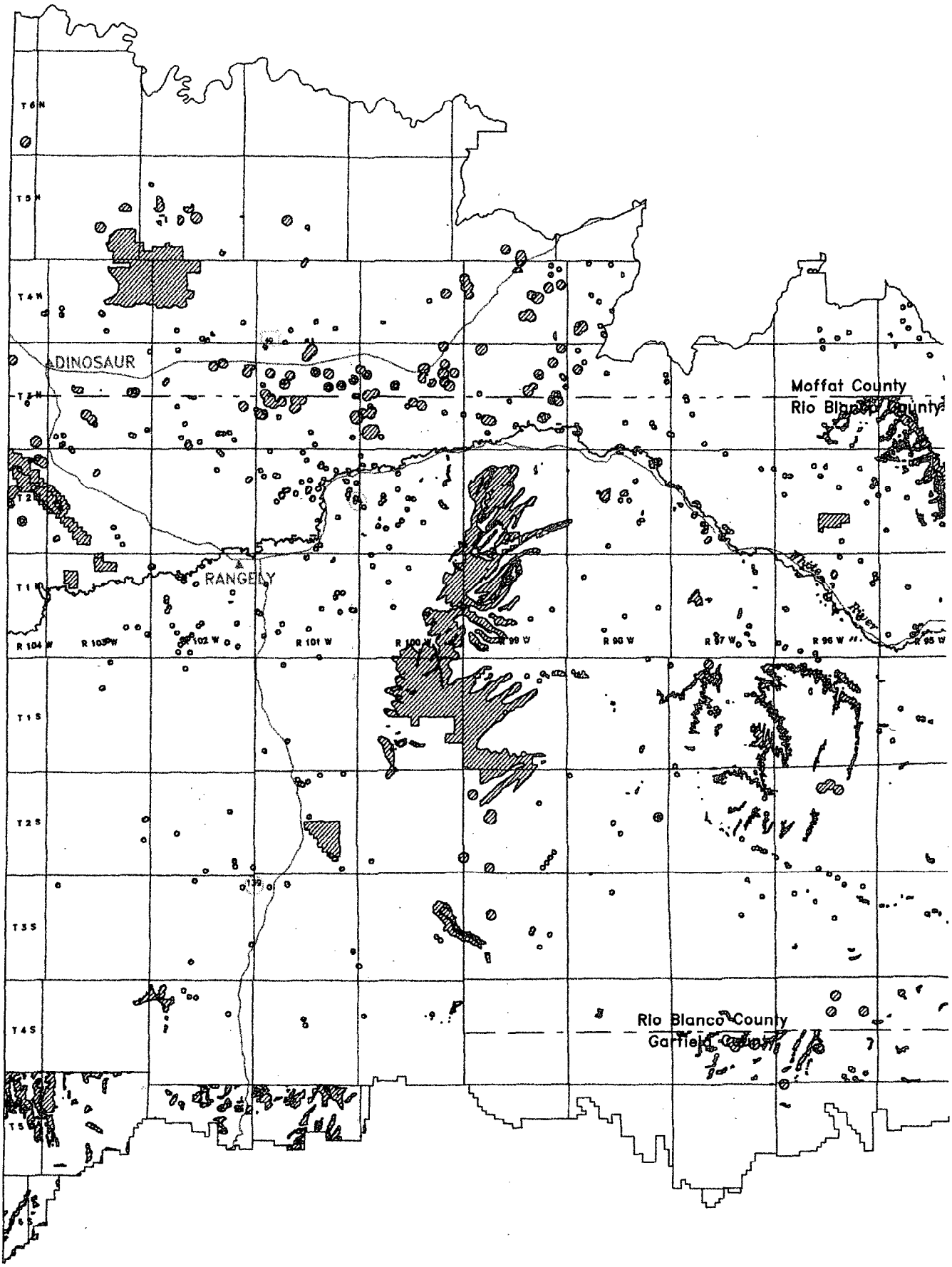
For prescribed burn activities, smoke management requirements of BLM Manual 7723 would be followed to ensure ambient air standards are not exceeded. This procedure would require obtaining an approved open burning permit from the State of Colorado Air Quality Board prior to implementation.

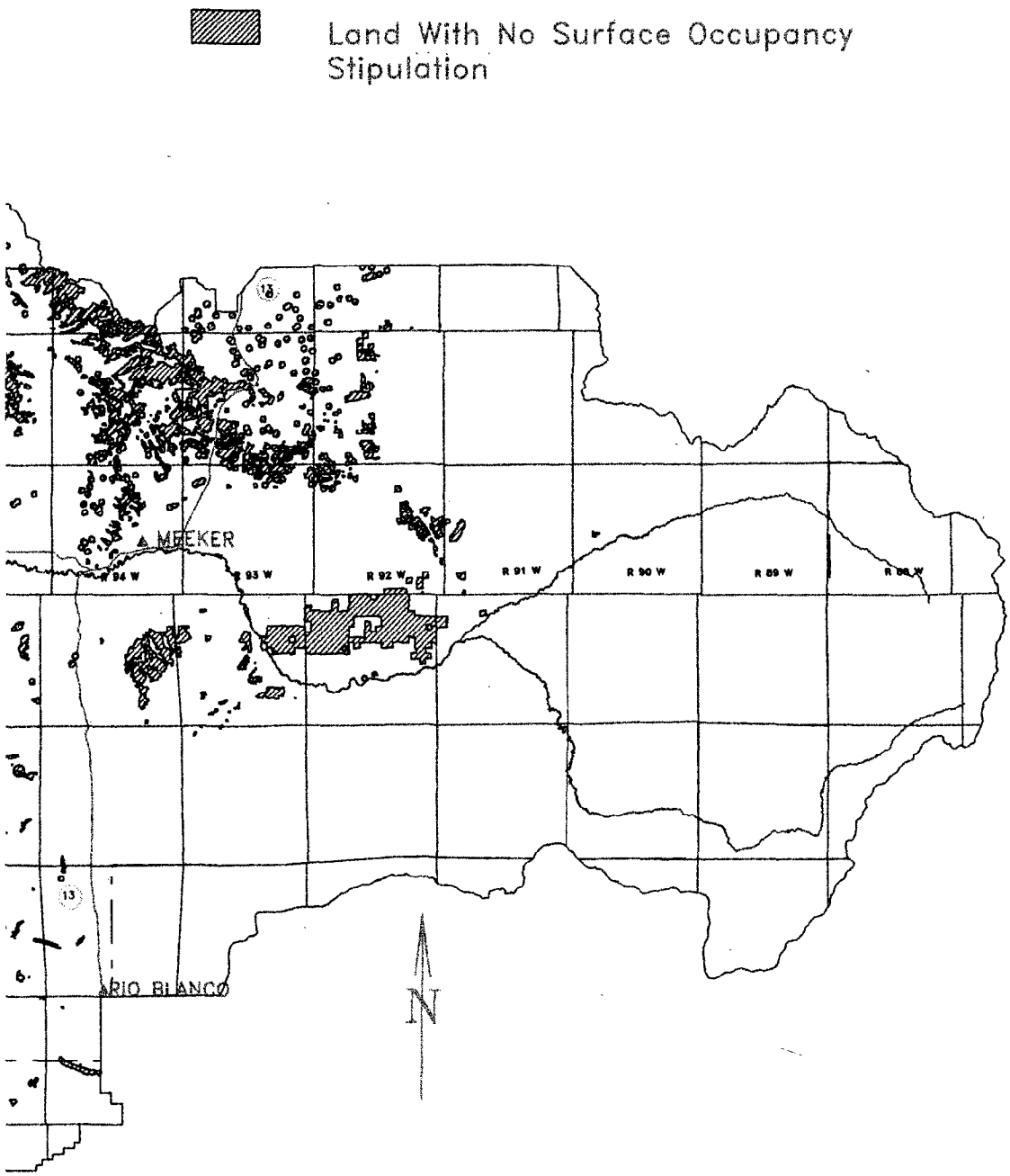
Specific operational guidance for all fire training, presuppression, and suppression activities would be provided for in an operational plan. Operational plans would establish specific activity prescriptions to meet RMP objectives and the work force, equipment, and budget identified in the FMAP.

CHAPTER 3

PROPOSED MANAGEMENT MAPS

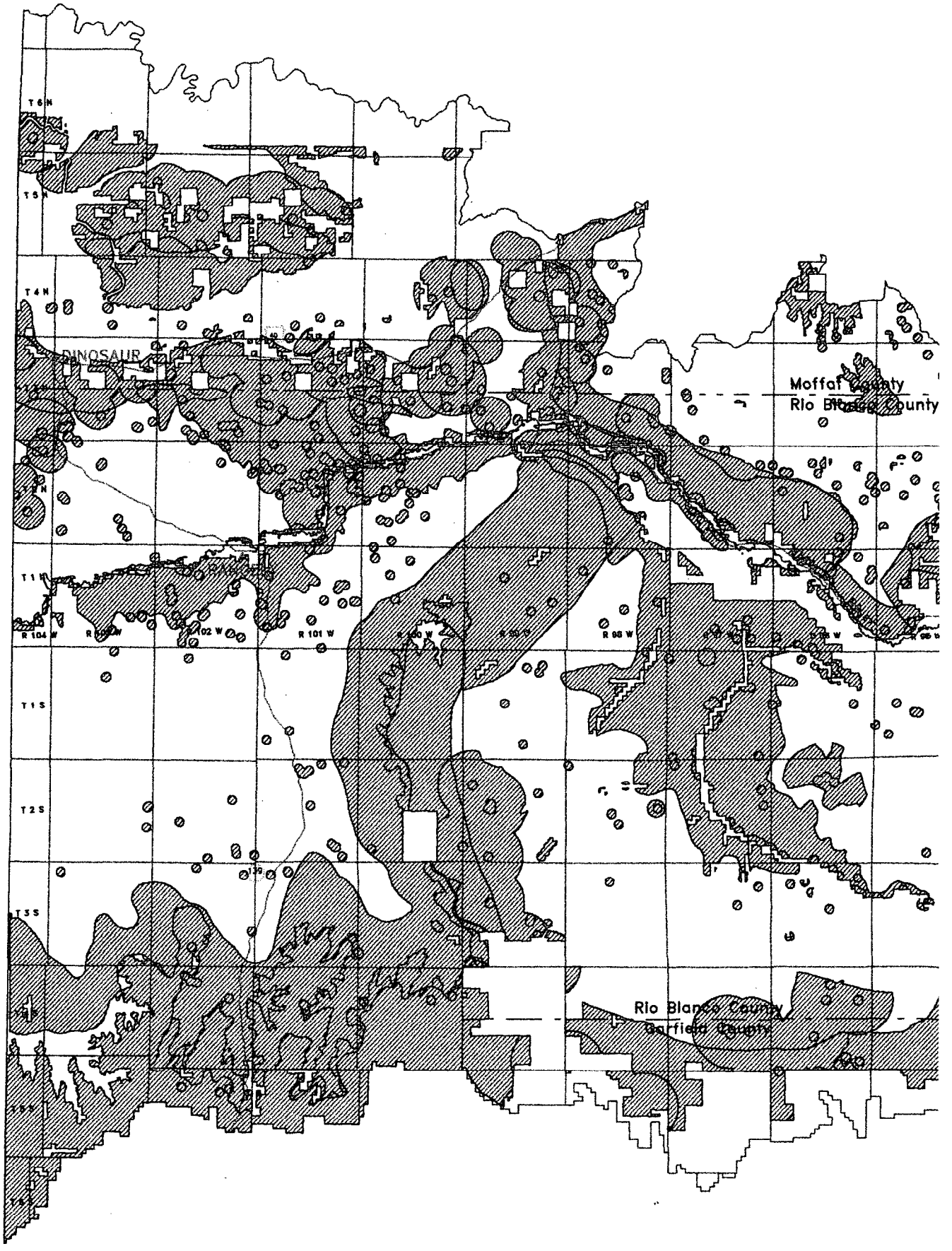
MAP 3-1. NO SURFACE OCCUPANCY STIPULATIONS ON BLM AND SPLIT ESTATE LANDS PROPOSED MANAGEMENT



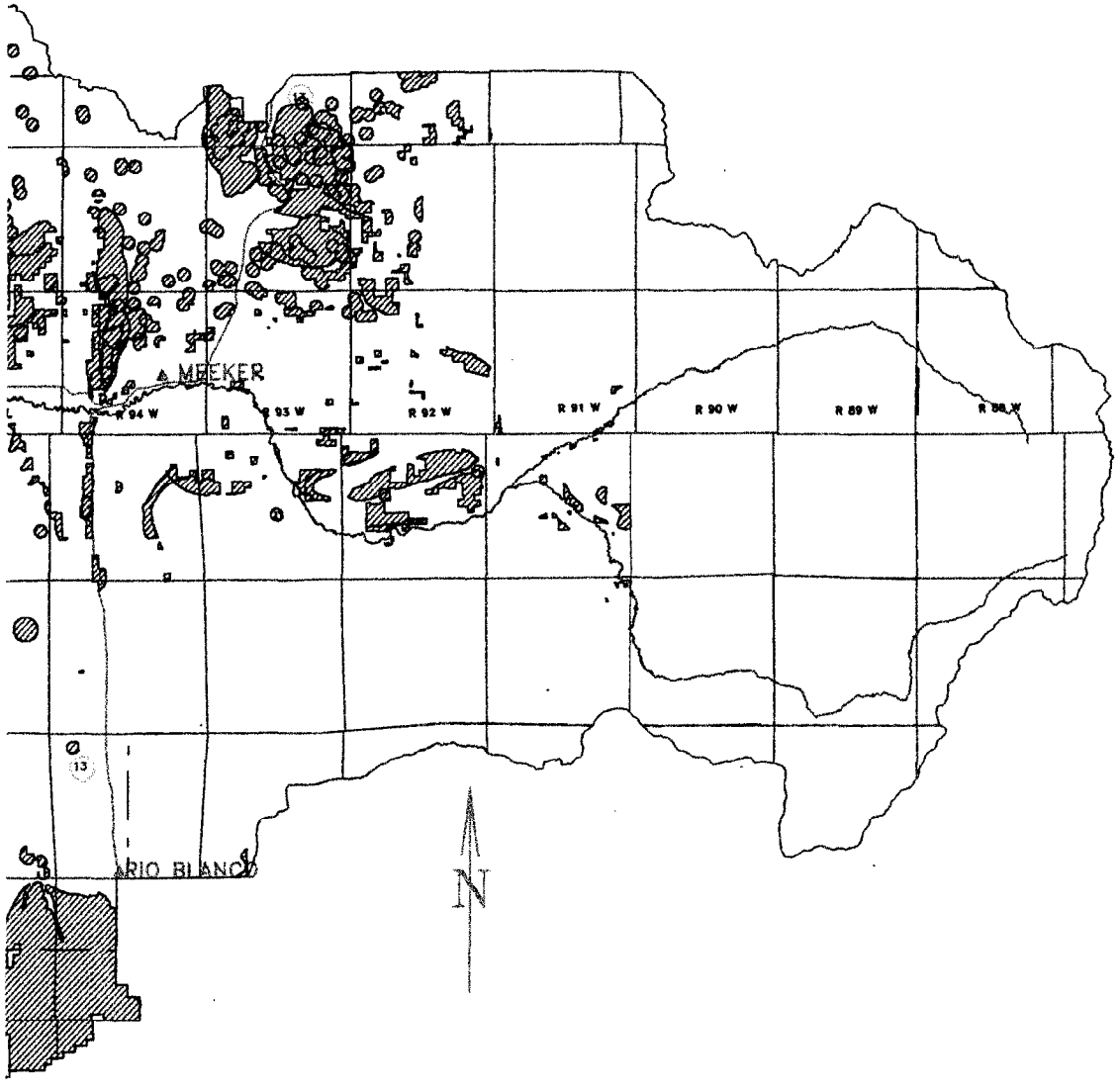

Land With No Surface Occupancy Stipulation
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
RIO BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-1

MAP 3-2. TIMING LIMITATIONS ON BLM AND SPLIT ESTATE LANDS PROPOSED MANAGEMENT



Land With Timing Limitations



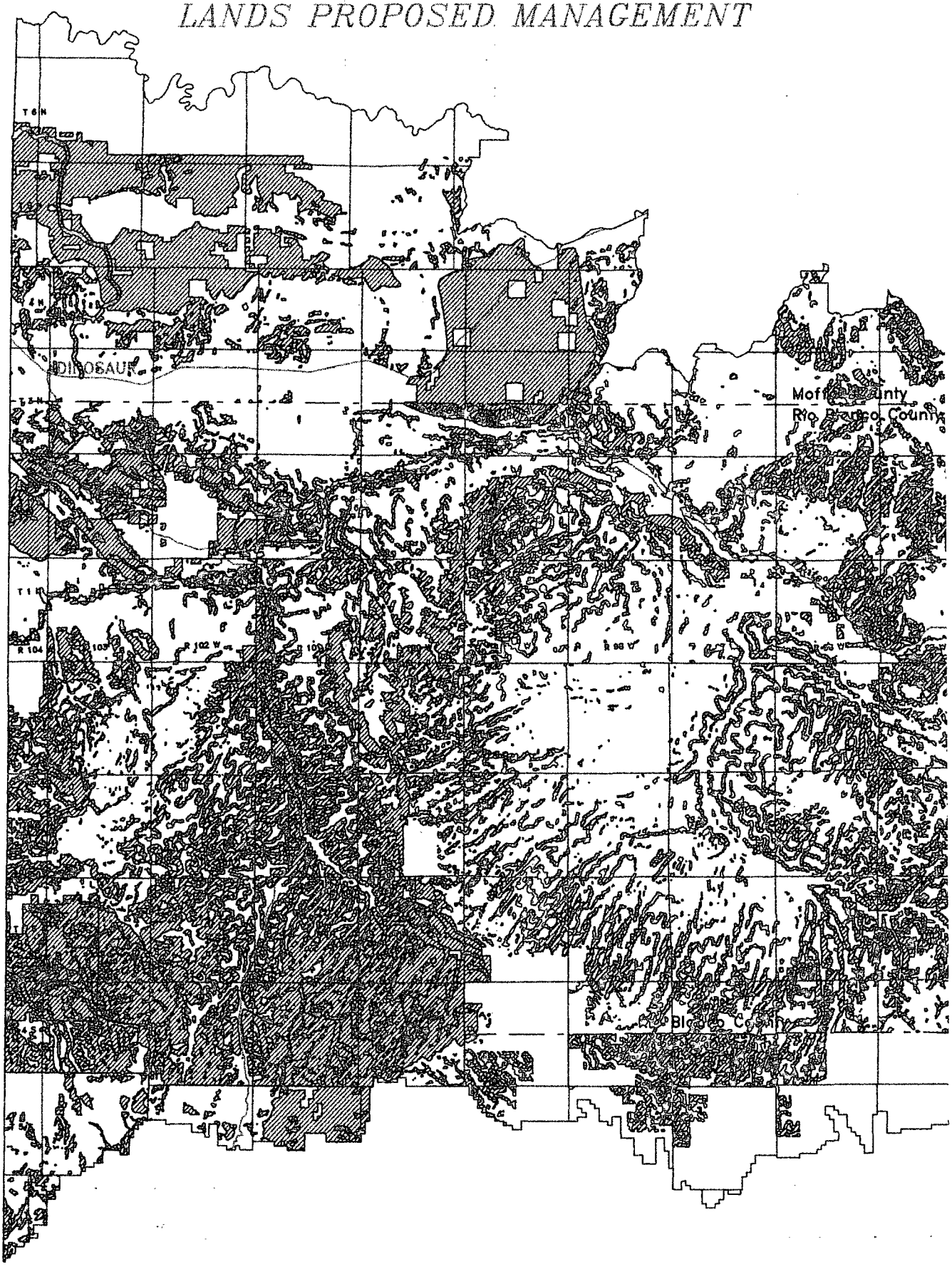
MILES

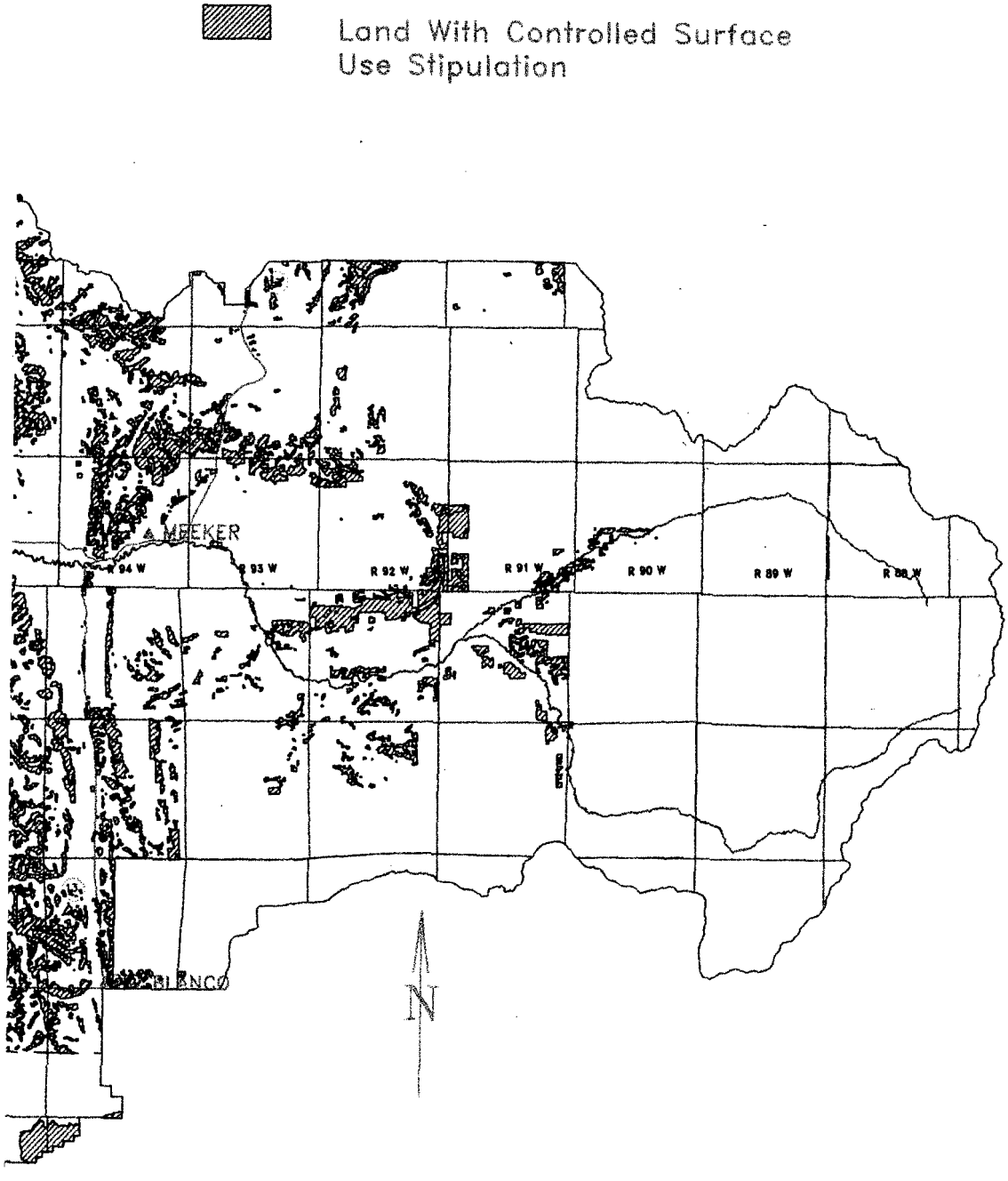
0 6 12 18 24

SCALE 1:500,000

MAP 3-2

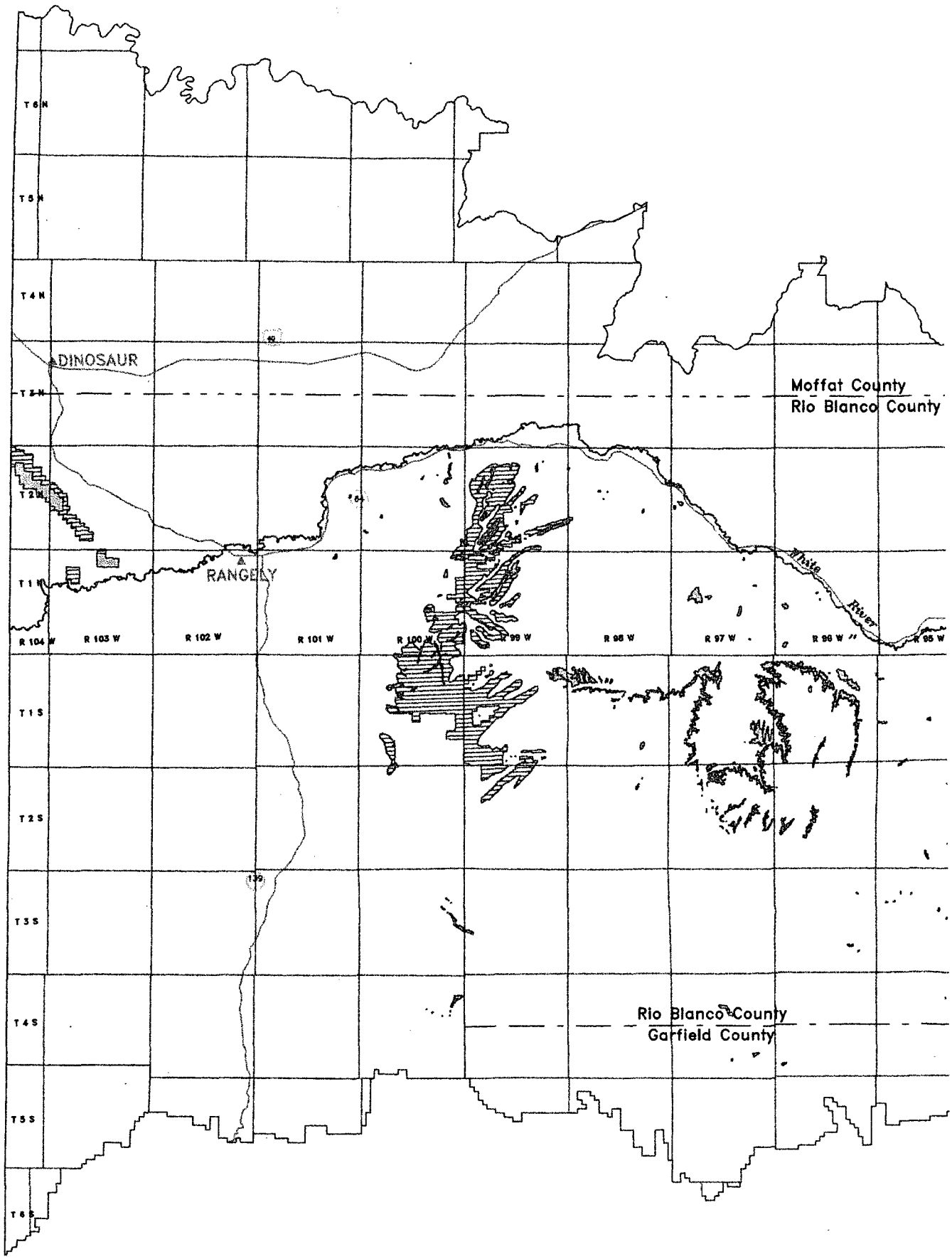
MAP 3-3. CONTROLLED SURFACE USE STIPULATIONS ON BLM AND SPLIT ESTATE LANDS PROPOSED MANAGEMENT

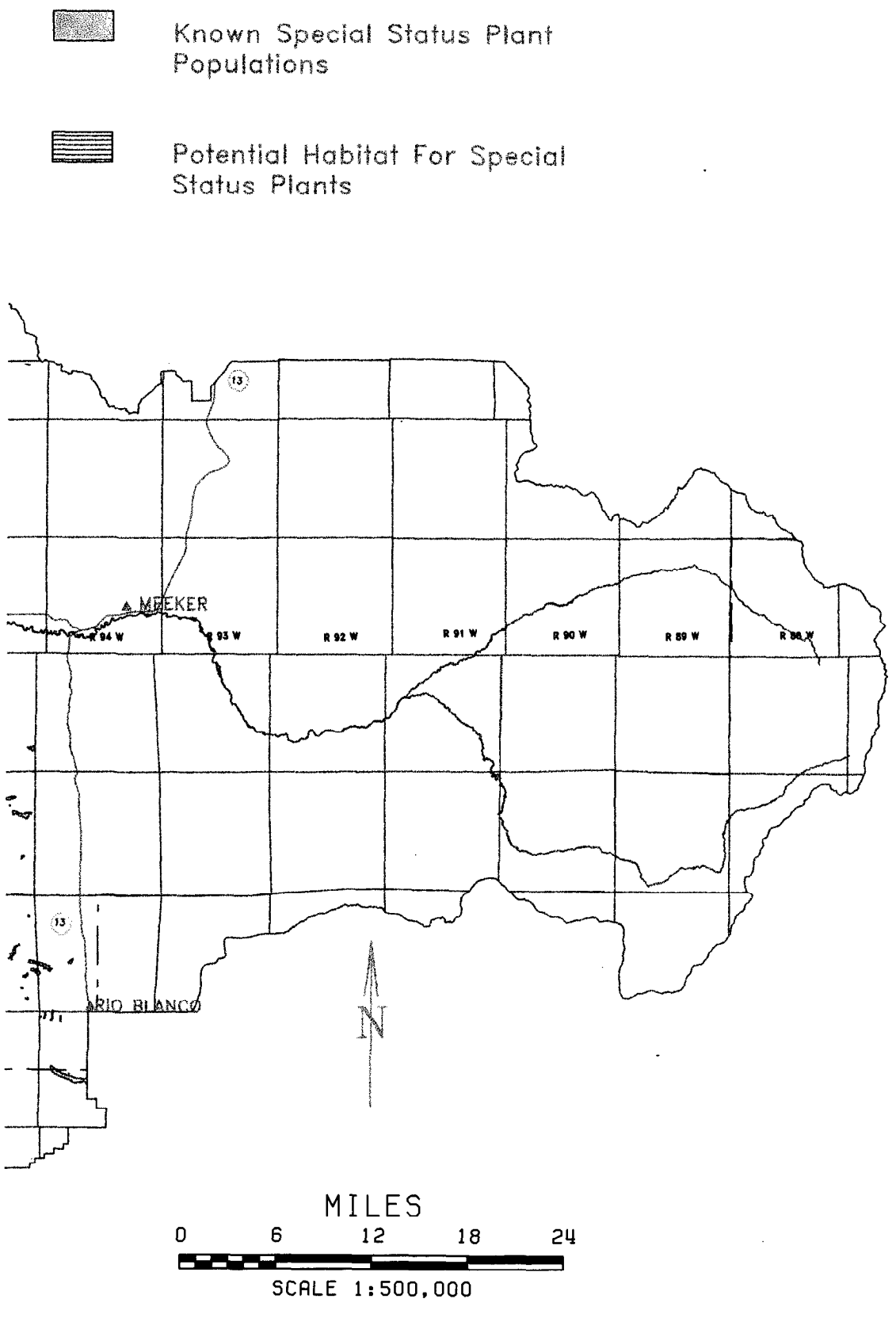



Land With Controlled Surface
Use Stipulation
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
R 88 W
BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-3

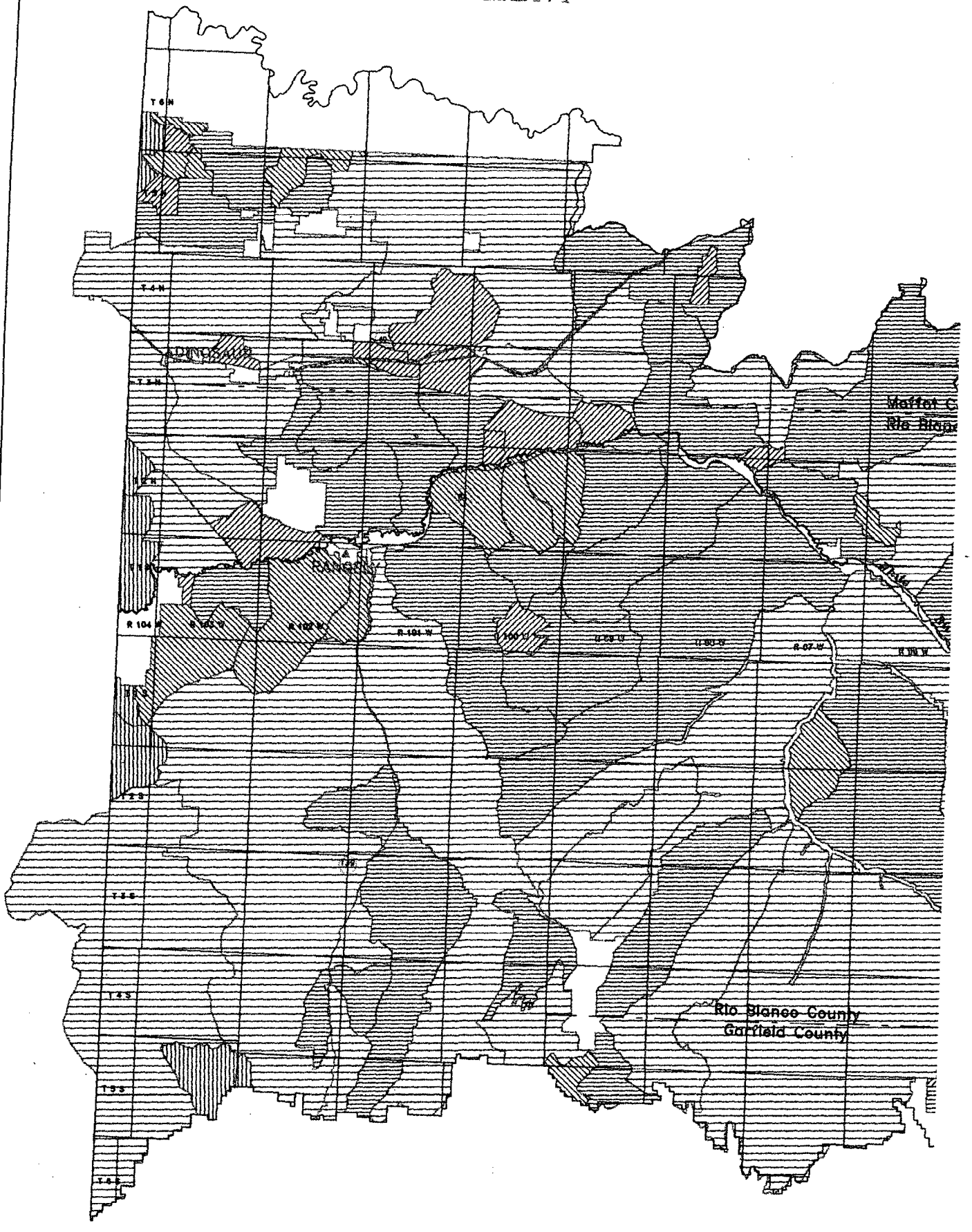
MAP 3-4. SPECIAL STATUS PLANTS ON BLM PROTECTED BY NSO STIPULATIONS PROPOSED MANAGEMENT

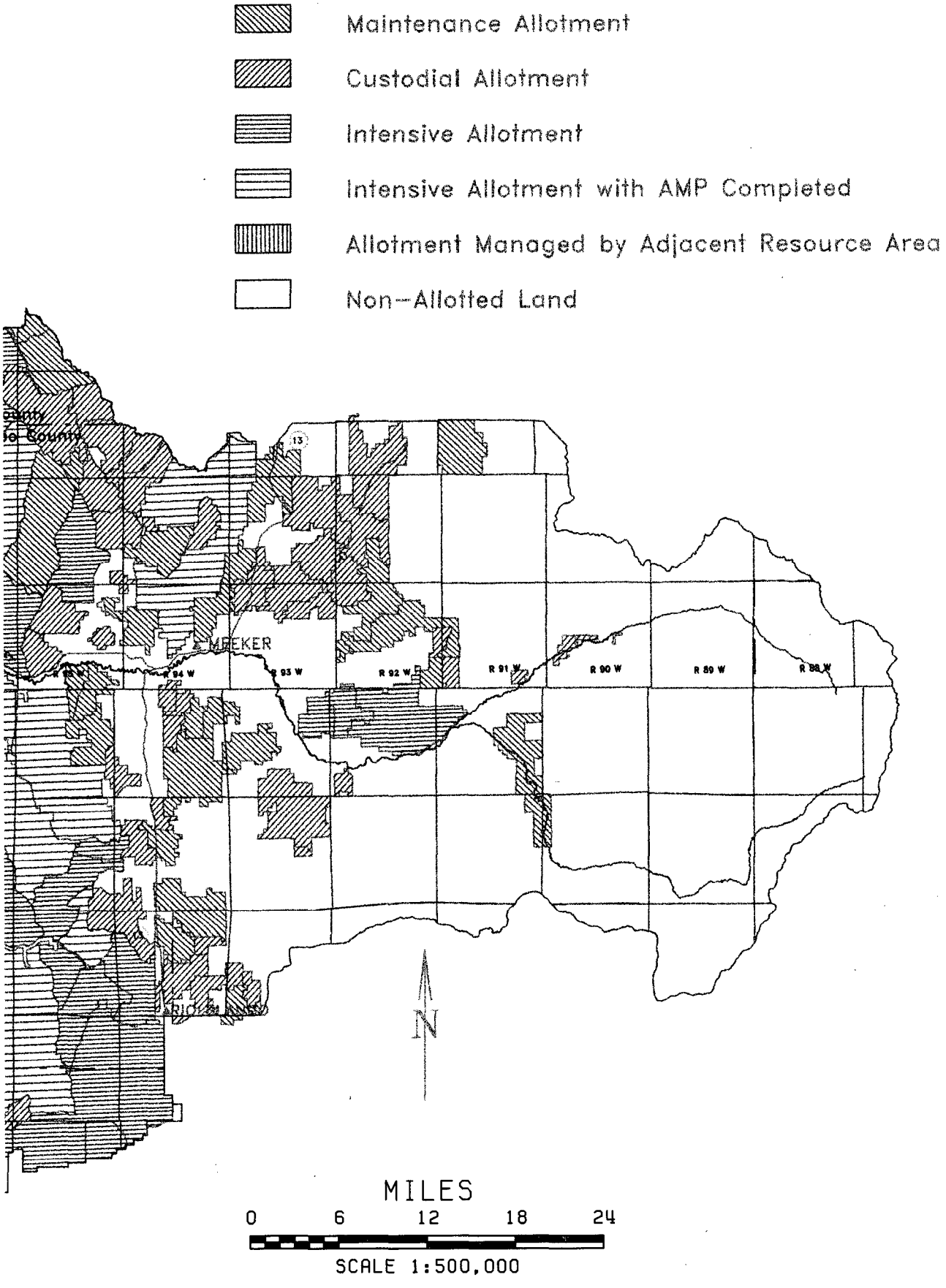



Known Special Status Plant Populations
Potential Habitat For Special Status Plants
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
R 88 W
13
13
RIO BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-4

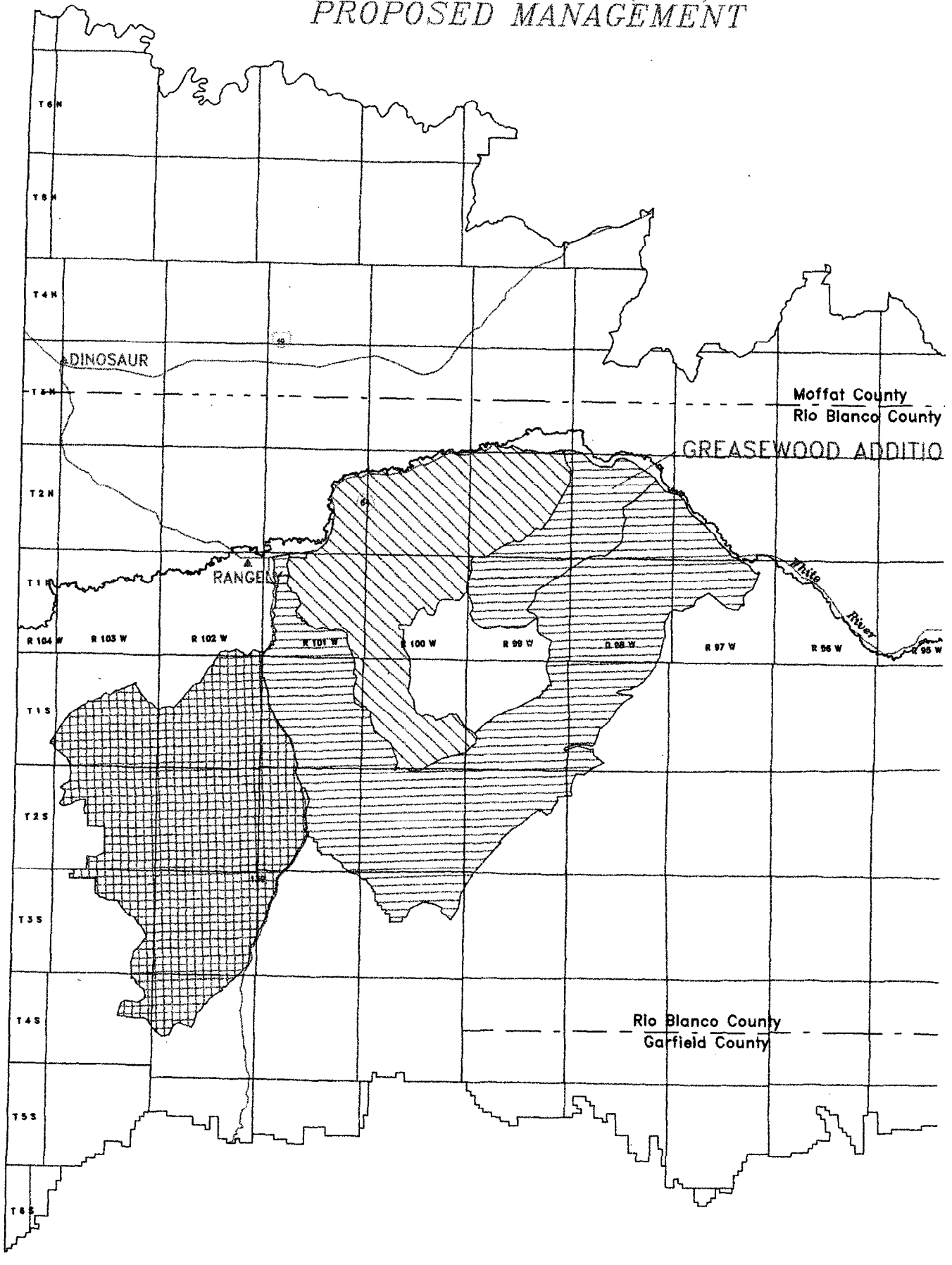
MAP 3–5. ALLOTMENT CATEGORIZATION PROPOSED MANAGEMENT

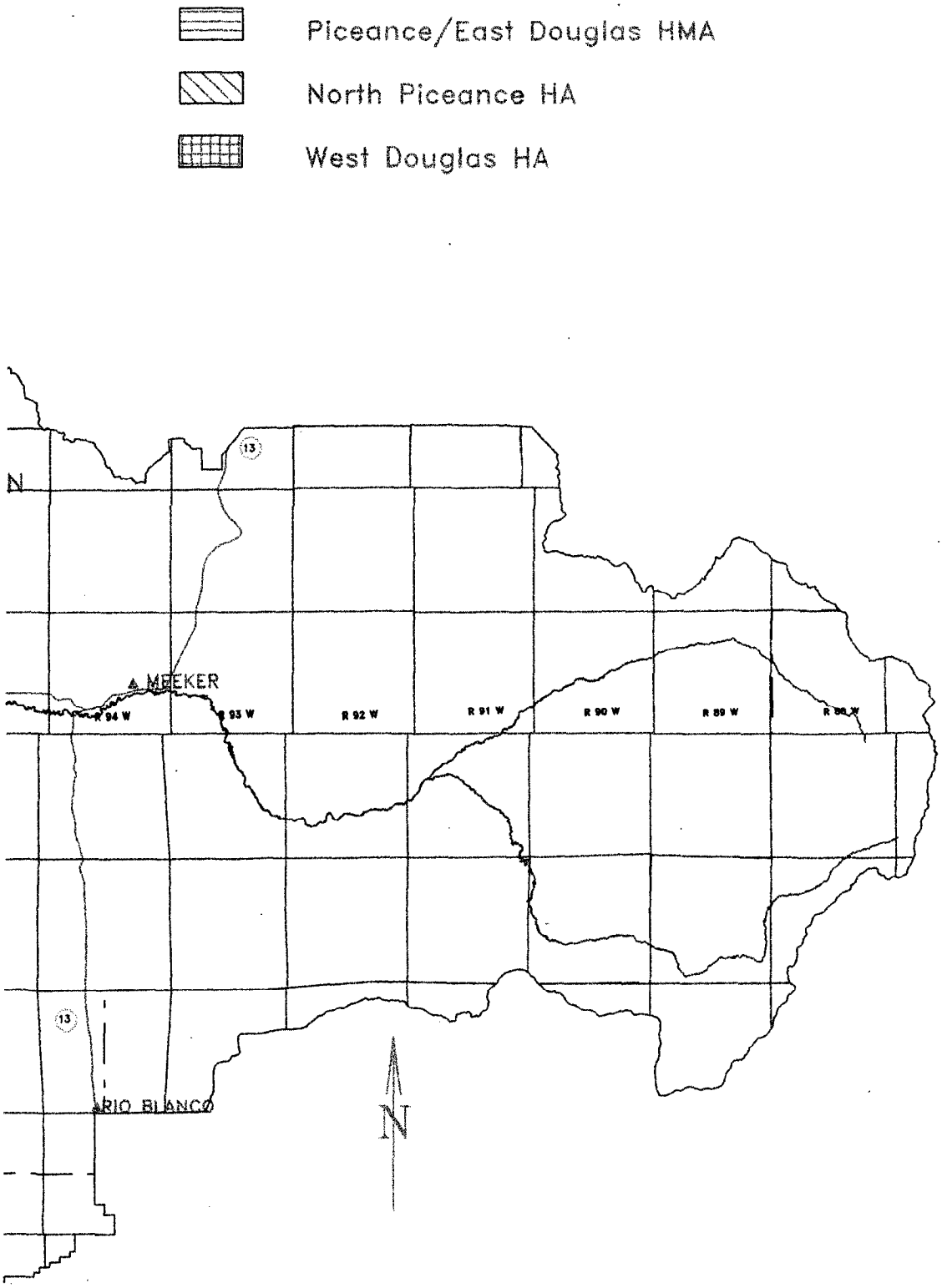



Maintenance Allotment
Custodial Allotment
Intensive Allotment
Intensive Allotment with AMP Completed
Allotment Managed by Adjacent Resource Area
Non-Allotted Land
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
R 88 W
N
MILES
0 6 12 18 24
SCALE 1:500,000

MAP 3-5

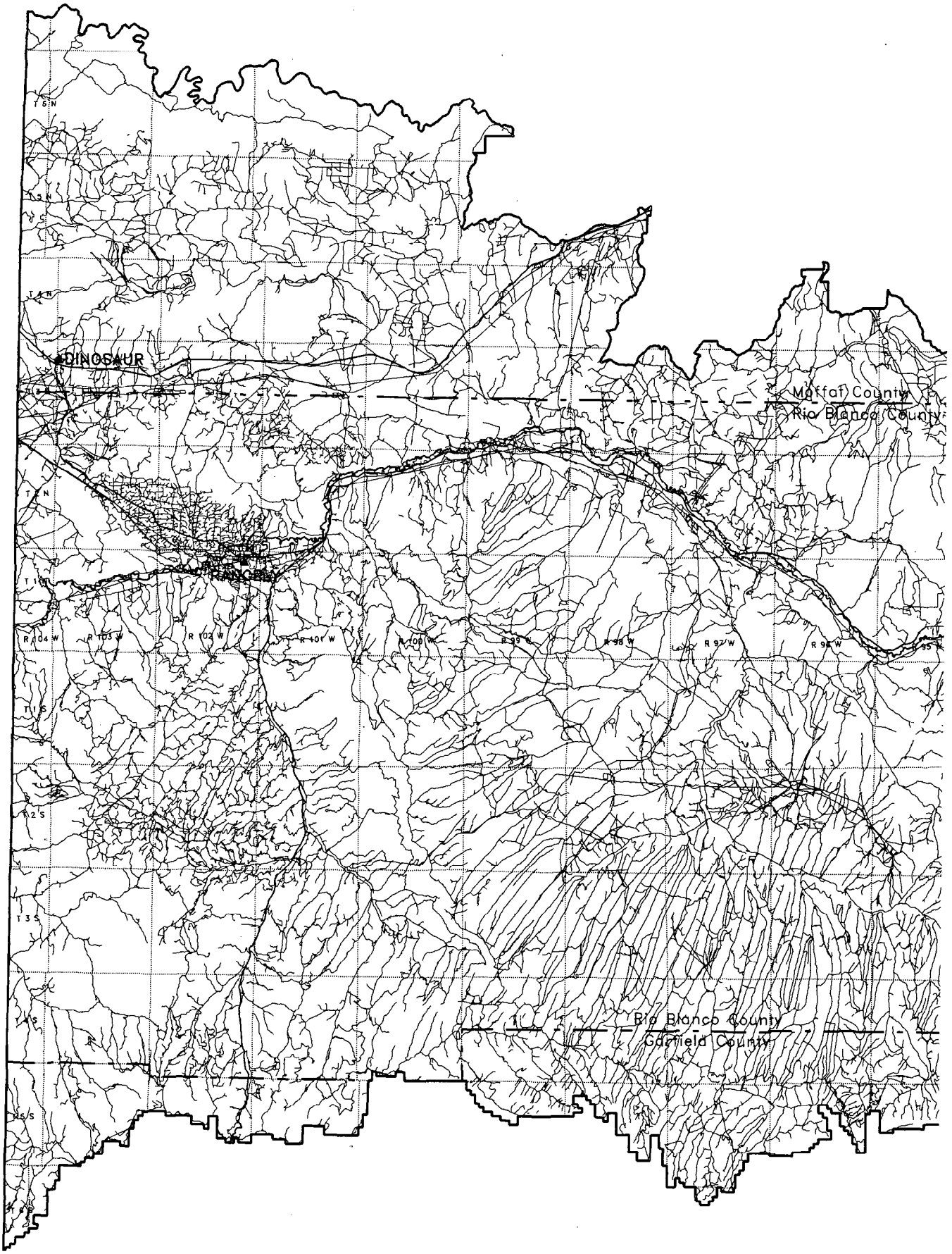
MAP 3–6. WILD HORSE HERD MANAGEMENT AREAS (HMAs) AND HERD AREAS (HAs) PROPOSED MANAGEMENT

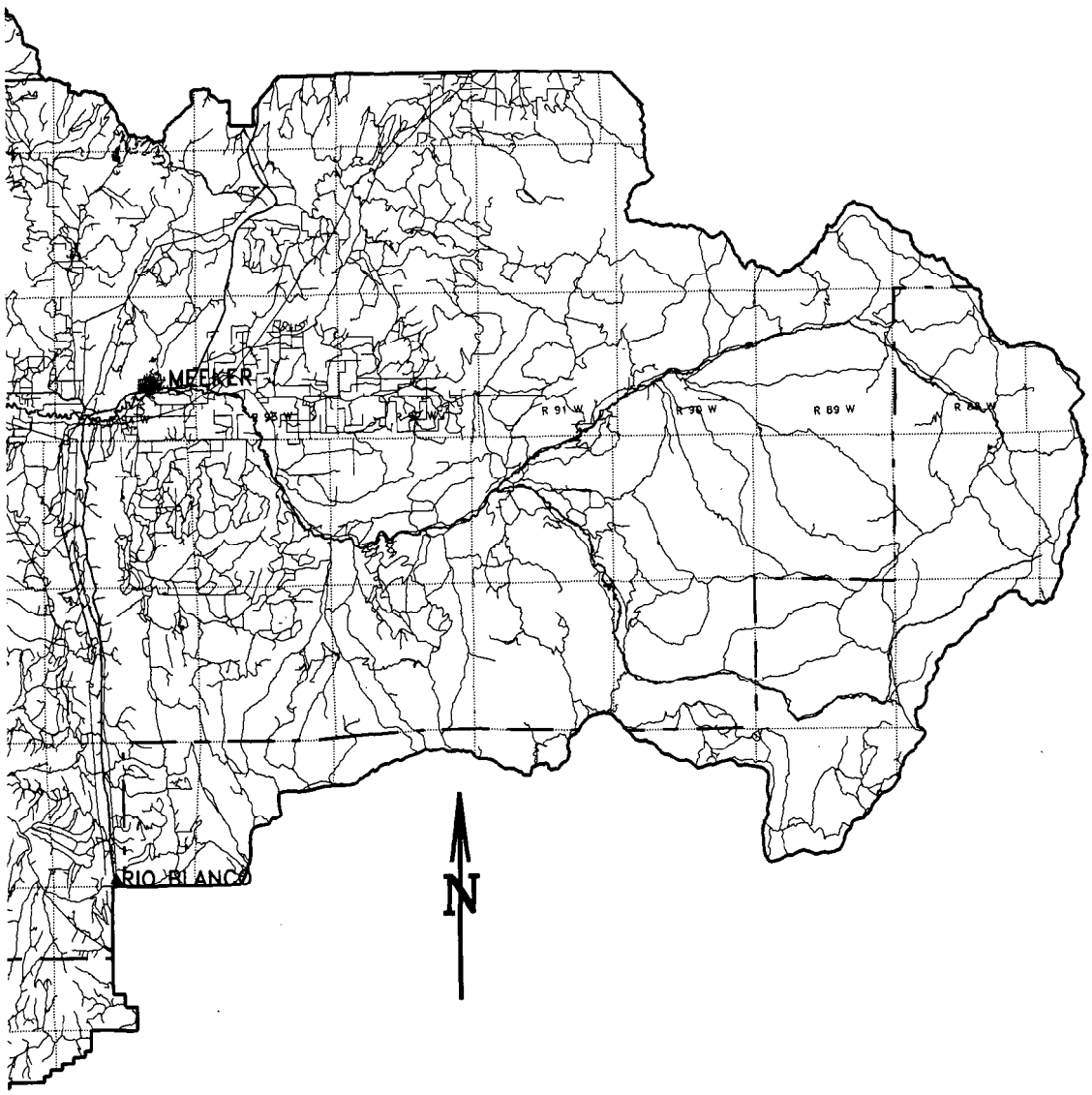



Piceance/East Douglas HMA
North Piceance HA
West Douglas HA
N
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
RIO BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-6

MAP 3–7. EXISTING ROADS, TRAILS, AND WAYS PROPOSED MANAGEMENT





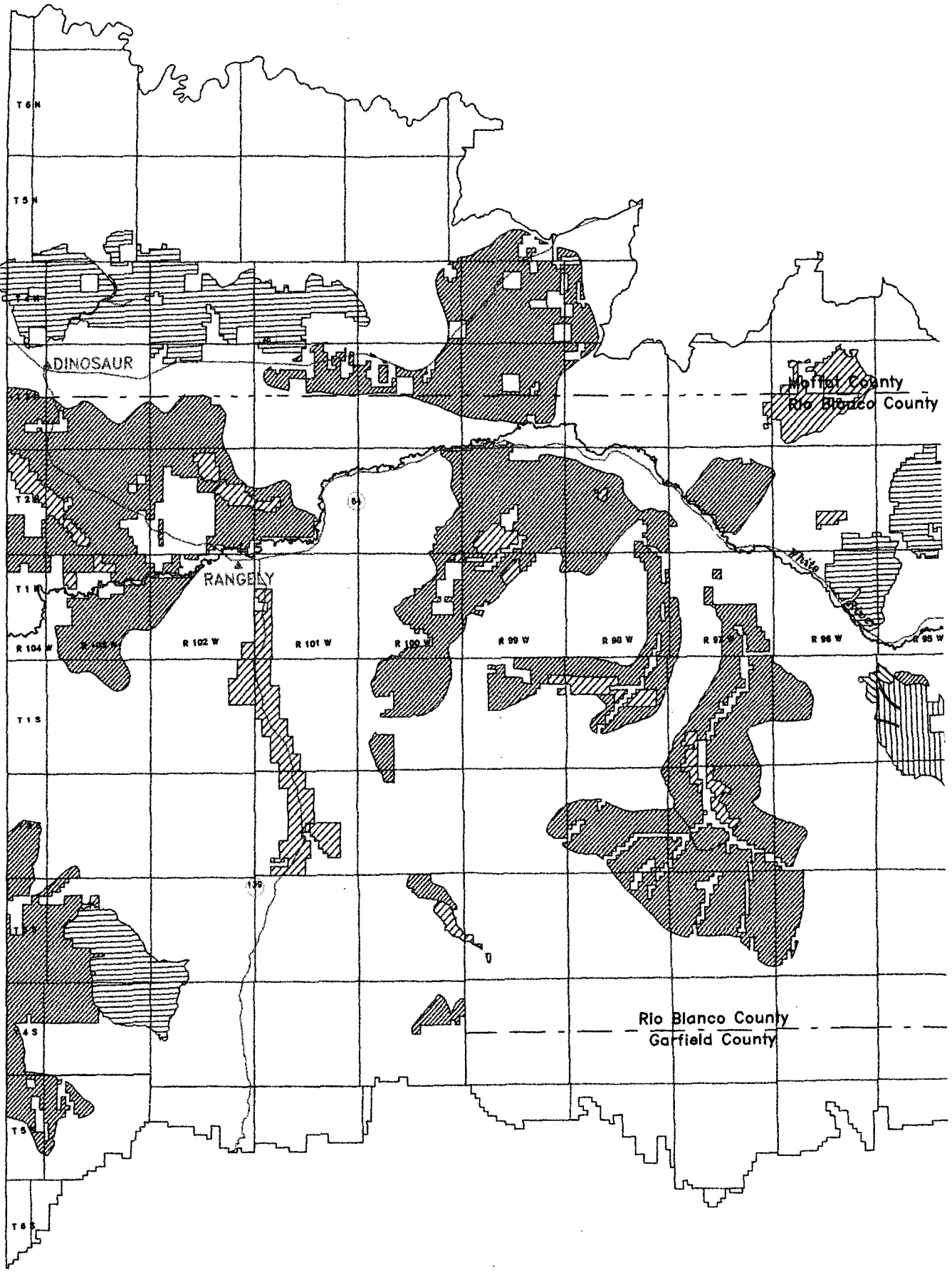
MILES

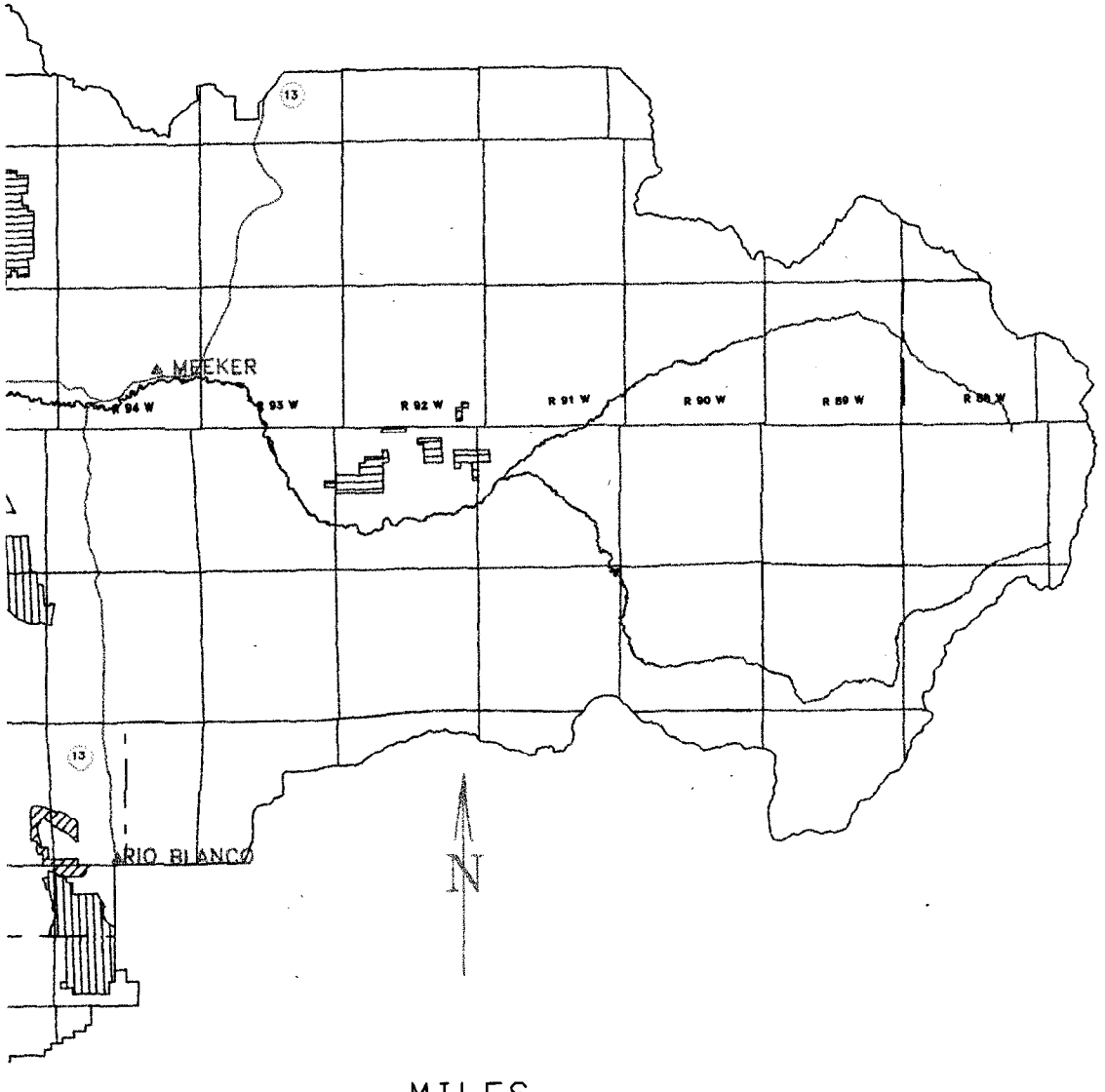
0 6 12 18 24

SCALE 1:500,000

MAP 3-7

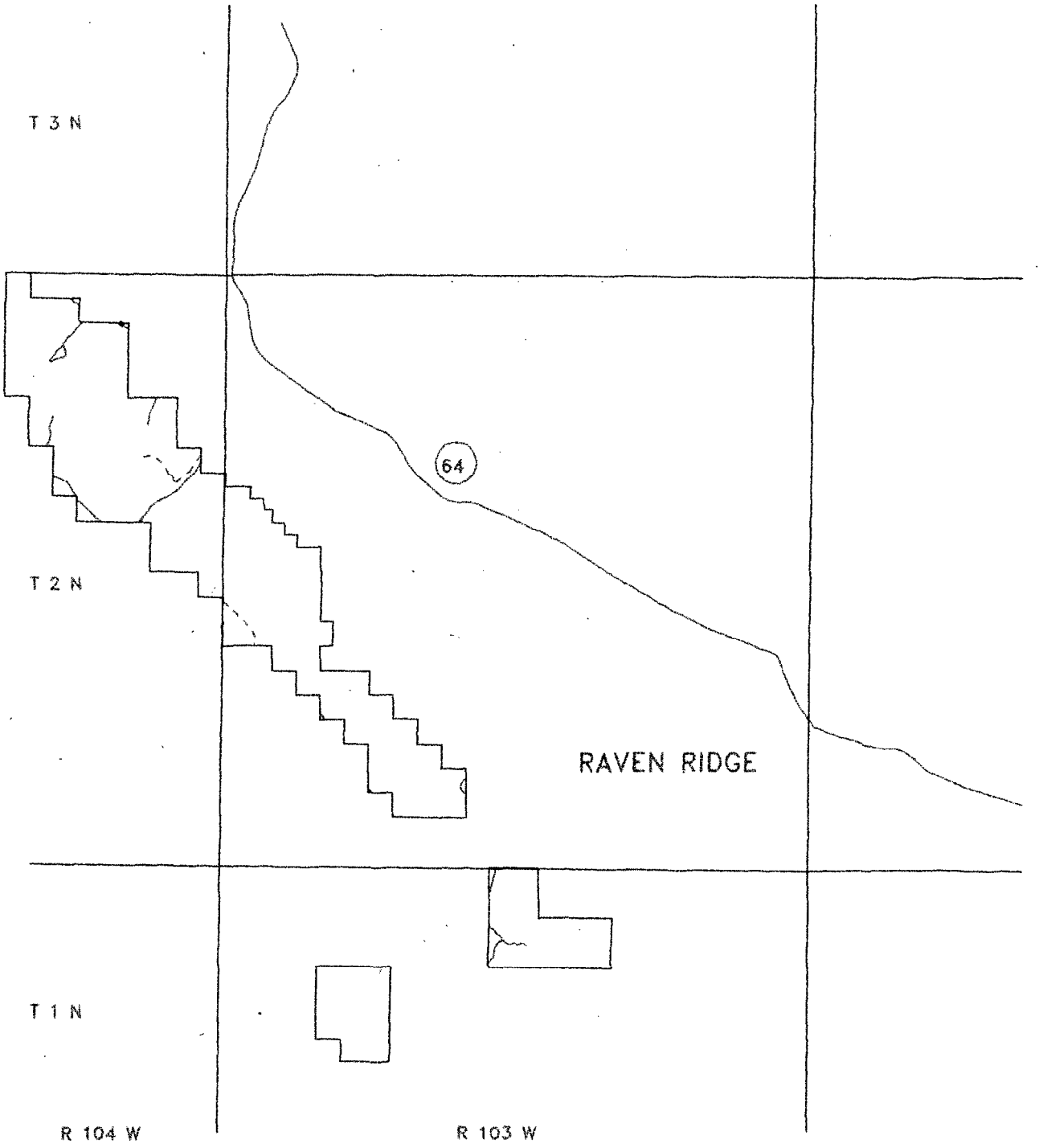
MAP 3–8. OFF HIGHWAY VEHICLE DESIGNATIONS ON BLM LANDS PROPOSED MANAGEMENT

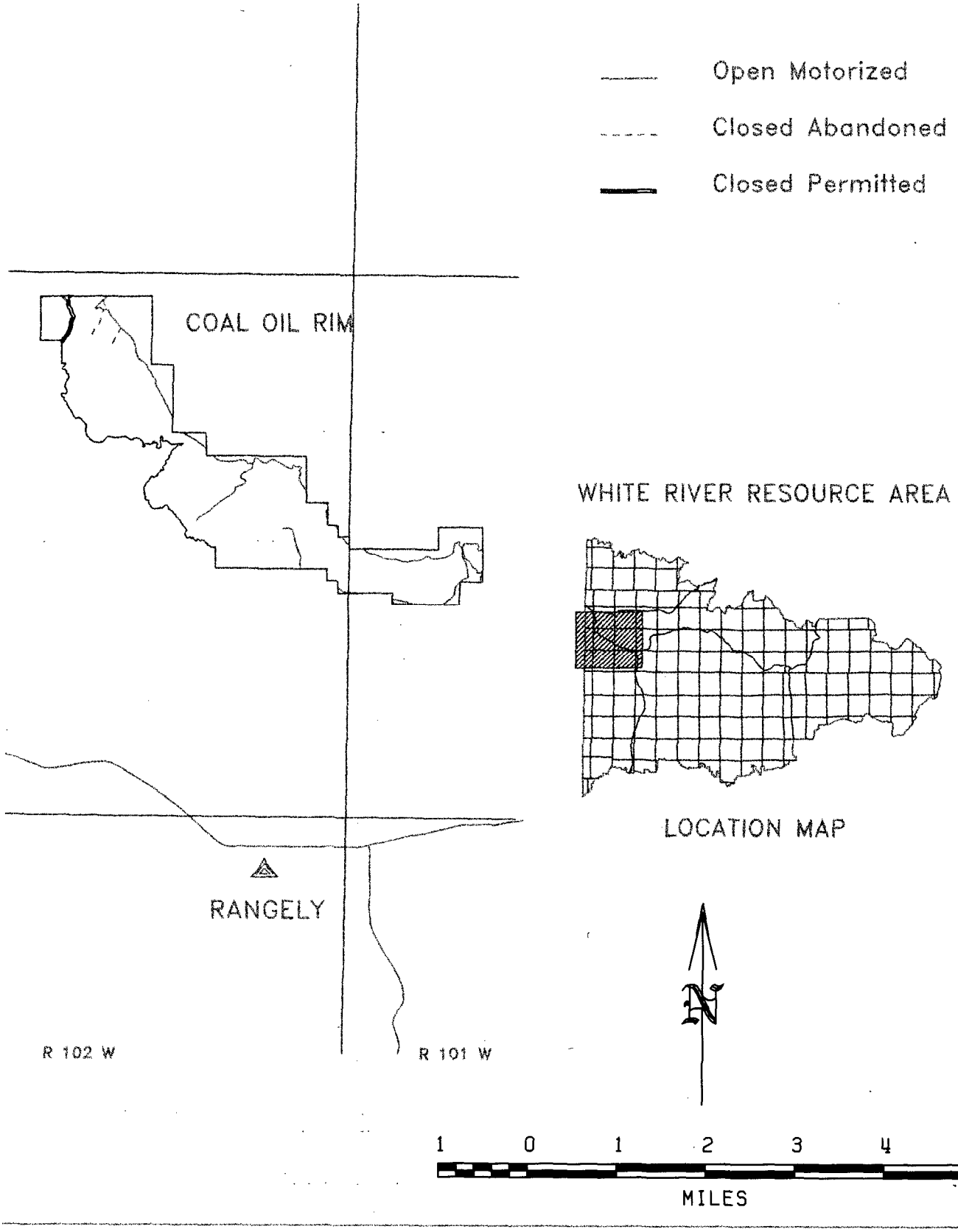



Closed
Closed 8/15-11/30
Closed 8/15-11/30, Exsiting Roads, Trails, Ways, 12/1-8/14
Designated Roads, Trails, Ways
Exsiting Roads, Trails, Ways
Existing Roads, Trails, Ways 10/1-4/30
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
13
RIO BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-8

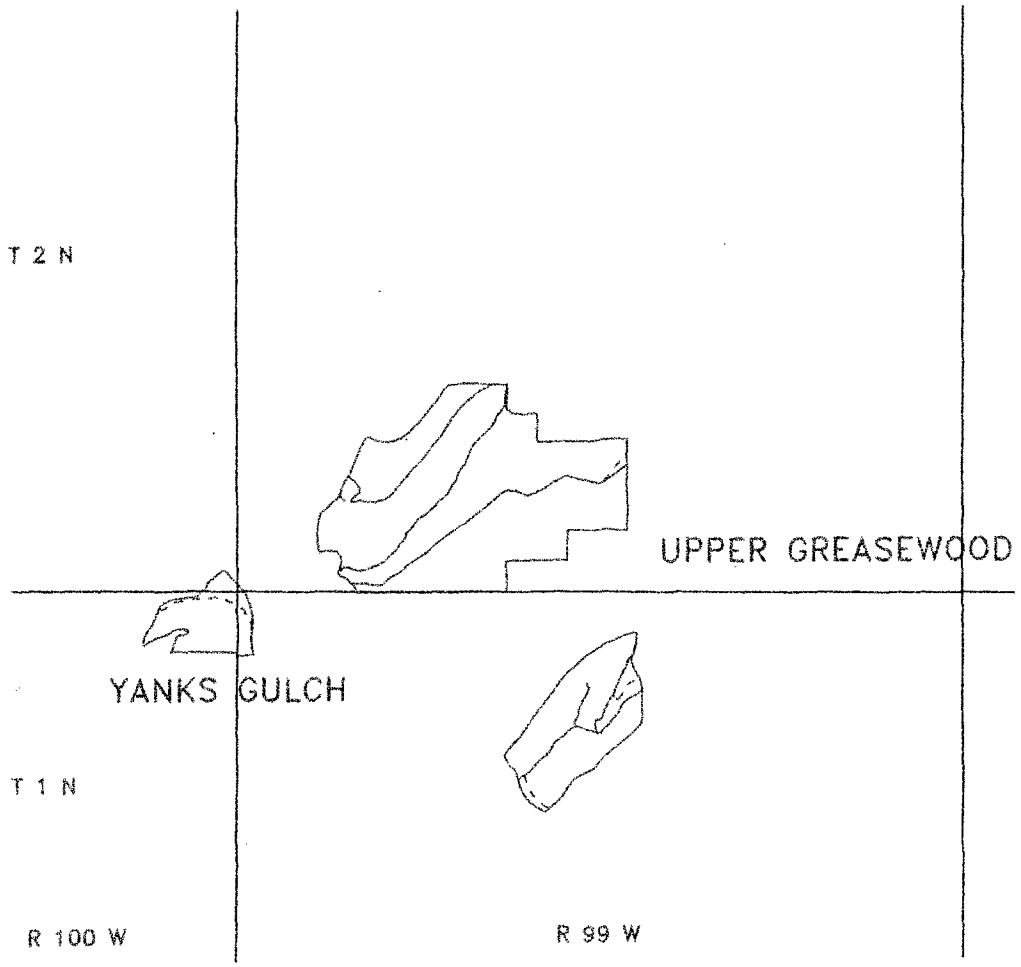
MAP 3–9a. ACEC DESIGNATED ROADS AND TRAILS PROPOSED MANAGEMENT




Open Motorized
Closed Abandoned
Closed Permitted
COAL OIL RIM
WHITE RIVER RESOURCE AREA
LOCATION MAP
RANGELY
R 102 W
R 101 W
N
1 0 1 2 3 4 5
MILES

MAP 3-9a

MAP 3–9b. ACEC DESIGNATED ROADS AND TRAILS PROPOSED MANAGEMENT

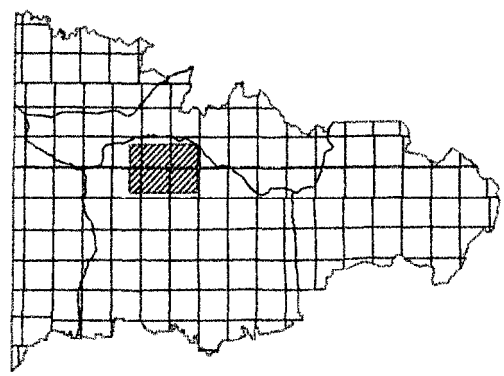


Open Motorized

Closed Abandoned

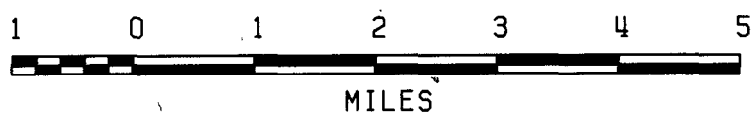
LOWER GREASEWOOD

WHITE RIVER RESOURCE AREA



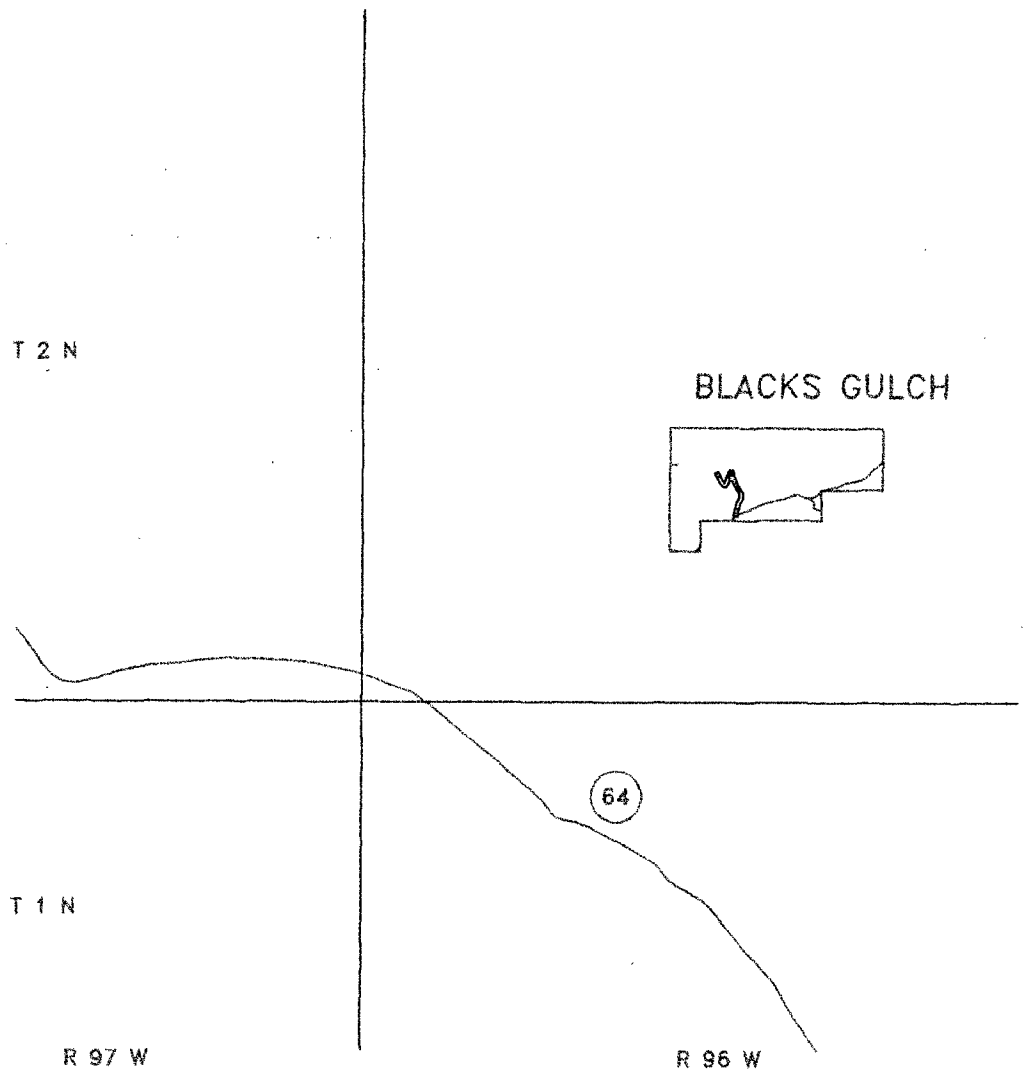
LOCATION MAP

R 98 W



MAP 3-9b

MAP 3–9c. ACEC DESIGNATED ROADS AND TRAILS PROPOSED MANAGEMENT

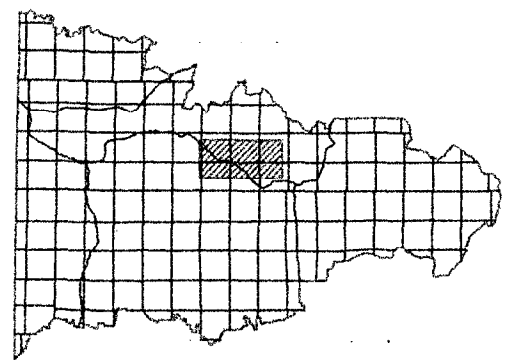


Open Motorized

Closed Abandoned

Closed Permitted

WHITE RIVER RESOURCE AREA



LOCATION MAP

R 95 W

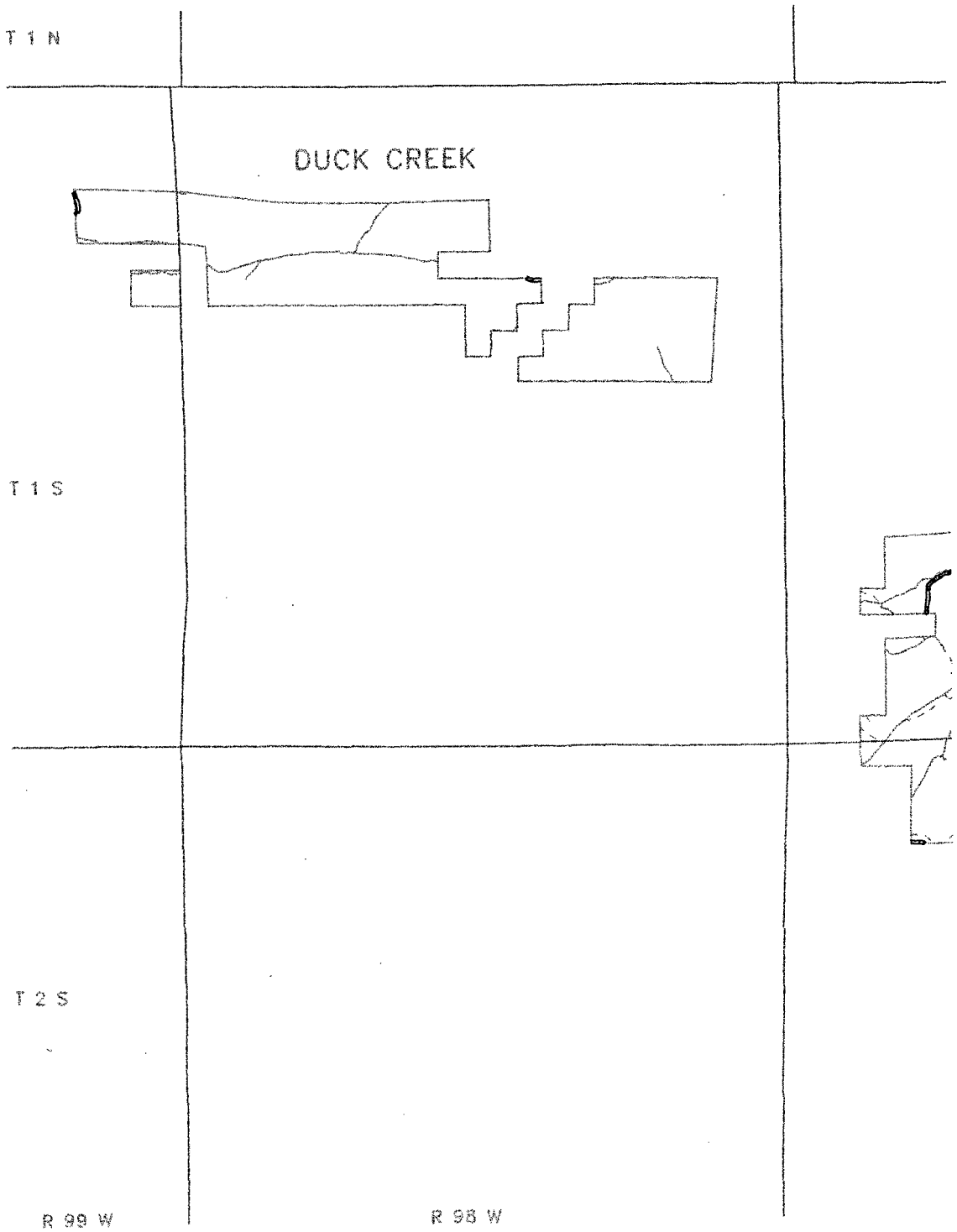
N

1 0 1 2 3 4 5

MILES

MAP 3-9c

MAP 3–9d. ACEC DESIGNATED ROADS AND TRAILS PROPOSED MANAGEMENT

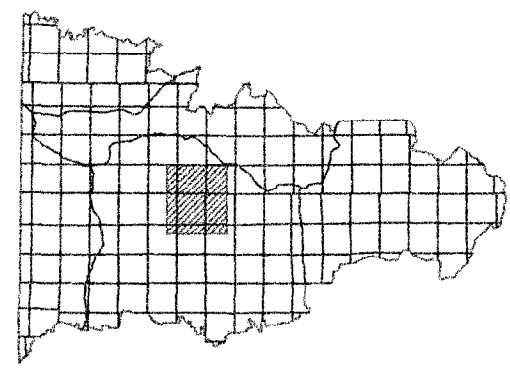


Open Motorized

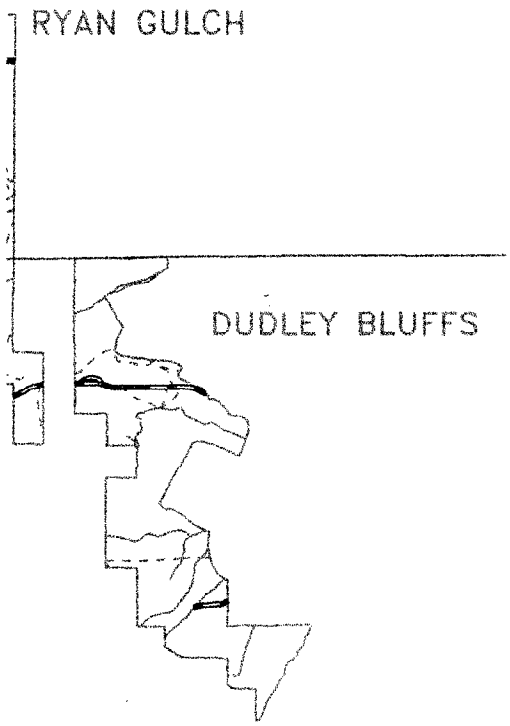
Closed Abandoned

Closed Permitted

WHITE RIVER RESOURCE AREA



LOCATION MAP



R 97 W

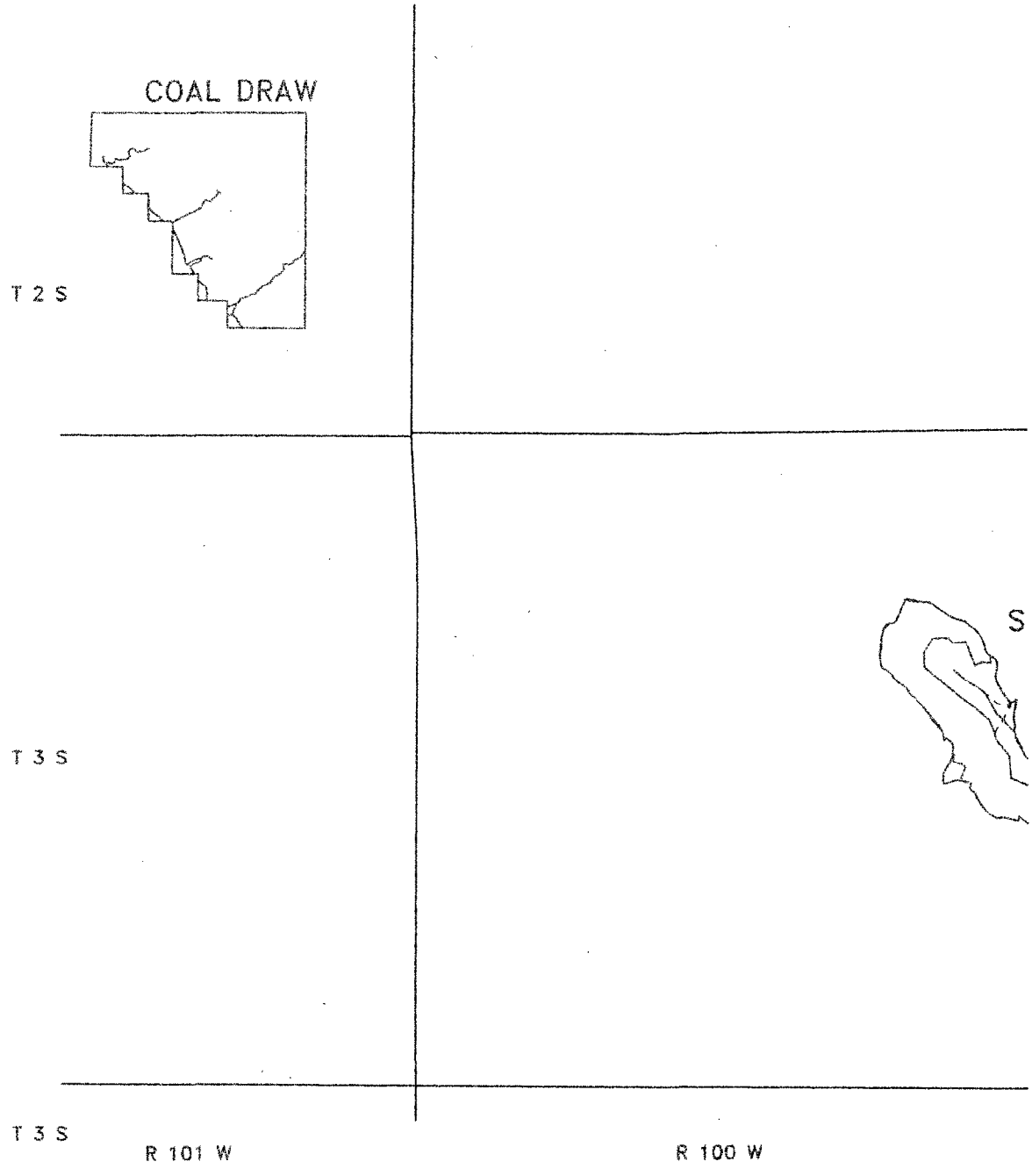
N

1 0 1 2 3 4 5

MILES

MAP 3-9d

MAP 3–9e. ACEC DESIGNATED ROADS AND TRAILS PROPOSED MANAGEMENT

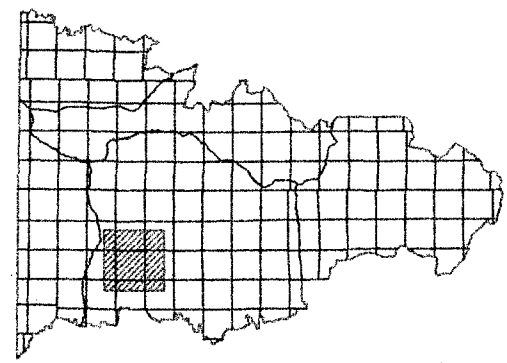


Open Motorized

Closed Abandoned

WHITE RIVER RESOURCE AREA

. CATHEDRAL BLUFFS



LOCATION MAP

R 99 W

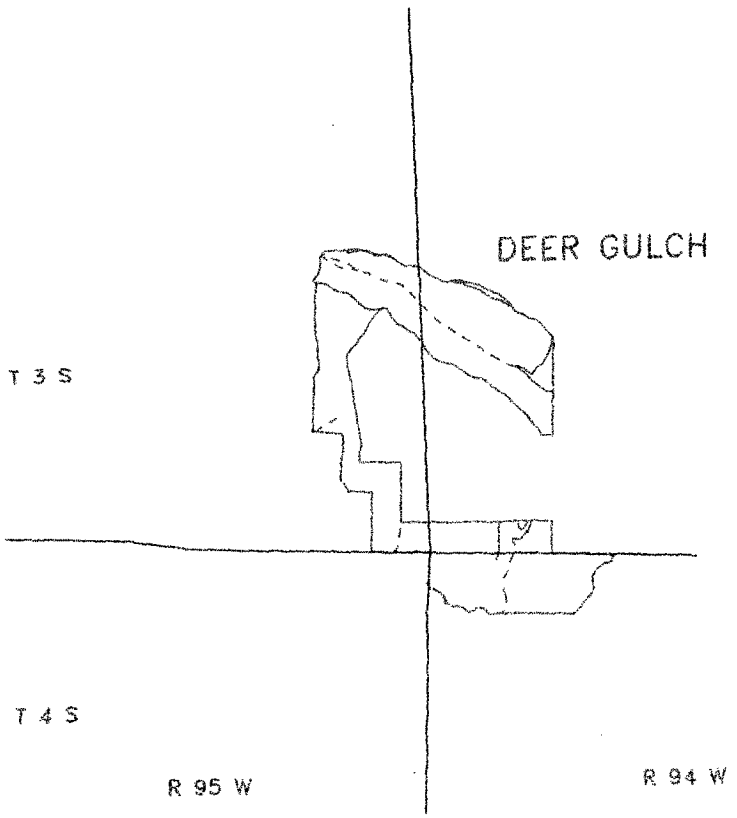
N

1 0 1 2 3 4 5

MILES

MAP 3-9e

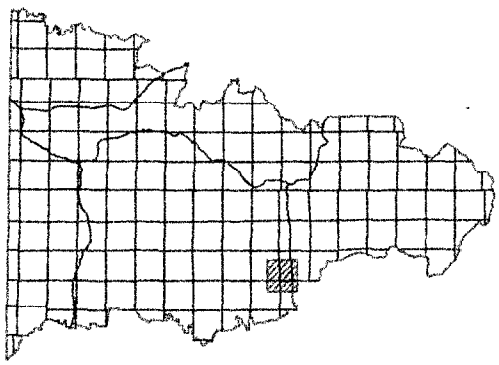
MAP 3–9f. ACEC DESIGNATED ROADS AND TRAILS PROPOSED MANAGEMENT



Open Motorized

Closed Abandoned

WHITE RIVER RESOURCE AREA



LOCATION MAP

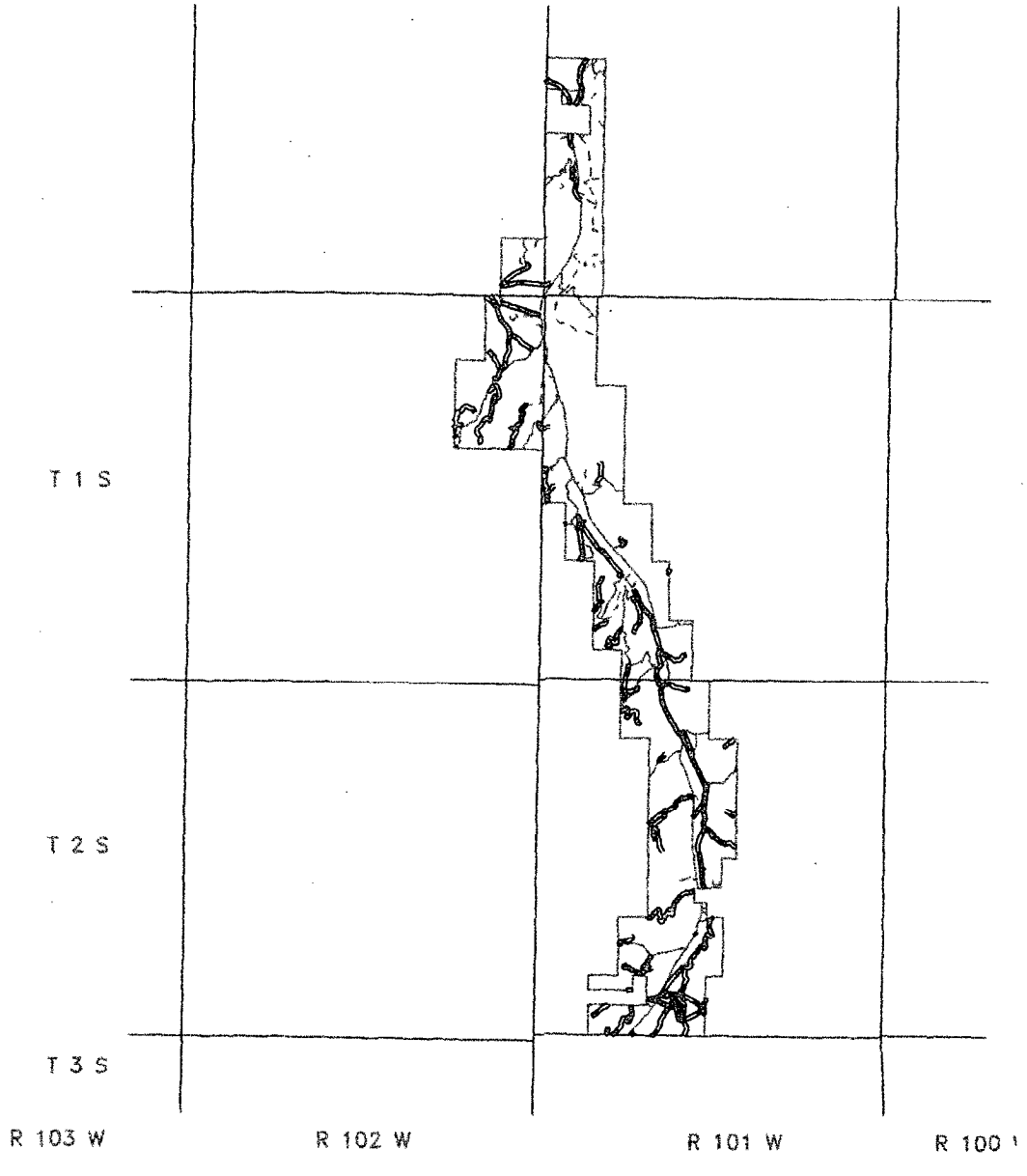
N

1 0 1 2 3 4 5

MILES

MAP 3-9f

MAP 3–10. CANYON PINTADO DESIGNATED ROADS AND TRAILS ON BLM LANDS PROPOSED MANAGEMENT



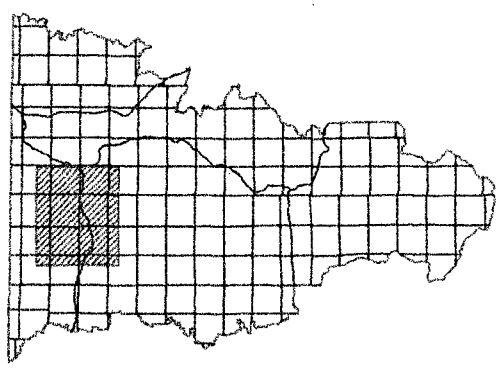
T 1 S

Open Motorized

Closed Abandoned

Closed Permitted

WHITE RIVER RESOURCE AREA



LOCATION MAP

N

MILES

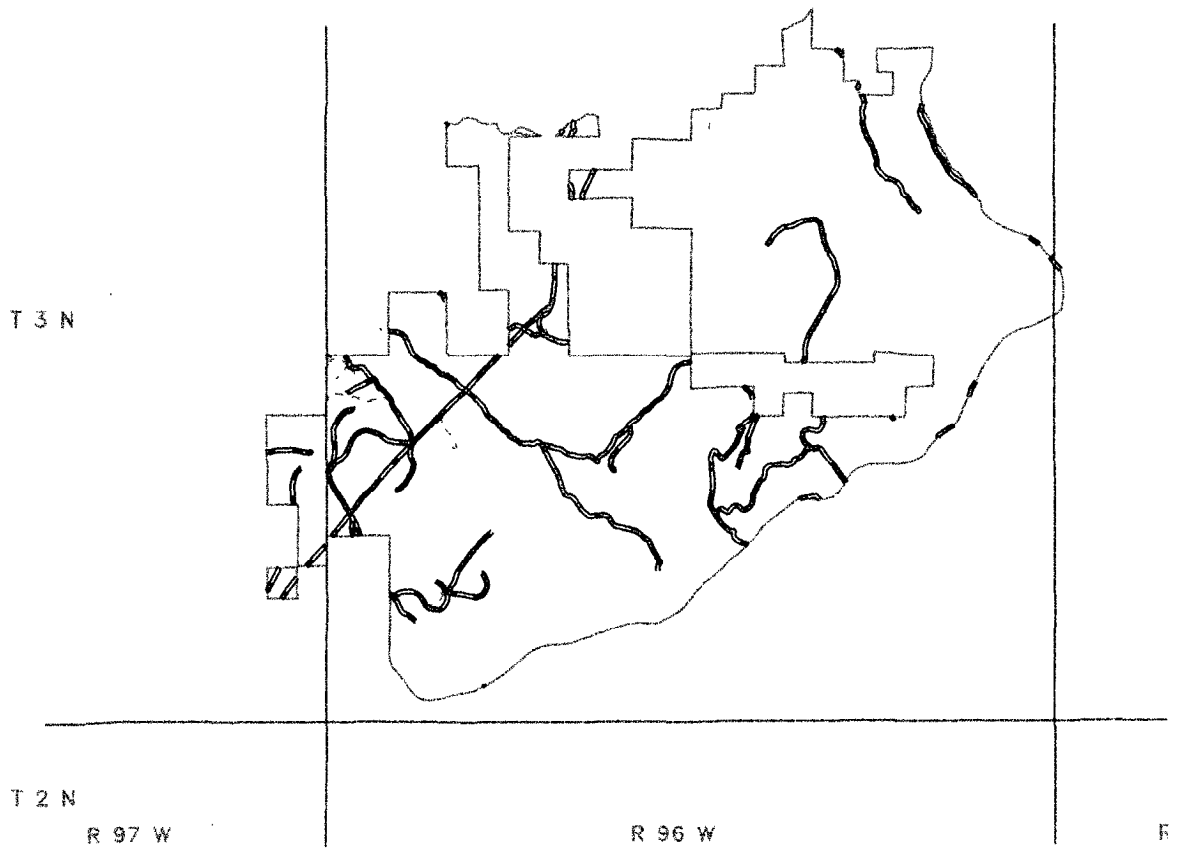
1 0 1 2 3 4 5 6

SCALE 1:200,000

N

MAP 3-10

MAP 3–11. DEEP CHANNEL DESIGNATED ROADS AND TRAILS ON BLM LANDS PROPOSED MANAGEMEN



T

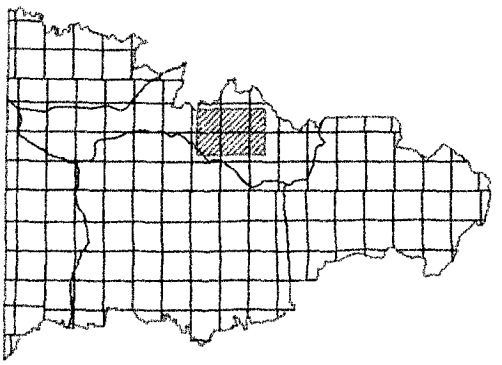
Open Motorized

Closed Abandoned

Closed Permitted

Public Access

WHITE RIVER RESOURCE AREA



LOCATION MAP

95 W

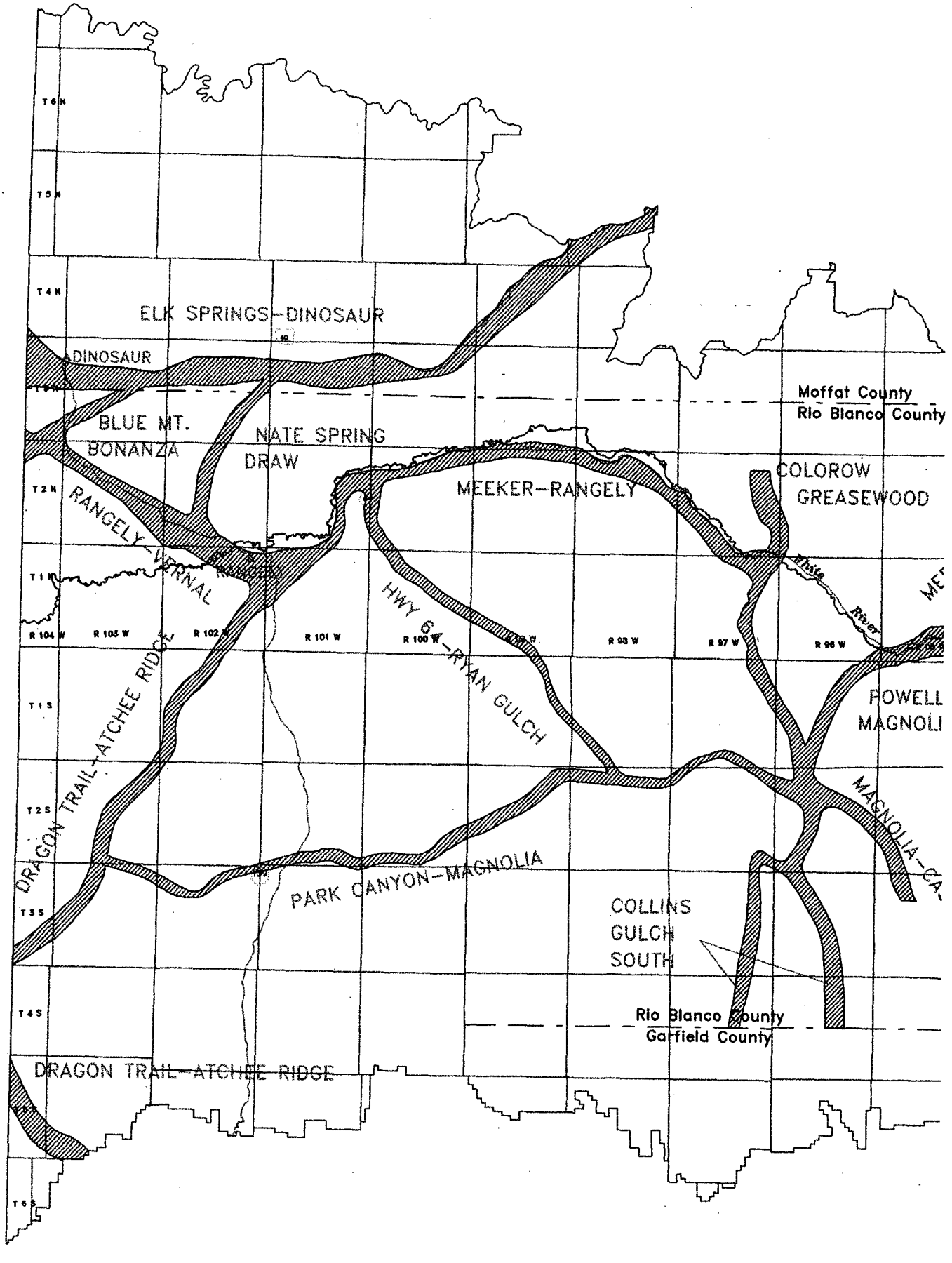
N

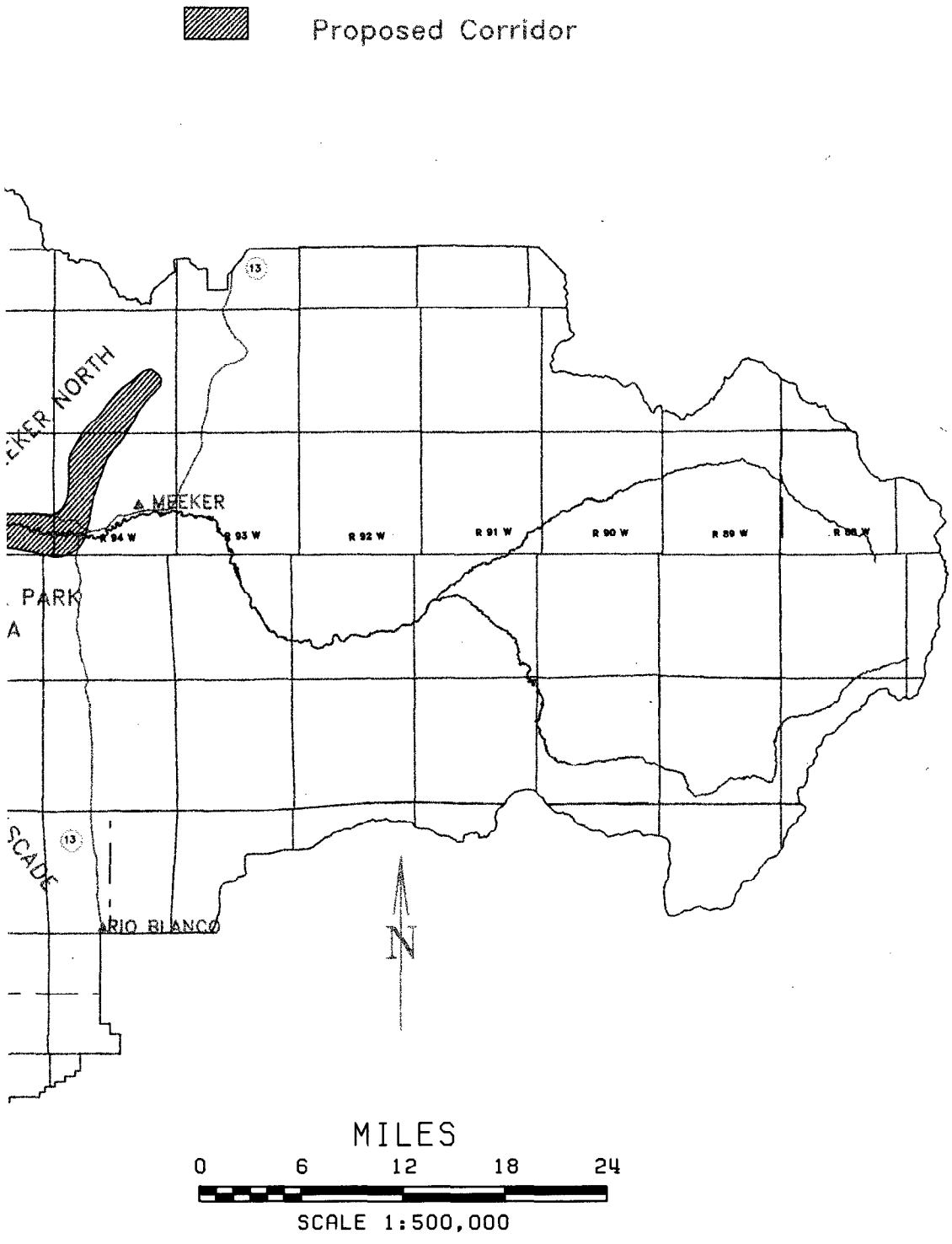
1 0 1 2 3 4 5

MILES

MAP 3-11

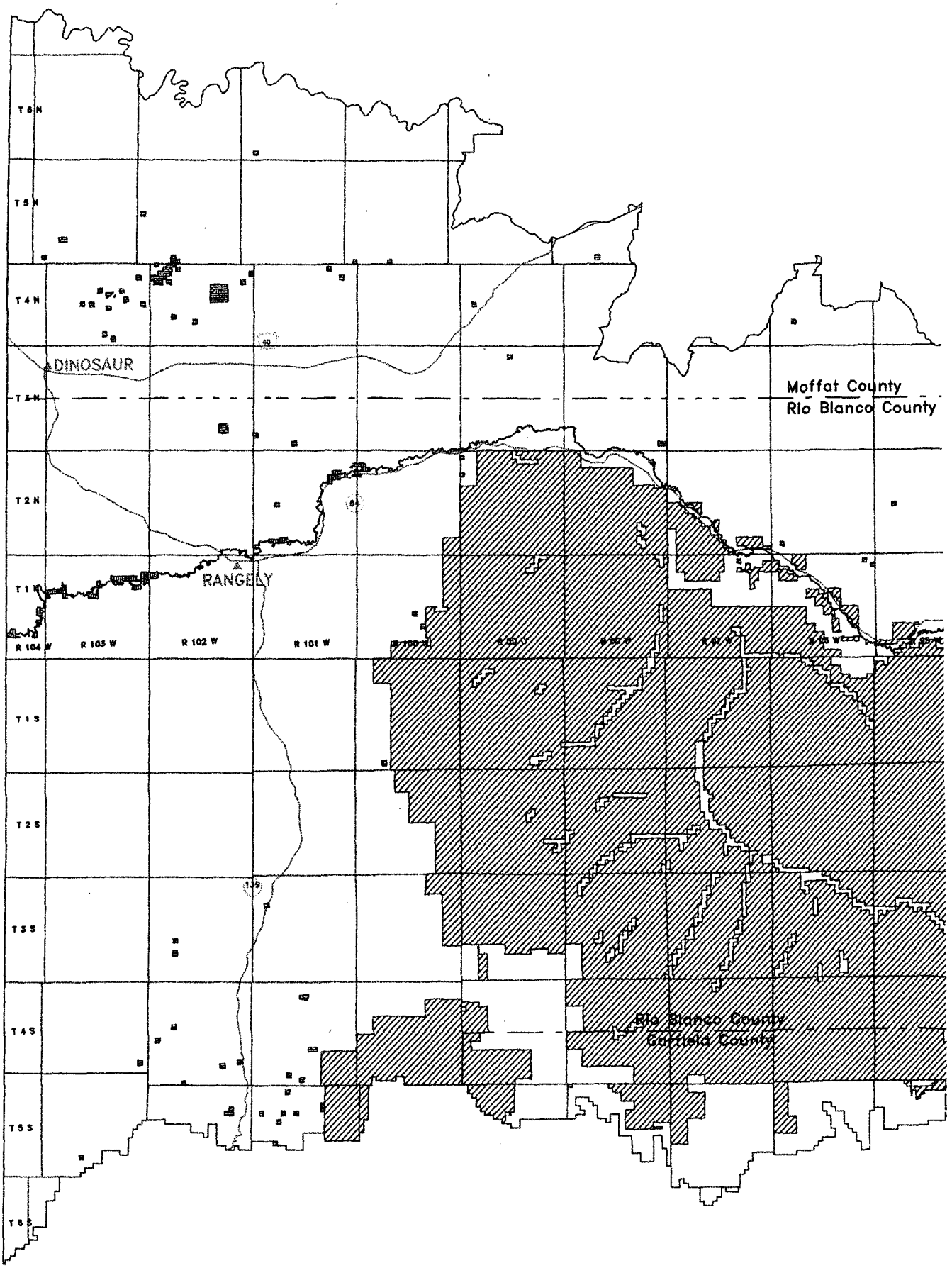
MAP 3–12. MAJOR UTILITY CORRIDORS PROPOSED MANAGEMENT

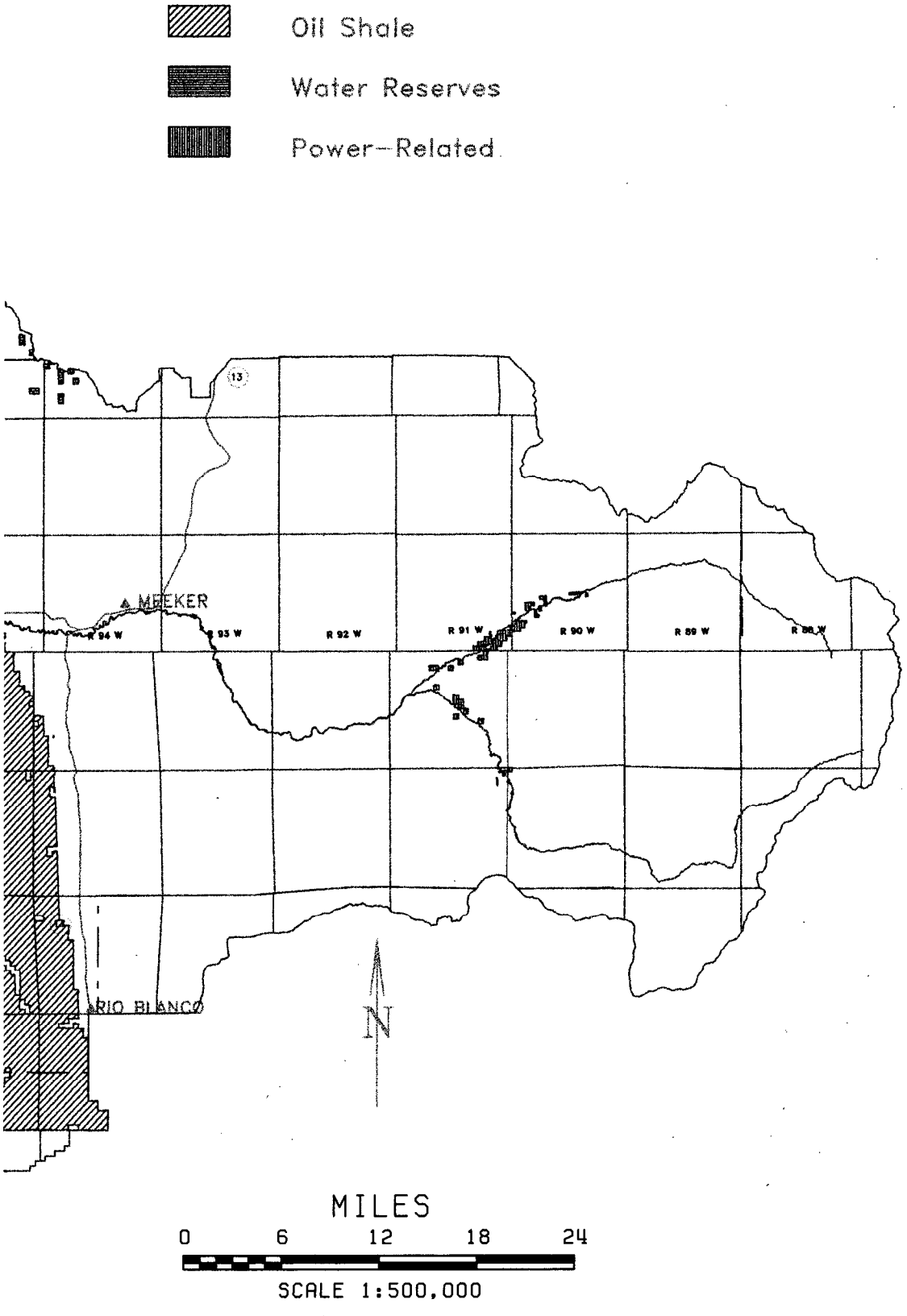



Proposed Corridor
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
PARK
RIO BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-12

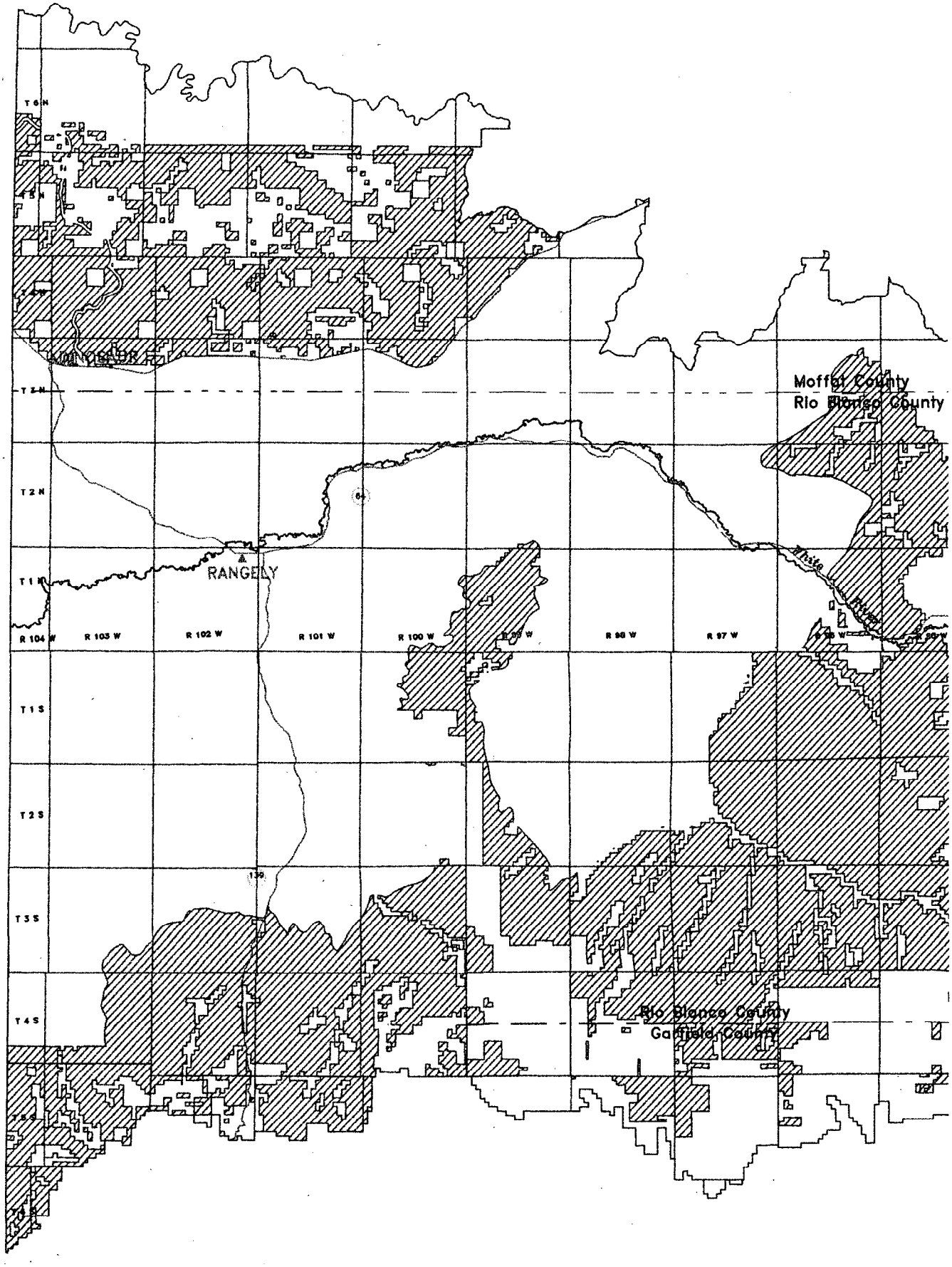
MAP 3–13. EXISTING WITHDRAWALS AND WATER RESERVES PROPOSED MANAGEMENT

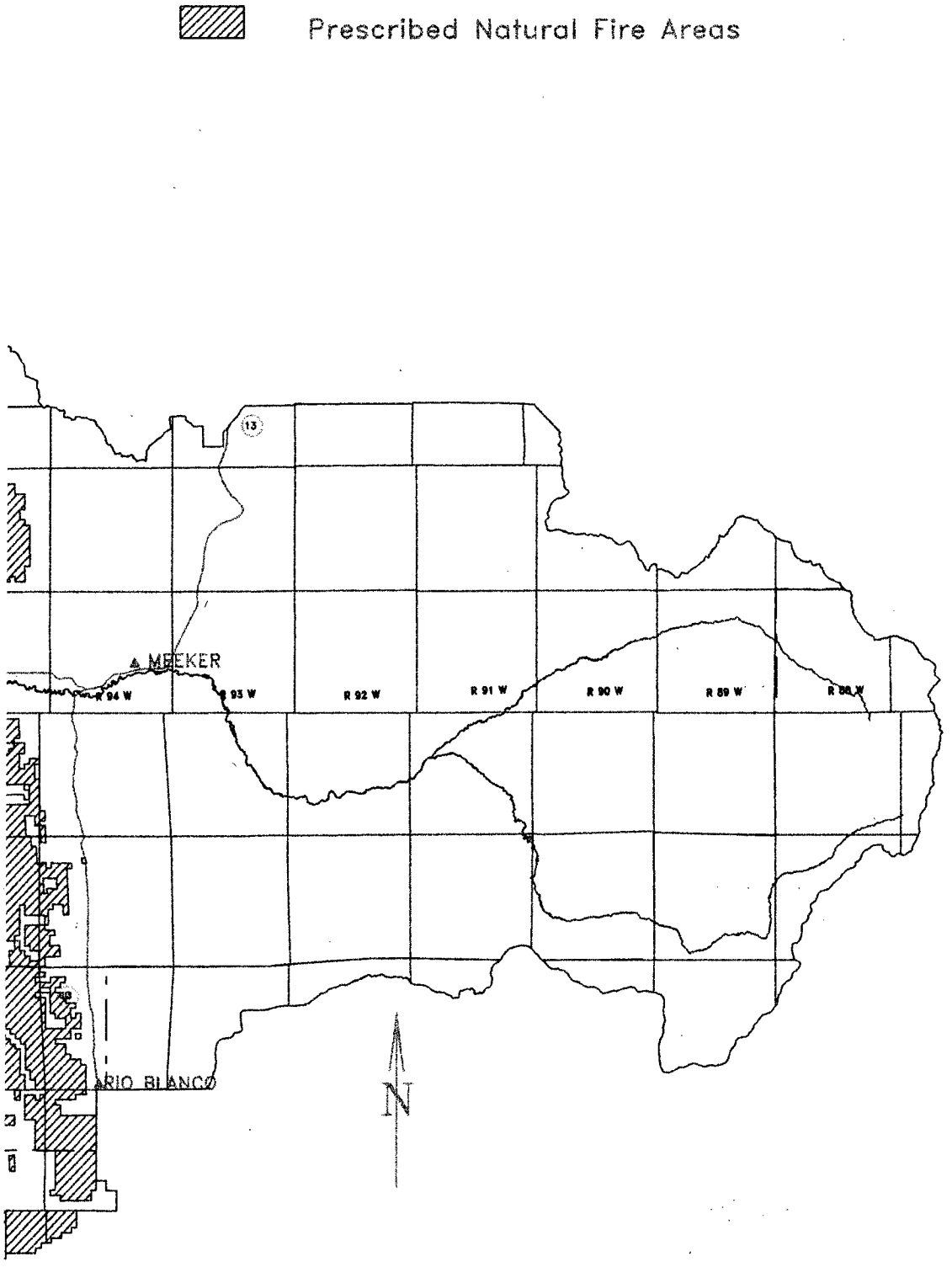



Oil Shale
Water Reserves
Power-Related
MEEKER
R 94 W
93 W
R 92 W
R 91 W
R 90 W
R 89 W
R 88 W
RIO BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-13

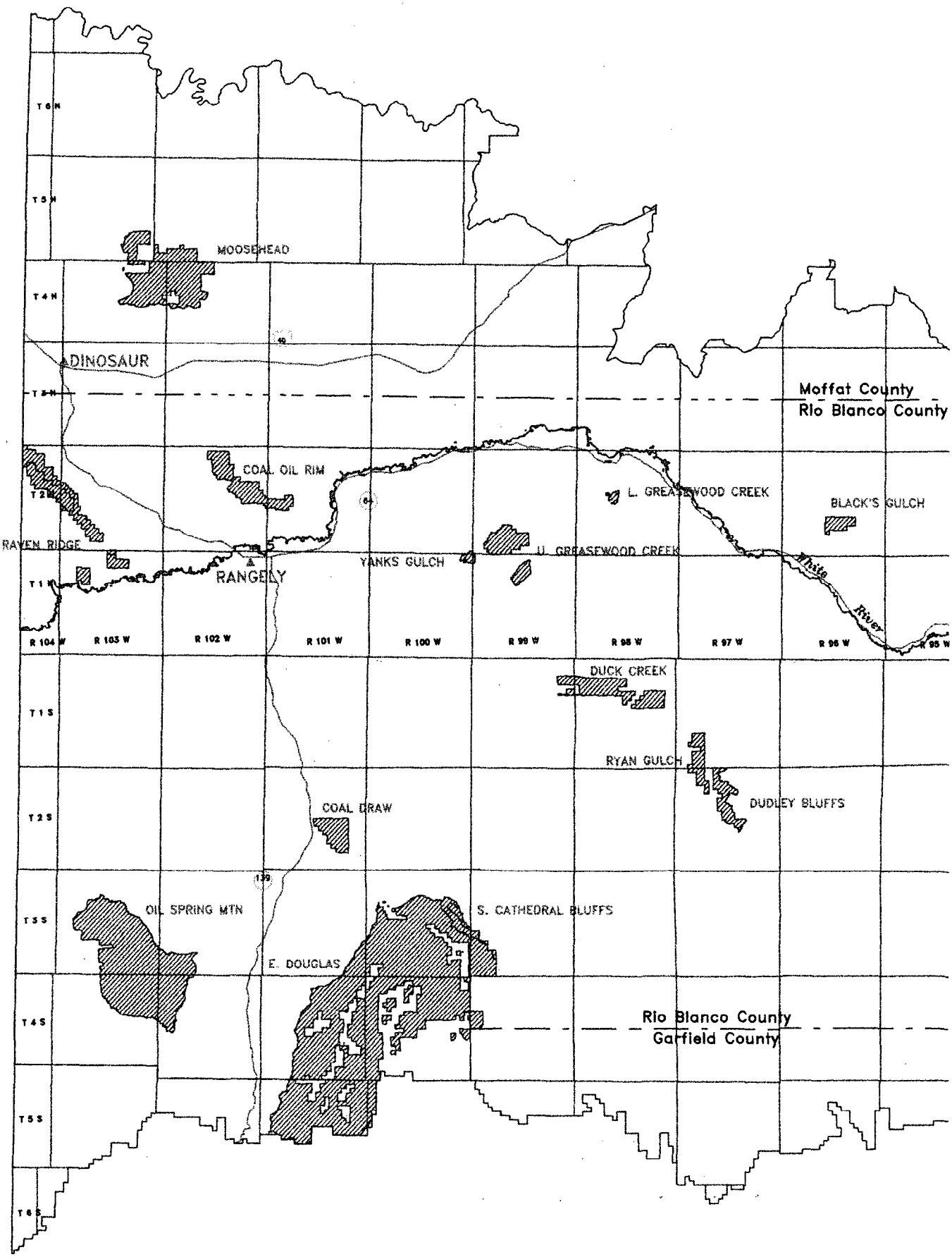
MAP 3–14. FIRE MANAGEMENT AREAS ON BLM LANDS PROPOSED MANAGEMENT



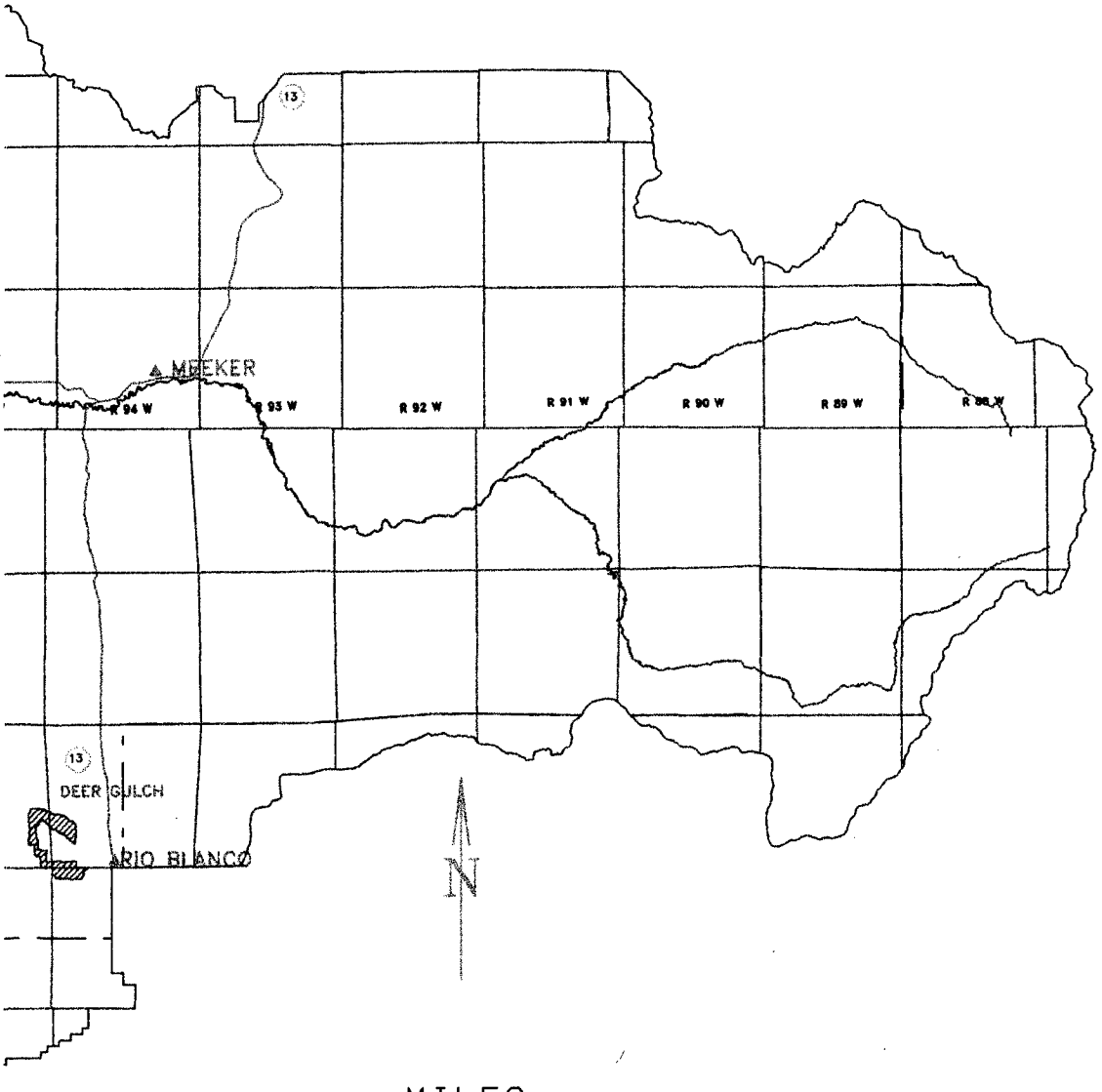

Prescribed Natural Fire Areas
MEEKER
R 94 W
R 93 W
R 92 W
R 91 W
R 90 W
R 89 W
RIO BLANCO
N
MILES
0
6
12
18
24
SCALE 1:500,000

MAP 3-14

MAP 3–15. AREAS OF CRITICAL ENVIRONMENTAL CONCERN ON BLM LANDS PROPOSED MANAGEMENT



Areas of Critical Environmental Concern



MILES

0 6 12 18 24

SCALE 1:500,000

MAP 3-15

CHAPTER FOUR
ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED MANAGEMENT PLAN

INTRODUCTION

This chapter describes the physical, biological, and economic consequences of implementing the Proposed Resource Management Plan (PRMP) as described in the previous Chapter. For a comparison of impacts from the other alternatives, the reader is referred to the Draft Resource Management Plan and Environmental Impact Statement (DRMP). A summary comparison of impacts resulting from all alternatives is provided in Table 4-1.

The assumptions used in the analysis of impacts include:

1. The analysis of impacts are presented as impacts on a resource that would result from a proposed management action.
2. Changes or impacts described are short-term (occurring within the life of the plan) unless otherwise stated. Long term impacts would extend beyond the life of the plan.
3. The affects identified would be the net unavoidable changes and impacts to a resource or resource use after application of the conditions of approval and/or stipulations.
4. Significant adverse and beneficial impacts are identified and analyzed. Some impacts that are "less than significant" are occasionally presented and analyzed to help distinguish a difference in management action. In most cases, less than significant impacts are not discussed.
5. No significant impacts would occur to the following resource components and are therefore not discussed in detail: Prime and Unique Farmlands; Topography; and Climate.

IMPACTS OF THE PROPOSED RESOURCE MANAGEMENT PLAN

IMPACTS ON AIR QUALITY MANAGEMENT

Impacts From Proposed Air Quality Management On Air Quality

Significant impacts are not expected to occur because all BLM actions and use authorizations must comply with all local, state, and federal air quality laws, regulations and implementation plans.

Cumulative Impacts on Air Quality

No significant impacts are expected because all BLM actions and use authorizations must comply with local, state, and federal air quality laws and regulations.

IMPACTS ON SOIL MANAGEMENT

Impacts From Proposed Soil Management On Soils

No surface occupancy (NSO) stipulations for soils would eliminate the potential for property and soil loss caused by surface-disturbing activities such as mineral development and timber harvesting. Controlled surface use (CSU) stipulations for soils, which place constraints on development on steep slopes, fragile soils, and saline soils, would help reduce the potential for property loss and decrease the severity of soil loss that occurs from surface-disturbing activities. The amount of soil saved (tons per year) cannot be quantified at this time and is dependent on factors such as, amount of disturbance, soil type and climate.

Continuing to apply the soil-related NSO stipulation on Baxter/Douglas Pass would continue to reduce soil loss in that area. A typical undisturbed side slope in the Baxter/Douglas Pass area losses approximately 1 ton per acre per year from natural erosion alone. The soils stipulation (16,490 acres) on soils in Management Priority Areas (MPA) would be continued. It is a part of 484,000 acres of fragile soils.

Applying a 52,000-acre CSU stipulation on highly saline soils and using the COAs listed in Appendix C, as well as other best management practices (BMPs), would help retain 8-20 tons per acre per year of salt.

Applying a CSU stipulation to 484,000 acres of fragile soils on slopes greater than 35 percent would help to minimize greater potential for erosion and mass wasting. Slopes greater than 35 percent (e.g., three and one-half feet of rise in ten feet of run) are considered critical in terms of increased erosion and potential for soil instability for construction purposes.

Watershed projects proposed in watershed plans are designed to improve vegetation cover and soil infiltration, which would help minimize soil erosion. Fifteen watershed plans on 508,650 acres would be implemented through integrated activity plans.

Restricting activities (e.g., motorized vehicle travel, fire suppression and surface disturbance) as proposed in Appendix B within fragile and saline soils would protect the soil's physical properties and protective herbaceous cover. Leaving shallow topsoil in place would protect sparse vegetation and prevent the displacement of salinity and sediment, inhibiting the erosion process. Because disturbed areas would be on the more productive soil sites, the reclamation process would be reduced. Some fragile soil areas would be unavoidable (e.g., existing leases and prior disturbance) and, as a result, increases in sediment and salinity loads could be expected. Although these increases cannot be calculated, is it believed that they would be adverse and long term, based on past soil erosion and mass wasting that has occurred from other surface-disturbing activities.

Impacts From Proposed Minerals Management, Timber Harvesting, And Land Use Authorizations On Soils

Surface-disturbing activities such as oil and gas, mineral materials, oil shale, coal development, timber harvesting, and land use authorizations would all result in the same types of soil-related impacts. Surface stipulations listed in Appendix B would help reduce soil impacts by either prohibiting surface-disturbing activities or avoiding sensitive areas. Soil loss caused by surface-disturbing activities would be eliminated in no lease areas and in NSO stipulation areas. Timing limitation (TL) stipulations imposed by wildlife would help reduce soil impacts that occur from surface-disturbing activities conducted in wet and moist areas as no disturbance would be allowed during the TL stipulation. CSU stipulations imposed by soils and by other resources could protect soils to a lesser extent.

The severity of soils impacts would depend on the number of acres unavailable for leasing and surface occupancy and the number of acres protected by TL and CSU stipulations. Table 4-1 (Cumulative Impacts on Soils Section) lists the number of acres that would not be available for surface-disturbing activities. It also lists the acres that would be available to surface-disturbing activities but conditioned by other stipulations.

Soils not protected by these surface stipulations would be subject to soil impacts caused by surface-disturbing activities. Fragile soils in these disturbed areas would be the most vulnerable to soil loss. However, some loss would still occur from natural processes. Soil erosion in areas with high salt content would contribute to salinity in the Upper Colorado River Basin. Any increase in salinity in the Colorado River Basin is of national concern.

Development and associated road construction would displace topsoil which would adversely affect the structure and microbial activity of the soil. This would result in a reduction of natural soil productivity. Development and associated roads could result in soil loss through excessive erosion and slope failures and damage soil properties in place by compaction or chemical contamination. Short-term soil loss would occur during the construction phase and for a period after construction. Many of these short-term erosion problems would be reduced by surface reclamation procedures (Appendix A). Revegetating disturbed areas would initiate the process of creating new soil structures and soil horizons. On fragile soil sites, the process would be very slow because already-low productivity soil is usually high in salinity and low in soil moisture. Fragile (e.g., especially soils high in gypsum) and saline soils are extremely susceptible to soil loss caused by development. These soils occur on 830,100 acres (46 percent of the Resource Area total). Many of the short-term impacts also would be reduced by the use of mitigation under Section 6 of standard lease terms for oil and gas leasing and development.

A number of erosion and productivity problems (e.g., fragile and saline soils) may not be eliminated under current management actions, resulting in a long-term declining trend in soil resources. Long-term impacts to soil productivity and stability would occur as a result of open pit mining and surface disposal of retorted shale, until successful reclamation would be accomplished. These problems would be minimized if the spent shale were covered with at least 24 inches of suitable plant growth material.

Reduction in soil fertility levels and reduced productivity would affect diversity of reestablished vegetative communities. Surface spillage of nahcolite and other minerals would result in deflocculation of soil/clay particles and subsequent breakdown of soil structure. Moisture infiltration would be reduced, creating soil drought conditions. Vegetation would undergo physiological drought reactions.

Harvesting timberlands and woodlands would have both beneficial and damaging impacts on forest soils. Although cut areas could encourage the development of a grass understory which aids in soil stabilization, an unquantifiable amount of soil would be lost because of trails, road construction and camps. This loss of soil productivity would occur through damaging soil properties in place by compaction. When compaction occurs, reduced infiltration capacity could persist for over 50 years in some soils.

Impacts From Proposed Plant Communities Management On Soils

Managing plant communities to conserve the sites ability to produce vegetation and by requiring to maintain a site's conservation threshold would be beneficial to the protection and productivity of soil resources. Vegetation treatments could temporarily affect the physical characteristics of soils by altering the abundance and types of vegetation that may shield soils from erosion. Many of these short-term erosion problems would be eliminated once new vegetation was established.

Impacts From Proposed Riparian Management On Soils

Improving management on high- and medium-priority riparian areas and requiring incompatible land uses to avoid priority riparian areas would be beneficial to soil resources. Expanding the level of management and protection (e.g., avoidance of priority areas) to medium-priority streams would extend soil benefits to an increased number of watersheds. More stringent application of COAs in Appendix A and BMPs (e.g., buffer establishment between road and channel) would help minimize adverse effects.

Impacts From Proposed Livestock Grazing, Wild Horse, And Big Game Management On Soils

Continuing to implement livestock or wildlife projects that increase vegetative cover and better distribute animals would provide long-term improvement and protection of soil resources. Big game land use restrictions (e.g., protection of critical winter range, elk and pronghorn production areas, Moosehead road closure) would help protect soil resources by preventing surface disturbances.

Improved forage production and vegetative cover would improve soil infiltration rates, causing sediment yields from rangelands to decrease somewhat over the long term. Soil compaction problems associated with use of riparian areas would be lessened with implementation of BMPs and alternative water sources.

Continuing to allow or provide big game use of more forage than was allotted to them in the 1981 *Grazing Management Environmental Impact Statement* (EIS), while not reducing livestock allocations could result in overgrazing and animal-unit months (AUM) deficits in the Douglas/Cathedral and Wolf Creek/Red Wash Geographic Reference Areas (GRAs). AUM deficits could deplete the vegetative cover needed to protect soil from erosion and could cause long term soil productivity problems. Overgrazing in any watershed would cause soil compaction, reduce infiltration, and decrease watershed stability. Sensitive (e.g., fragile soils) watersheds have very high erosion potential and are frequently high in salts. Proper grazing practices (e.g., rest rotation, time of use) within sensitive watersheds is consequential in reducing erosion from both streambank and upland sources.

Impacts From Proposed Fisheries Management On Soils

Implementing protection and improvement measures (e.g., livestock grazing strategies, reestablishment of riparian vegetation, installation of instream structures and exclosures) for the improvement of fisheries would enhance streambank stability and vegetative cover thereby reducing soil erosion.

Impacts From Proposed Special Status Wildlife Management On Soils

Continuing to protect prairie dog habitat for potential black-footed ferret reintroduction (Wolf Creek and Coyote Basin) could limit sagebrush manipulations and project developments planned in several watersheds. This would reduce the effectiveness of watershed improvements. Implementing management objectives for special status wildlife, which restrict surface-disturbing activities within floodplains and riparian habitats, would be beneficial to soil resources by reducing compaction and erosion and increasing infiltration.

Designating the East Douglas watershed as an Areas of Critical Environmental Concern (ACEC), would protect steep slopes on 55 percent of East Douglas Creek watershed and its tributaries.

Impacts From Proposed Wilderness Management On Soils

Permanently protecting 41,250 acres of wilderness study area (WSA) as wilderness and providing interim protection on 40,090 acres of non-recommended WSAs would have both adverse and beneficial impacts on soil management. Prohibiting surface-disturbing activities that could cause accelerated soil erosion would be beneficial. However, if the soil or watershed condition deteriorated over time, corrective procedures would be limited because of restrictions placed on the types of watershed rehabilitation treatments allowed.

Returning Black Mountain, Windy Gulch, and Oil Spring Mountain to multiple use management, following interim protection, would allow surface-disturbing activities to take place. Short-term losses would occur from any type of surface-disturbing activity, but many of these short-term erosion problems would be mitigated by reclaiming disturbed surfaces.

Impacts From Proposed Visual Resource Management On Soils

Prohibiting surface-disturbing activities in VRM Class I areas and restricting surface-disturbing activities in Class II areas would help reduce soils-related impacts in these areas. Allowing more liberal development in Class III and Class IV areas would increase the opportunity for soils-related impacts caused by surface-disturbing activities. Surface disturbance could increase sediment and salinity yields in fragile/saline soil areas by an unquantifiable amount. The amount of protection or lack thereof would vary by alternative.

Proposed VRM classifications would permit 1,007,780 acres of additional development (a reduction of 811,120 acres from current management). These reductions would significantly decrease sediment and salinity yields.

Impacts From Proposed Areas Of Critical Environmental Concern Management On Soils

NSO stipulations in existing and proposed ACECs on 26,770 acres would help eliminate surface disturbance and eliminate soil loss created by surface-use activities. CSU stipulations in existing and proposed ACECs on 99,060 acres would also help reduce soil erosion by controlling surface disturbances.

Impacts From Proposed Recreation And Motorized Vehicle Travel Management On Soils

Recreation impacts on soils would depend upon the types and numbers of facilities and other management (e.g., targeted activities, desired settings, etc. see Chapter 2, Recreation Section) provided within the White River Extensive Recreation Management Area (ERMA). Impacts would also depend upon the types of stipulations in place to protect soils from the types of motorized travel allowed, and soil conditions. Vehicle use on unimproved roads during wet or moist conditions is a major cause of accelerated road deterioration and gully erosion. Off-road vehicle use destroys soil-stabilizing vegetation, damages soil properties in place by compaction, and reduces soil-water infiltration.

Localized adverse and beneficial impacts could result from the proposed Blue Mountain GRA and White River ACEC. Increases in sediment yield from surface erosion of compacted trails and parking areas would occur from construction and visitor use, degrading local surface water quality.

Restricting motorized vehicle travel to designated roads and trails would reduce, by an undetermined amount, soil damage that is presently occurring from unrestricted off-road vehicle travel throughout most of the Resource Area. Trying to maintain road density in critical wildlife habitat to 1.5 miles per square mile and 3 miles per square mile elsewhere in the Resource Area would reduce the amount of damage that is presently occurring from road travel.

Off-road vehicle use would destroy soil-stabilizing vegetation, damage soil properties in place by compaction, and reduce soil-water infiltration. Increases in surface erosion would be expected because of the difficulty in maintaining and reestablishing vegetation in these areas.

Impacts From Proposed Fire Management On Soils

Fire line construction and vegetation removal would cause short-term disturbance to soil resources, including fragile/saline soils. Soil loss would occur through excessive wind and water erosion on burned slopes and road surfaces. Loss of productivity would occur by physical removal, mixing, redistributing, and/or burying of surface soils, and would damage soil properties in place by compaction, reducing soil water infiltration and microbial activity of the soil.

Impacts from fire management would be the same as described under Alternative A except for the applications of management restrictions and BMPs, which would help minimize erosion on 830,100 acres of fragile and saline soils. With the soil CSU, 424,000 acres would be subject to management restrictions on fragile soils with slopes greater than 35 percent and restrictions on 52,000 acres of highly saline soils.

Cumulative Impacts On Soil Resources

An unquantifiable amount of soil would be lost from surface-disturbing activities through wind and water erosion in the short term until vegetative cover is established. These losses could continue over the long term if disturbance is in fragile soils because of the difficulty in establishing vegetation on these sites. Soils losses would be significant in the short term but not in the long term. A number of long-term erosion and productivity problems (e.g., fragile and saline soils) may not be restored by reclamation, resulting in a declining trend for soil resources.

Revegetating disturbed areas would begin the process of creating new soil structures and soil horizons. Revegetation on fragile soil sites would be very slow because of the already-low producing soils that are usually high in salinity and low in moisture.

Constructing roads, trails, and well pads within sensitive watersheds would have the most adverse impact on soils within or adjacent to fragile soil areas. High rates of soil erosion from disturbance of fragile sites would cause increased sedimentation and increased salinity loads to the Colorado River Basin.

Prohibiting surface disturbance in NSO areas would prevent soil and surface water impacts caused by surface-disturbing activities. Conditioning approved development with TL and CSU stipulations (especially soils CSU stipulations) would help reduce impacts on soils.

Soil loss in the Baxter/Douglas Pass area would continue from natural process at the rate of 1 ton per acre per year. Studies have documented that Mancos Shale terrain is highly erodible, producing large quantities of salt and sediment. The Soil Conservation Service (SCS) has determined that these areas have the potential to transport 2-5 tons per acre per year of sediment from water erosion. By applying a 52,000-acre CSU stipulation on highly saline soils and using the COAs listed in Appendix A, as well as other BMPs, 8-20 tons per acre per year of salt could potentially be retained.

Slope angle is a critical factor in project and road location. As slope angle increases, the potential for erosion and mass wasting increases. Slopes greater than 35 percent (e.g., three and one-half feet of rise in ten feet of run) are considered critical in terms of increased erosion and potential for soil instability for construction purposes. Applying a CSU stipulation to 484,000 acres of fragile soils on slopes greater than 35 percent would help to minimize these problems.

Soils CSU stipulations attached to all surface-disturbing activities would require special construction techniques be used in an effort to minimize soil erosion. COAs listed in Appendix C would also be used to help reduce sedimentation and salinity transport.

Restricting vehicles to designated trails and reducing effective road density to 1.5 miles per square mile would be beneficial to soils management. Vehicle use of unimproved roads during wet or moist conditions is a major cause of accelerated road deterioration and soil loss. Off-road vehicle travel destroys soil-stabilizing vegetation, damages soil properties in place by compaction, and reduces soil water infiltration.

Designating Coal Oil Basin open for off-road vehicle travel with little restrictions would expose 86,843 acres of fragile soils to disturbance. Increases in overland erosion would be expected because of the difficulty in reestablishing vegetation in these areas.

IMPACTS ON HYDROLOGY MANAGEMENT

SURFACE WATER

Impacts From Proposed Surface Water And Soils Management On Surface Water

Applying soils-related stipulations to surface-disturbing activities and developing watershed management plans would decrease soil erosion and thereby reduce sediment and salinity yields.

Impacts From Proposed Minerals And Land Use Authorizations Management On Surface Water

Surface-disturbing activities such as oil and gas, mineral materials, oil shale, coal development and land use authorizations would all increase soil erosion and thereby increase sediment and salinity in nearby drainages. No lease areas would prohibit surface-disturbing activities as would NSO stipulations. TL stipulations imposed by wildlife would help reduce soils impacts that occur from surface-disturbing activities conducted in wet and moist areas, as no disturbance would be allowed during the TL stipulation. CSU stipulations imposed by soils would reduce surface water impacts. CSU stipulations imposed by other resources could protect surface water to a lesser extent.

The severity of soils and surface water impacts would depend on the number of acres unavailable for leasing and surface occupancy and the number of acres protected by TL and CSU stipulations. Table 4-1 (Soils Section) lists the number of acres that would NOT be available to surface-disturbing activities. It also lists the acres that would be available to surface-disturbing activities but conditioned by other stipulations.

Revegetating disturbed areas would help minimize raindrop impact, thereby improving soil-water infiltration and water retention and reducing the potential for overland flows. These types of degradation contribute to gullying, stream bank erosion, and reduced water quality. Many of these short-term erosion problems would be avoided by surface reclamation procedures and with the use of BMPs. However, a number of accelerated erosion and salinity problems (e.g., fragile and saline soils) would not be avoided, resulting in a declining trend in water quality and stream bank stabilization. This trend would continue for the long term because of the difficulty in revegetating fragile watersheds.

Oil and gas development could result in the following impacts on water quality and quantity: 1) Reduced water quality due to erosion of salt and sediment off roads, drill pads, and pipeline rights-of-ways. 2) Contamination from produced water which may contain high concentrations of salts (particularly sodium and chloride), heavy metals, and aromatic hydrocarbons, such as benzene and toluene. Spills, leakage or percolation from pits could contaminate surface waters; 3) disappearance and/or reduction in flows on normally perennial seeps and springs could occur due to compaction or loss of vegetation, which reduces soil-water infiltration; 4) mudflows from landslides and gullying associated with roads and drill pads could deposit large amounts of sediment into drainages. Typically, these mass wasting events occur during moist spring conditions; 5) mass gullying, piping and rill erosion could occur where well pads and roads have been developed in fragile or highly saline soils.

Oil shale development could have the following impacts on surface water: 1) Up to an 8.2 percent reduction in the annual flow of the White River at the confluence with the Green River. Portions or all of

the water used in oil shale development could be irreversibly lost to agriculture over the short term. Reduction in flow to the White River would be considered insignificant to the overall discharge. However, lower flows would concentrate total dissolved solids (salinity), which would increase salinity contribution to the Colorado River Basin. Any increases to salinity in the Colorado River Basin are considered significant with respect to agriculture, public health, recreation uses, fisheries, and economics; 2) possible in-situ leachates containing high levels of many inorganic and organic constituents and carried by ground water into Piceance and Yellow Creeks, causing the quality of these streams to deteriorate; 3) Leaching of surface spent shale spoil piles into the ground water system could degrade surface water quality.

Sodium development would have the following effects on surface water, although much would depend on the method of development used: 1) Surface disturbances on approximately 1,000 acres would increase sediment delivered to the streams during project construction and operation; 2) reduced soil fertility levels and productivity by mixing of the soil horizons would affect diversity of reestablished vegetative communities and their potential to protect soils from surface runoff; 3) degradation of surface water quality from brine spills during pipeline disconnection and movement, accidental pipeline ruptures, and evaporation pond leaks or overflow.

Coal development would have the following impacts on surface water: 1) Alteration or removal of existing stream channels from surface disturbances and subsidence from underground mining; 2) reduced flows. Peak flows would be lower and occur earlier than pre-mining flows. Base flows would be lower during and shortly after mining but would be higher over the long term after reclamation.

Impacts From Proposed Plant Communities Management On Surface Water

Vegetation treatments could affect the physical characteristics of soils and alter the abundance and types of vegetation that shield soil from water erosion. Treatments aimed at reducing woody species and increasing herbaceous species greatly reduce runoff and erosion and improve soil stability. Loss of vegetation cover may result in increased erosion and a temporary increase in sedimentation from high intensity summer storms; however, erosion from snow melt and gentle rainfall would be limited. Recovery of infiltration rates and sediment control generally occur with time and interim losses depend on the speed of revegetation.

Impacts From Proposed Riparian Management On Surface Water

Implementing management on high and medium priority riparian areas and implementing grazing and vegetation management objectives listed in Chapter 2 would be beneficial to surface water management. Incompatible land-use activities that involve riparian areas and impair the channel's natural ability to retain water would be mitigated by projects to stabilize banks and collect sediment. Excessive grazing and associated trampling of stream riparian areas adversely affects water quality and flow duration by removing or deteriorating streambank vegetation necessary for sediment capture and bank stability.

Applying COAs (e.g., buffer establishment between road and channel) listed in Appendix C and surface stipulations listed in Appendix B would help minimize adverse effects.

Impacts From Proposed Forestry Management On Surface Water

Harvesting Douglas-fir and spruce/fir would locally reduce short-term evapotranspiration rates and increase runoff. These activities could affect water yields, seasonal streamflow characteristics, and instream water quality. With the proposed annual harvest levels (4 acres annually) the impacts to water resources would be very insignificant.

Harvesting commercial woodlands would locally reduce short-term evapotranspiration rates and increase runoff. In watersheds with large clearcut acreage, timing and magnitude of seasonal streamflows may be altered (e.g., larger peak flows or sustained flows). Increased water yields may also contribute to accelerated overland and channel erosion, especially on soils considered fragile. Although cut areas would encourage the development of a grass understory, which aids in soil stabilization, an unquantifiable amount of sediment would be lost due to trails or road construction. COAs listed in Appendix C would be implemented to new commercial permits to help mitigate any impacts to surface water resources.

Impacts From Proposed Livestock Grazing, Wild Horse, And Big Game Management On Surface Water

Continuing to allow big game and wild horses to use more forage than was allotted to them in the 1981 *Grazing Management Environmental Impact Statement* while not reducing livestock allocations could result in overgrazing and AUM deficits in the Douglas/Cathedral and Wolf Ridge/Red Wash GRAs. AUM deficits could deplete the vegetative cover needed to protect watersheds from runoff and erosion and could cause long-term watershed problems. Sensitive (e.g., fragile soils) watersheds have very high erosion potential and are frequently high in salts. Proper grazing practices (e.g., rest rotation, time of use) within sensitive watersheds is consequential in reducing erosion and sedimentation from both streambank and upland sources.

Developing AMPs on 35 allotments in the improve category would help reduce the impacts associated with livestock grazing by controlling livestock use and improving rangeland conditions. As with any surface-disturbing activity, implementation of range improvement projects would increase soil erosion. An increase in soil erosion would degrade water quality for the short term, until successful reclamation is achieved.

Implementation of livestock and wildlife projects that increase vegetation cover and better distribute animals would help decrease overland flows and improve water quality. Long term streambank benefits would be realized from wildlife management actions.

Big game land-use restrictions (e.g., protection of critical winter range, elk and pronghorn production areas, Moosehead road closure) would help protect surface water management by preventing surface disturbances.

Impacts From Proposed Fisheries Management On Surface Water

Implementing projects that improve fisheries habitat, increase bank stabilization, reduce erosion, and improve vegetative cover would have benefiting impacts on surface water quality.

Impacts From Proposed Special Status Wildlife Management On Surface Water

Protecting black-footed ferret reintroduction areas (Wolf Creek and Coyote Basin) would limit sagebrush manipulation and project development in watershed plans.

Implementing management objectives for special status wildlife, which restrict surface-disturbing activities within floodplains and riparian habitats, would be beneficial to water resources.

Impacts From Proposed Wilderness Management On Surface Water

Permanently protecting 41,250 acres of WSA as wilderness and providing interim protection on 40,090 acres of non-recommended WSA would have both adverse and beneficial impacts on surface water management. Prohibiting surface-disturbing activities that could cause accelerated soil erosion would be beneficial. However, if the soil or watershed condition deteriorated over time, mitigative procedures would be limited because of restrictions placed on the types of watershed rehabilitation treatments allowed.

Returning Black Mountain, Windy Gulch, and Oil Spring Mountain to multiple use management, following interim protection, would allow surface-disturbing activities to take place. Short-term losses would occur from any type of surface-disturbing activity, but many of these short-term erosion problems would be mitigated by surface reclamation procedures.

Short-term erosion problems would be avoided by using surface reclamation procedures as well as COAs.

Impacts From Proposed Visual Resources Management On Surface Water

Prohibiting surface-disturbing activities in VRM Class I areas and restricting surface-disturbing activities in Class II areas would help reduce surface water-related impacts in these areas. Allowing more liberal development in Class III and Class IV areas increases the opportunity for surface water-related impacts caused by surface-disturbing activities. Surface disturbance could cause sediment and salinity yields to increase, in fragile/saline soil areas by an unquantifiable amount.

Proposed VRM classifications would permit additional development on 1,007,780 acres (a reduction of 811,120 acres from current management). These reductions would significantly decrease sediment and salinity yields.

Impacts From Proposed Areas Of Critical Environmental Concern Management On Surface Water

NSO stipulations in existing and proposed ACECs on 26,770 acres would help eliminate surface disturbance on this acreage and eliminate sedimentation in nearby drainages created by surface-disturbing activities. CSU stipulations in existing and proposed ACECs on 99,060 acres, could also help reduce water erosion by controlling surface disturbances.

Impacts From Proposed Recreation And Motorized Vehicle Travel Management On Surface Water

Recreation impacts on surface water would depend upon the types and numbers of facilities and other management (e.g., targeted activities, desired settings, etc. see Chapter 2, Recreation Section) provided within the White River Extensive Recreation Management Area (ERMA). Impacts also would depend upon the types of stipulations in place to protect soils from the types of motorized travel allowed, and soil conditions. Vehicle use of unimproved roads during wet or moist conditions is a major cause of accelerated road deterioration and gully erosion. Off-road vehicle use destroys soil-stabilizing vegetation, damages soil properties in place by compaction, and reduces soil water infiltration.

Constructing camping areas, boat ramps, trails and parking areas would degrade local surface water quality and could cause increases in fecal coliform bacteria levels in the White River, depending on boat and camp use.

Localized adverse and beneficial impacts could result from the proposed wilderness designation for Bull Canyon, Willow Creek, and Skull Creek WSAs. Increases in sediment yield from surface erosion of compacted trails and parking areas would occur from construction and visitor use, degrading local surface water quality. Primitive area designation would be beneficial to water resources by limiting motorized vehicle travel and reducing surface disturbance.

Vehicle travel limited to designated and existing roads and trails would reduce, by an undetermined amount, soil damage that is presently occurring from unrestricted off-road vehicle travel throughout most of the Resource Area. Trying to maintain road density in critical wildlife habitat to 1.5 miles per square mile and 3 miles per square mile elsewhere in the Resource Area would reduce the amount of damage that is presently occurring from off-road travel.

Impacts From Proposed Fire Management On Surface Water

Fire line construction and vegetation removal would cause short-term impacts to surface water management. Infiltration rates are likely to decline for a short period following fires, causing an increase in overland flows. Burned areas subjected to high intensity storms, prior to vegetation regrowth, contribute to flashy runoff and an increase in erosion and sediment yields. Surface disturbance associated with fire suppression in areas with fragile soils would increase the susceptibility of these soils to erosion. An NSO stipulation on Baxter/Douglas Pass and a CSU stipulation on soil MPAs in Piceance Basin would help protect 23,700 acres of fragile/saline soils or three percent of resource total.

Cumulative Impacts On Surface Water Management

Short- and long-term increases in sediment and salinity loads within local surface waters would be anticipated. These increased sediment and salinity loads would occur from any type of surface disturbing activity; many of these short-term erosion problems would be reduced by surface reclamation mitigation. However, a number of accelerated erosion and salinity problems (e.g., fragile and saline soils) would not be mitigated under current management actions, resulting in a declining trend in water quality and stream bank stabilization. The cumulative impacts of local stream additions on the quality of the White River cannot be quantified at present, but increases in both

sediment and salinity concentrations would probably occur under all alternatives. During low flow periods, this impact would be most apparent within the Piceance Creek, Douglas Creek and the White River drainages because of the location of the energy activities.

Revegetating disturbed areas would help minimize raindrop impact, thereby improving soil water infiltration, water retention, and reducing overland flow and sedimentation to nearby drainages. On fragile soil sites, the revegetation process would be very slow due to an already-low productivity soil, usually high in salinity and low rainfall.

Prohibiting surface disturbance in no lease areas and NSO areas would prevent soil and surface water impacts caused by surface-disturbing activities. Conditioning development with TL and CSU stipulations (especially soils CSU stipulations) would help reduce impacts on surface water.

Soil loss in the Baxter/Douglas Pass area would continue from natural process at the rate of 1 ton per acre per year.

Applying a 52,000-acre CSU stipulation on highly saline soils and using COAs listed in Appendix A as well as other BMPs, would help retain 8-20 tons per acre per year of salt.

Applying a CSU stipulation to 484,000 acres of fragile soils on slopes greater than 35 percent would reduce the potential for erosion and mass wasting in these areas. Slopes greater than 35 percent (e.g., 3-1/2 feet of rise in 10 feet of run) are considered critical in terms of increased erosion and potential for soil instability for construction purposes. Restricting motorized vehicles to designated roads and trails and applying road density criteria would allow road closures and rehabilitation to occur on needless roads.

Designating Coal Oil Basin open for motorized vehicle travel with few restrictions would expose 86,843 acres of fragile soils to destruction. Increases in sediment and salinity yields to nearby drainage ways would be expected because of the difficulty in reestablishing vegetation in these areas.

GROUND WATER

Impacts From Proposed Surface And Ground Water Management On Ground Water

Applying water quality standards and anti-degradation policy for both surface and groundwater would require surface-disturbing activities to be in compliance with basic standards and methodologies to ensure that state waters are maintained at existing quality unless it can be demonstrated that a change is necessary.

Impacts From Proposed Soils, Plant Communities, Riparian, Forestry, Livestock Grazing, Wild Horse, Big Game, Fisheries, And Fire Management On Ground Water

Continuing to implement surface-disturbing projects (i.e., erosion control structures, water developments, vegetative manipulations, instream structures) in support of these programs could impact the ability of water to recharge aquifers. Recharge into formations that supply aquifers is dependent on the ability of that formation or soils to transmit water. Removal of vegetation, soil compaction, and trampling could reduce soil-water infiltration and alter the way water is captured and supplied to the water table. This alteration could cause a decline in nearby base flow (ground-water discharge) in perennial springs and streams.

Impacts From Proposed Oil And Gas Management On Ground Water

Disposing of water into reserve pits could degrade local ground water quality if the pits were not designed properly (i.e., use of lined vs. unlined pits, design capacity to hold 100-year, 6-hour storm event). Depending on the geologic formation, permeability of soils, and climatic conditions, degradation of ground water quality could occur.

Intercepting shallow aquifers by water source wells, geophysical shot holes, core test holes or monitoring wells could be damaging to ground water quality if not constructed to preclude interzonal migration of fluids from one water bearing zone to another. Reinjection of waste waters into deep wells is regulated by the state and would not cause adverse impacts to shallow useable aquifers.

Impacts From Proposed Oil Shale Management On Ground Water

Developing oil shale could have the following effects on ground water: 1) Mine dewatering could affect flows of springs or wells which derive water source from bedrock aquifer systems within the oil shale mineral development area; 2) an increase in aquifer mixing would occur as a result of shaft and mine dewatering which could change the local direction of groundwater flow in the aquifer systems; 3) contamination from aquifer mixing and leaching of spent shale within the flooded retorts would cause degradation of springs and wells locally; 4) in-situ leachates containing high levels of many inorganic and organic constituents and carried by groundwater may, in time, discharge into Piceance and Yellow Creeks, causing the quality of these streams to deteriorate; 5) leaching of surface (spent shale) spoil piles into the groundwater system could degrade ground-water or surface-water quality; 6) disruption of normal flows from wells and springs could occur from seismic activity in close proximity to the well or spring. Disruption could cause either an increase or decrease in flows.

Several private oil shale tracts are located adjacent and to the south of the Resource Area. Although these tracts are contained in the Colorado River surface drainage system, the ground water aquifer system appears to be in hydraulic connection with ground water in the White River Basin. The cumulative affects on ground water from development of these surface drainages could adversely affect the hydrologic regime within the White River.

Impacts From Proposed Sodium Management On Ground Water

Continuing to pump ground water for sodium development could affect ground water discharge to springs and streams in the surrounding area. Complete recovery through natural recharge would be expected to take in excess of 50 years. Significant impacts to local ground water quality could occur as the result of brine leaking through well casings or through breaching of a solution cavity during collapse of a mine zone.

Impacts From Proposed Coal Management On Ground Water

Continuing to develop coal could deplete ground water quantity, depending upon the formation being mined, the mining method, and the communication with water bearing strata. The removal of overburden and interburden during strip mining could destroy or deplete existing wells and springs. Resaturation could take 50 to 100 years after completion of mining. During this recovery time, increased well drilling and pumping costs could be expected.

Ground water quality could be impacted regardless of the mining method. The most critical impact would be an increase in total dissolved solid (salinity) levels. This increase would be due to discharge of mine effluent into ephemeral drainages or replacement of portions of the aquifers by spoil materials in the immediate surroundings of the coal mine operation. Because degradation of ground water quality would be a slow process, moving only a few hundred or few thousand feet from the reclaimed mine areas (Bishop et al. 1982), the impact would be considered to be insignificant.

Impacts From Proposed Mineral Materials Management On Ground Water

Extracting sand and gravel may affect the base flows (flows in perennial drainages from late summer through spring of the following year) in the river. Negative effects on ground water would be in terms of quality change, depending on development extent and subsequent rehabilitation.

Impacts From Proposed Visual Resources, Recreation, And Motorized Vehicle Travel Management On Ground Water

Continuing to construct roads and facilities and permitting off-road vehicle use would alter soil's natural ability to transmit water due to compaction. This alteration in recharge areas could cause a decline in nearby base flows (ground water discharge) in perennial springs and streams.

Impacts would be the same as described under Alternative A of the Draft RMP except that restricting motorized vehicle travel to designated roads and trails would help to prevent declines in the baseflows of perennial springs and streams.

Cumulative Impacts On Ground Water

Intercepting shallow aquifers by water source wells, geophysical shot holes, core test holes, oil and gas wells, and/or monitoring wells could adversely affect ground water quality and quantity, if construction and abandonment procedures do not preclude the interzonal migration of fluids from one water bearing zone to another.

Full scale oil shale development could adversely affect the overall hydrologic system within the White River.

Cumulative degradation or alteration of ground water resources could occur from other disturbing activities (e.g., mineral development, land use authorizations, recreation, etc.), although most of the impacts should be localized.

WATER RIGHTS

Impacts From Proposed Surface Water, Ground Water And Water Rights Management On Water Rights

Watershed projects would be potential sources for water right filings. Protecting surface water quality would ensure the availability of potable water for past and future water right acquisitions.

Continuing to maintain the integrity of aquifer systems, both in quality and quantity, would ensure the availability of good quality water for past and future water right acquisitions.

Impacts From Proposed Minerals Management On Water Rights

Conversion of oil and gas wells to water wells (i.e. BLM manual 3160-4) would be potential sources for water right filings. Using the COAs listed in Appendix C would help eliminate impacts derived from wells.

Impacts From Proposed Livestock Grazing Management On Water Rights

Implementing range projects (e.g., pits, reservoirs, spring developments) would create a potential source for water rights.

Impacts From Proposed Fisheries Management On Water Rights

Continuing to identify streams for instream flow surveys and surveying, would complement the water rights objective to make recommendations to the state for acquisition of instream flows.

Cumulative Impacts On Water Rights Management

Any impacts to water rights as a result of BLM management decisions would have to be augmented through the state. Appropriation of water rights for future demand should be met for the resource areas planned projects except for during drought years and in over appropriated drainages. Should unforeseen projects require more than what is normally allocated to BLM, the demand may not be met.

WATER DEPLETIONS

Impacts From All Proposed Management Actions On Water Depletion

The U.S. Fish and Wildlife Service has determined that project depletion impacts, which the Service has consistently maintained are likely to jeopardize the listed fishes, can be offset by (a) the water project proponent's one-time contribution to the Recovery Program in the amount of $12.34 (adjusted annually for inflation each fiscal year) per acre-foot of the project's average annual depletion, (b) appropriate legal protection of instream flows pursuant to State law, and (c) accomplishment of activities necessary to recover the endangered fishes as specified under the Recovery Implementation Program Plan.

In accordance with the biological assessment, the BLM would require individual lessees/ permittees to provide a payment directly to the U.S. Fish and Wildlife Service for their depletion charge amount. The Bureau will also provide an annual payment for Bureau-initiated actions.

IMPACTS ON MINERALS MANAGEMENT

OIL AND GAS MANAGEMENT

Impacts From Proposed Oil And Gas Management On Oil And Gas

Acreages available for oil and gas leasing and development are divided into the following categories: 1) 168,486 acres would be leased subject to the standard terms and conditions contained on the lease form; 2) 1,552,958 acres would be leased subject to one or more special stipulations, such as no surface occupancy, controlled surface use, or timing limitations.

83,720 acres would not be available for oil and gas leasing due to withdrawals or congressional mandates.

Drilling an estimated 55 wells per year over the next 20 years, on the lands available for leasing and development, would yield approximately 86.7 million cubic feet of gas and produce approximately 11.5 million barrels of crude oil. Although exploration and development may continue at the above rate, production of gas and oil would decrease approximately seven to 10 percent yearly due to depletion rates of the larger known fields.

Impacts From Proposed Soil, Water, And Air Management On Oil And Gas

Applying NSO stipulations to the 35,710 acres of applicable soil units within landslide areas, would not likely prevent oil and gas recovery but could increase development costs. Proposed oil and gas operations could be relocated so that these areas would be avoided. Most companies do not normally locate developments within these landslide prone areas.

The CSU stipulations included on 536,260 acres of steep, fragile, and saline soils would require the submission of plans of operations and surveys that would increase the costs of development, but would not prevent the exploration and development of oil and gas.

The cost of complying with NSO and CSU stipulations would vary depending on the distance for relocation and other mitigation required to prevent impacts on the resources of concern. The cost of relocating could be minimal if proper planning occurs.

The conditions of approval contained in Appendix C, related to soil, water, and air resources would not add significant impacts to oil and gas leasing and development.

Impacts From Proposed Vegetative Management On Oil And Gas

Applying NSO stipulations to 72,360 acres of existing and proposed ACECs for vegetative resources, known and potential habitat for T/E plant species, and remnant vegetation associations (RVA) could have a significant impact on oil and gas development. Drilling and leasing may be precluded from these areas. Because of the nature of oil and gas reservoirs in the area, it is impossible to determine an accurate estimate of oil and gas reserves that could be foregone. The ACEC and RVA areas are generally linear, with greater length and narrower width, which would likely provide an opportunity to delineate lease parcels that could include acreage not encumbered by the NSO stipulation. The NSO stipulations also contain language that would allow for an exception to be granted if an inventory indicated that the species of interest was not present. Conducting inventories would provide added costs to the operation. Added cost associated with special leasing stipulations may lead to lower bids on lease parcels, or it could mean that the parcel would go unleased until adjacent acreage had been developed. The area delineated for known and potential T/E species habitat is not linear and lease parcels may end up with the entire acreage encumbered by NSO. These lease parcels would likely not be leased. There are currently no producing wells within these areas.

Controlled surface use stipulations developed for ACECs and certain other woody plant communities encompass 135,000 acres. The CSUs provide for development after inventories identify the specific sensitive resource, and subsequent operational plans are designed to avoid the specified vegetative populations. Conducting inventories would provide added costs to the operation. Added cost associated with special leasing stipulations may lead to lower bids on lease parcels, or it could mean that the parcel would go unleased until adjacent acreage had been developed.

The requirement that construction equipment would be cleaned prior to entering the 497,900-acre weed-free zone, would add an undetermined amount to the cost of construction projects. Added costs would also be incurred in these areas because of the requirement to use certified weed free seed, mulching material, etc., in reclamation efforts.

Impacts From Proposed Wildlife Management On Oil And Gas

Applying NSO stipulations on 46,870 acres in order to protect raptor nests, sage grouse leks, eagle roosts and concentration areas, and the Oak Ridge State Wildlife Area would not likely prevent oil and gas recovery but could increase development costs. Except for the Oak Ridge State Wildlife Area, proposed oil and gas operations could be relocated so that these areas would be avoided. Lease parcels within the Wildlife Area would likely not be leased until adjacent areas are developed.

The 128,380 acres containing controlled surface use stipulation developed to protect Black-footed ferret reintroduction areas, bald eagle nest and roost habitat, and Colorado River cutthroat trout habitat would result in an increased cost to development and reclamation activities. Added cost associated with special leasing stipulations may lead to lower bids on lease parcels.

Timing limitation stipulations affect exploration and drilling operations by causing delays in operations, which may affect internal company project funding. However, adequate industry planning could substantially reduce this type of impact. Two or more timing stipulations, having different overlapping dates, that encompass the same parcel could cause significant financial impact, depending on the total length of time the operations would be delayed.

Impacts From Proposed Wilderness Management On Oil And Gas

Six Wilderness Study Areas, comprising 81,196 acres, are unavailable for oil and gas leasing until such time that the Congress acts on a Colorado Wilderness bill. Current wilderness interim management would apply to all pre-FLPMA leases within these areas. Interim management requirements would substantially increase the cost of siting and reclamation operations. If the Congress follows the Department of Interior's recommendations, 41,250 acres would become wilderness and would be withdrawn from mineral leasing. This acreage is considered to be in an area with low development potential. The 39,946 acres included in Black Mountain, Windy Gulch, and Oil Spring Mountain WSAs would then be made available for oil and gas leasing and development subject to special stipulations. These three WSAs have high development potential but adjacent production is not significant in terms of volumes produced.

Impacts From Proposed Visual Resources Management On Oil And Gas

The 41,250 acres identified as a Visual Class I area, is the same area that contains the three Wilderness Study Areas that have been recommended to become wilderness. Impacts resulting from the designation of a Class I area would be the same as identified under the Impacts From Proposed Wilderness Management section. Restricting oil and gas activities within the 412,250 acres making up Visual Class II areas would increase production costs by requiring companies to construct facilities so as to repeat basic elements of landscape form, line, color, and texture and not attract the attention of casual observers. The amount of increased costs cannot be quantified at this time.

Impacts From Proposed Areas Of Critical Environmental Concern Management On Oil And Gas

Approximately 23,640 acres occurring within designated and proposed ACECs would have NSO stipulations applied to oil and gas leases. 21,000 of these acres were included in discussions in the above section titled "Impacts From Vegetative Management". The impacts identified in that section resulting from the application of NSO stipulations would also apply to this section. All of the designated and proposed ACECs are underlain by formations determined to have high potential for the presence of hydrocarbons.

An additional 75,480 acres within designated and proposed ACECs would have controlled surface use stipulations applied to surface disturbing activities. This acreage was included in the 135,000 acres addressing CSU stipulations in the above section "Impacts From Proposed Vegetation Management". Impacts identified in that section would also apply to this section.

Cumulative Impacts On Oil And Gas Management

Continuing to drill an estimated 55 wells per year over the next 20 years would yield approximately 86.7 million cubic feet of gas and produce approximately 11.5 million barrels of crude oil.

Applying NSO stipulations to 157,583 acres could have a significant impact on oil and gas development, in that drilling may be precluded from these areas. Many of the NSO areas are generally linear, with greater length and narrower width, which would likely provide an opportunity to delineate lease parcels that could include acreage, not encumbered by the NSO stipulation. These parcels would likely be leased, although the added cost associated with special leasing stipulations may lead to lower bids on lease parcels. Lease parcels encumbered by large non-linear NSO areas may end up with the entire acreage encumbered by NSO. These lease parcels would likely not be leased until adjacent acreage has been developed. Most of the delineated NSO areas are outside known producing oil and gas fields.

TL, and CSU stipulations to protect other resources would increase costs of extraction but would not likely prevent recovery. Costs would vary depending upon the type of mitigation applied. Added cost associated with special leasing stipulations may lead to lower bids on lease parcels, or it could mean that the parcel would go unleased until adjacent acreage had been developed. Please refer to the section titled, "Social and Economic Impacts of the Proposed Management Plan", for a more detailed analysis of the cumulative economic impacts to oil and gas management.

Because of the nature of oil and gas reservoirs in the area, it is impossible to determine an accurate estimate of oil and gas reserves that may be foregone because of application of special stipulations.

OIL SHALE MANAGEMENT

Impacts From Proposed Oil Shale Management On Oil Shale

Making the multimineral zone (70,820 acres) unavailable for oil shale leasing until all minerals present (oil shale, nahcolite, and dawsonite) can be successfully recovered would result a lost opportunity to develop oil shale while the restriction is in effect. This would not affect the oil shale industry in the short term because oil shale is not expected to be developed during the life of this plan (15-20 years). In the long-term, an opportunity exists to improve technology so that all minerals can be recovered.

Making 223,860 acres available for oil shale leasing and development (39,140 acres for open pit mining) could provide production of an estimated 19 to 25.5 billion barrels of kerogen using today's technology. When technology has been developed, this could be a valuable resource and could supply 6 to 8 years of the country's current total demand for crude oil.

Impacts From Proposed Air Quality, Surface Water, And Ground Water Management On Oil Shale

Analyzing areas near the Dinosaur National Monument (DNM) for visibility impacts prior to issuing an emissions permit would affect oil shale development. Oil shale operations could emit pollution that would be visible near the DNM.

Continuing to comply with existing laws and policies for the protection of air and water quality would cause an adverse economic impact on oil shale mining proposals. Actual costs of the air monitoring program would depend on the size of the operation and the type of mining method being proposed. Monitoring of surface water would add a minimum of $10,000 per year to a mining operations budget. Developing wells for monitoring aquifer changes would be dependent on the size of the proposed operation and would vary in cost, averaging around $75,000 per completed well.

Impacts From Proposed Oil And Gas Management On Oil Shale

Making the Piceance Dome (51,350 acres) unavailable for oil shale leasing because of extensive oil and gas development, and unfavorable geologic settings for oil shale mining, would preclude the extraction of an estimated 5 billion barrels of kerogen until favorable development technology would evolve.

Impacts From Proposed Soils, T/E Plants, Sensitive Plants, Wildlife, Cultural Resources, And ACEC Management On Oil Shale

These environmental components all possess NSO stipulations that total 12,040 acres in areas identified for open pit mining. NSO stipulations would make those lands unavailable for development by surface mining techniques. Exceptions, modifications or waivers of the stipulation could be provided if the environmental analysis conducted on the mine plan would indicate that the resource of concern would not be affected or could be avoided.

NSO stipulations in areas identified for underground mining would prohibit surface occupancy and disturbance but would not prevent underground development. Mitigation would be included in any approved mine plan. The aerial extent of plant populations should be such that the siting of surface facilities could avoid plant populations without causing significant impacts. The T/E plant habitat normally occurs on linear exposures of a certain geologic formation. This fact should serve to reduce the cost of inventory as well as increasing the ability to be able to avoid plant populations. Inventory costs can vary depending on the size of the project and source of expertise conducting the inventory.

Applying TL stipulations to 83,410 acres would not prevent recovery of oil shale but could increase mining costs. TL stipulations would apply to exploration and pre-mine plan approval activities and would likely only cause a delay in the those activities. Approved mine plans would have mitigation built in to address these issues. Costs associated with seasonal restrictions would be minor, including delaying activities for one full nesting season to conduct raptor inventories. Baseline resource data gathering needed for environmental impact statements would likely take longer than a year to procure.

CSU stipulations on 99,880 acres would require engineering/ reclamation plans for soils and surveys for T/E plants, sensitive plants, and cultural resources. This stipulation would increase mining costs but would not prevent recovery of the resource since proposed operations could be relocated to avoid the resource of concern or could be designed to mitigate impacts to an acceptable level. CSU stipulations also could be exempted through environmental analysis.

The cost of complying with surface stipulations would vary depending upon the type of mitigation required and distances to relocate operations.

Cumulative Impacts On Oil Shale Management

Making 223,860 acres available for oil shale leasing and development (39,140 acres for open pit mining) would provide an opportunity to produce an estimated 19 to 25.5 billion barrels of kerogen using today's technology.

Applying 12,040 acres of NSO, 83,410 acres of TL, and 99,880 of CSU stipulations for soils, T/E plants, sensitive plants, wildlife, and cultural resources would not make lands unavailable for leasing and development but would likely increase development costs.

The cost of complying with surface stipulations would vary with the restrictions necessary to mitigate impacts to an acceptable level. Applicants would need to consider the costs associated with the above stipulations as well as the costs associated with (1) air quality monitoring, (2) surface water quality monitoring (gauge stations), and (3) ground water quality monitoring (monitor wells). The costs associated with botanical, cultural resource, and paleontological inventories would be included in the costs of some of the NSO and CSU stipulations. There would be some overlap between the different acreage restrictions identified above.

SODIUM MANAGEMENT

Impacts From Proposed Sodium Management On Sodium

Making the multimineral zone (70,820 acres) unavailable for sodium leasing until all minerals present (oil shale, nahcolite, and dawsonite) can be successfully recovered would result a lost opportunity to develop sodium within that area while the restriction is in effect. This would not have a significant effect on the sodium industry because of the undeveloped existing leases encumbering the area (16,620 acres under lease).

Continuing to prohibit the mining of sodium if it would adversely affect the minability of oil shale could delay or preclude the future leasing of sodium minerals.

Considering multimineral research scale tracts based on the merits of each proposal could allow development estimated in place reserve of 38.7 billion tons of combined nahcolite and dawsonite (Beard, et al., 1974).

Impacts From Proposed Air Quality, Surface Water, And Ground Water Management On Sodium

Continuing to comply with existing laws and policies for the protection of air and water quality would cause an economic impact on sodium mining proposals.

Actual costs of the air monitoring program would depend on the size of the operation and the type of mining method being proposed. Monitoring of surface water would add a minimum of $10,000 per year to a mining operations budget. Developing wells for monitoring aquifer changes would be dependent on the size of the proposed operation and would vary in cost, averaging around $75,000 per completed well.

Impacts From Proposed Soils, T/E Plants, Sensitive Plants, Wildlife, ACECs, And Cultural Resource Management On Sodium

Applying 4,100 acres of NSO stipulations in these areas could preclude certain mining methods. Alternative mitigation could be developed in the environmental analysis prepared on proposed mine plans. In addition, the aerial extent of plant populations should be such that the siting of surface facilities could avoid plant populations without causing significant impacts. The plant habitat normally occurs on linear exposures of a certain geologic formation, which should serve to reduce the cost of inventory as well as increasing the ability to avoid plant populations. Inventory costs can vary depending on the size of the project and source of expertise conducting the inventory.

The application of 64,670 acres of TL stipulations would not prevent recovery of sodium but could increase exploration costs. TL stipulations would apply to exploration and pre-mine plan approval activities and could cause a delay in the those activities. Approved mine plans would have mitigation built in to the plan to address these issues. Costs associated with seasonal restrictions would be minor, but delaying activities for one full nesting season to conduct raptor inventories would be significant, especially for smaller companies.

CSU stipulations encumber 73,150 acres and would require engineering/reclamation plans for soils and surveys for T/E plants, sensitive plants, and cultural resources. These stipulations would increase mining costs but would not prevent recovery of the resource. Proposed operations could be relocated to avoid the resource of concern or could be designed to mitigate impacts to an acceptable level. CSU stipulations also could be exempted through environmental analysis.

The cost of complying with surface stipulations would vary depending upon the type of mitigation required and distances to relocate surface disturbing activities.

Impacts From Proposed Oil And Gas Management On Sodium

Making the sodium resource underlying the Piceance Dome area unavailable for leasing in order to comply with development restrictions placed on oil shale, would affect approximately 4.1 billion tons of sodium reserve.

Impacts From Proposed Withdrawal Management On Sodium

Continuing the oil shale withdrawal (PLO 4522) would be a major obstacle to sodium development. Under terms of the withdrawal, lands containing sodium may be leased where ". . .development of these sodium deposits would not adversely affect the oil shale values of the lands." New leases would be issued subject to "Extractive operations . . . will be restricted to those beds valuable for sodium . . . workable without removal of significant amounts of organic matter and without significant damage to oil shale beds." Further sodium-only development may be precluded if existing lease developments cannot show that development can occur without harming the oil shale resource.

Cumulative Impacts On Sodium Management

Making 93,210 acres underlain by sodium available for sodium leasing would result in the opportunity to develop approximately 20.2 billion tons of sodium.

Applying 4,100 acres of NSO, 64,670 acres of TL, and 73,150 acres of CSU stipulations for soils, T/E plants, sensitive plants, wildlife, ACECs, and cultural resources would not prevent sodium development but would increase mining costs associated with extracting sodium minerals. The cost of complying with surface stipulations varies with the restrictions necessary to mitigate impacts to an acceptable level and distance to relocate operations.

COAL MANAGEMENT

Impacts From Proposed Coal Management On Coal

Making 11,470 acres unsuitable for both surface and underground mining, would not have a significant impact during this planning period. This is based on anticipated demand and availability of coal elsewhere in the region.

Making 150,570 acres available for further coal leasing should provide sufficient resources to satisfy expected demand for the life of the plan.

Impacts From Proposed Air Quality And Surface Water Management On Coal

Continuing to regulate surface coal mining and reclamation on federal lands, according to the Surface Mining Control and Reclamation Act (SMCRA), would require all exposed surface areas to be protected and stabilized to effectively control erosion and air pollution. Applying conditions of approval (COA) and SMCRA requirements to the acres available for coal development would have an economic impact on operators. Operators are required to suppress fugitive dust along roadways and on coal transfer and storage areas. The amount of economic impact from these requirements would vary depending on the size and location of the operation.

Impacts From Proposed Soils, T/E Plants, Sensitive Plants, Wildlife, ACEC, And Cultural Resource Management On Coal

Applying NSO stipulations on 21,690 acres of land suitable for further leasing consideration would remove some of the lands that were identified as available for surface mining. NSO stipulations should have little impact on those areas identified for underground mining. NSO stipulations would encumber approximately 14 percent of lands available for coal leasing.

Timing limitations (107,070 acres) and CSU stipulations (78,190 acres) on lands suitable for further leasing consideration could make the lands more costly to mine because of constraints placed on development. CSU stipulations would require engineering and reclamation plans for soils and surveys for T/E plants, sensitive plants, cultural resource sites, and fossils. Approved mine plans would have mitigation built in to address these issues. If advanced planning were exercised, TL and CSU limitations in a proposed area would not have a significant economical impact.

Costs associated with many of the NSO, TL, and CSU stipulations would be incorporated into the development of a mine plan and the subsequent environmental impact statement. The cost of complying with surface stipulations is unquantifiable, but compared to the overall costs of developing a coal mine, the costs are not expected to be significant.

Impacts From Proposed Oil And Gas Management On Coal

Continuing to prohibit underground coal mining within 300 feet of a gas or oil well could alter the mine plan and create a loss of coal resources.

Cumulative Impacts On Coal Management

Making 11,470 acres of coal lands unsuitable for both surface and underground mining would not have a significant impact on the availability of coal resources. Making 150,570 acres available for further coal leasing would satisfy existing and anticipated future demand for the life of this planning document.

NSO stipulations would make 21,690 acres lands identified for surface mining unavailable unless the stipulation could be exempted through environmental analysis. NSO stipulations would have little impact on underground mining, but could add to mining costs.

Advanced planning in the TL and CSU stipulation areas would prevent significant economical impacts.

MINERAL MATERIALS MANAGEMENT

Impacts From Proposed Air Quality Management On Mineral Materials

Continuing to apply air quality COAs to permits to reduce potential for sources of fugitive dust could provide an economic impact to permit holders. Impacts would vary by the size and location of the permit.

Impacts From Soils, T/E Plants, Sensitive Plants, Wildlife, ACECs, and Cultural Resource Management On Mineral Materials

NSO stipulations would preclude mineral materials disposal actions. Mitigation developed in an environmental analysis would be included

in any approved mine plan. The aerial extent of sensitive and T/E plant populations should be such that the siting of surface facilities could avoid plant populations. Inventory costs would vary depending on the size of the project and source of expertise conducting the inventory. In most cases, the same type of material can be found adjacent to the NSO areas.

Applying TL stipulations would not prevent recovery of mineral materials. TL stipulations would apply to exploration and pre-mine plan approval activities and would likely only cause a delay in the those activities. Approved mine plans would have mitigation built in to address these issues. Costs associated with seasonal restrictions would be minor, but delaying activities for one full nesting season to conduct raptor inventories would be significant, especially for smaller companies, and could force applicants to secure material from other sources, such as private or state lands.

CSU stipulations would require engineering/reclamation plans for soils and surveys for T/E plants, sensitive plants, and cultural resources. These stipulations would increase mining costs but would not prevent recovery of the resource, since proposed operations could be relocated to avoid the resource of concern or could be designed to mitigate impacts to an acceptable level. CSU stipulations also could be exempted through environmental analysis.

The cost of complying with surface stipulations would vary depending upon the type of mitigation required. The added costs involved may or may not preclude mineral material disposal actions. Smaller operations may not be able to afford the added cost.

Impacts From Proposed Noxious And Problem Weed Management On Mineral Materials

Requiring weed free equipment and certified weed free seed and mulch material within 660,110 acres delineated as weed-free zones would add to the cost of removing mineral material, as well as increasing the cost of reclamation. In addition, requiring weed inventories twice a year within the area of disturbance would likely preclude disposal actions to individuals and small companies due to the increase in costs. This could lead to less road maintenance which could lead to increased sediment load to local streams.

Impacts From Proposed Riparian Management On Mineral Materials

Removing approximately 407 acres of high and medium priority riparian habitat from mineral material disposal actions would eliminate the most recent deposits of good quality sand and gravel from being available for disposal. This would force applicants to secure needed material from other sources. There has been no inventory or estimate of how many tons of material within these riparian areas may be affected.

Impacts From Proposed Special Status Wildlife Management On Mineral Materials

Designating NSO on 850 acres around bald eagle roost and concentration areas would remove these areas from availability for disposal actions. Imposing an additional 4,840 acres of TL stipulations in a 1/2-mile buffer around the bald eagle winter roost and concentration areas could force applicants to secure material from another source if they could not wait for the limitation to expire. Applying CSU to 89,480 acres within the East Douglas, Trappers, and Big Beaver watersheds would require applicants to submit plans of development and reclamation plans to show that Colorado cutthroat trout habitat would not be affected by the proposal. These deposits would not be available for disposal if conditions of the CSU could not be met. This could result in less road surfacing being accomplished, leading to greater sedimentation.

Impacts From Proposed Wilderness Management On Mineral Materials

Mineral material disposal actions would be prohibited within WSAs (81,190 acres). This would not present a significant impact because suitable deposits of the same materials can be found adjacent to these areas.

Impacts From Proposed Visual Resource Management On Mineral Materials

Prohibiting mineral material extractions in Class I areas would not affect mineral material extraction because suitable deposits are available adjacent to these areas. Restricting mineral materials activities in Class II could result in companies having to go outside of these areas to secure needed material, which would increase material costs.

Cumulative Impacts On Mineral Material Management

The application of surface stipulations could cause companies to look elsewhere to extract mineral materials. Suitable material could likely be found in adjacent areas, however, relocating a site could increase the cost of materials because of longer hauling costs. Good quality sand and gravel occurring within riparian areas would not be available for disposal actions. In addition to the above constraints, permittees would also have added costs associated with the control of fugitive dust, controlling noxious weeds, and assuring that equipment and reclamation materials are free of weeds in the weed free zone areas.

LOCATABLE MINERALS MANAGEMENT

Impacts From Proposed Management On Locatable Minerals

Lands withdrawn from mineral location effectively removes that acreage from the availability to explore, develop, or locate mining claims. However, the potential for locatable mineral development is very low. The possibility of mining claim development is considered to be unlikely.

IMPACTS ON VEGETATION MANAGEMENT

PLANT COMMUNITIES MANAGEMENT

Impacts From Proposed Plant Communities Management On Plant Communities

Many of the management actions proposed are goals and guides used to control levels of use of all consumptive uses of the vegetation resource. Specific impacts of forage allocations are discussed in the livestock, wild horse and big game sections. Also, impacts from vegetation disturbances and manipulations are discussed within the impact section of each resource or resources use disturbing or manipulating vegetation.

On BLM land, PNCs would increase by 85,290 acres, late seral communities would increase by 133,050 acres, mid-seral communities would decrease by 206,420 and early seral communities would decrease by 11,920 acres as a result of management actions proposed. Table 4-12 in the Draft RMP presents a summary of the changes in ecological site classifications expected.

The following are estimates of impacts from disturbance to each plant community by use of non-native plant species, assuming all future disturbances would use standard seed mixes:

Pinyon/juniper woodland- 7.7 percent or 51,500 acres.

Sagebrush Rangeland- 12.6 percent or 36,730 acres.

Mountain shrub Rangeland- 5.9 percent or 9,500 acres.

Other plant communities- one percent or 3,100 acres.

The significance of the impact of using non-native species in reclamation work is site specific and would be evaluated in more depth in project specific environmental analyses. The standard seed mixes in Appendix A would be used only on sites at risk or currently impacted by presence of non-native annual weedy species or noxious weed species. The native seed mixes in Appendix C would be used on all disturbances not at risk.

The significance of the impact of using non-native species would relate to the success of establishing desirable vegetation cover on the 59,310 acres expected to be disturbed or treated. Successful establishment of reclamation species included in the standard seed mixes would prevent long term soil losses and forage production losses that would result if non-native weeds or noxious weeds were to become established on disturbed or treated areas.

The standard seed mixes consist of both native and non-native plant species. Non-native species include Siberian, crested, intermediate and pubescent wheatgrasses; Russian wildrye; orchard grass; smooth brome; cicer milkvetch; yellow sweetclover and alfalfa. All of these non-native species have been extensively used in reclaiming disturbances within the planning area. No non-native species are proposed for use in reclamation which have not already been introduced in reclamation efforts over the past 40 years.

A majority of major plant communities in the planning area would not be impacted from use of non-native species in reclamation. The non-native species to be used in reclamation, excluding smooth brome and yellow sweetclover, do not pose a significant threat of expanding onto and replacing native plant species on untreated areas. Based upon observations of past treatments, the non-native species have remained within the original treatment area, with only a few individual plants escaping into the margins of native plant communities adjacent to treatment areas. On several old treatments, native species have increased in composition and have replaced some of the non-native originally established.

The non-native species proposed for use have provided several significant benefits that have been difficult to achieve with native species alone. Non-native reclamation species, because of their ease of establishment, have been used to compete with a host of non-native annual weeds, such as, cheatgrass, Russian thistle, kocia, halogeton, tansy mustard, to name a few. Seeds from these non-native annual weeds are present within most plant communities in the planning area and take immediate advantage of any disturbance. Past treatments with native reclamation species have not been successful because of the overwhelming competition of non-native weeds, unless more labor intensive treatments, such as, mulches, soil additives or herbicides are used.

Unreclaimed disturbances dominated by non-native annual weeds provide a suitable habitat for a majority of the noxious weeds which are ever increasing their presence in the planning area. Non-native reclamation species are capable of decreasing the expansion of noxious weeds because of their competitive advantage in establishing on disturbed sites and decreasing sites suitable for establishment of noxious weeds.

Non-native species, both reclamation and weedy species, have and would change the structure and composition of impacted plant communities impacting the ecological functions served by native species. The non-native reclamation species are replicating some of the ecological functions of the native species which they are replacing, more so than non-native annual species. Because of past difficulty in establishing native species, the non-native weedy species that are dominating disturbed sites have resulted in the complete loss of the ecological function of the native species on those sites.

Native species not of local origin used in reclamation could genetically impact the ability of local native species to cope with present or changing environmental conditions. The genetic changes introduced into local populations of native species from use of non-local native species could have far greater long term impacts on ecological functions than use of non-native species in reclamation.

Non-native reclamation species have been utilized much more because of economic factors. Past seed availability of native species has been extremely low, and what seed was available cost 4 to 10 times more than non-native reclamation species. Non-native reclamation species usually establish on the first reclamation attempt, where as, native species may require several attempts before establishment. Many of the disturbances proposed are linear features that can not be economically fenced to protect the reclamation site from grazing animals until the reclamation species have established. The non-native reclamation species have been selected for their superior tolerances to grazing, giving them the advantage of establishing in areas subject to intense grazing pressure while continuing to provide protection for the basic soil resources.

Impacts From Proposed Soils Management On Plant Communities

Continuing to implement proposed management actions would emphasize soil protection which would improve vegetation. Short-term losses of vegetation would occur with development of some watershed improvement projects, involving surface disturbance, but improved watershed conditions would have a long-term positive impact on vegetation resources.

Impacts From Proposed Oil And Gas Management On Plant Communities

Implementing surface-disturbing activities associated with oil and gas exploration and development would destroy vegetation. Site-specific impacts would vary from moderate to significant, depending upon the stage of mineral development (exploration vs. production), the plant community impacted, and the soil conditions..

Developing oil and gas would reduce vigor and productivity of residual plants through mechanical damage, soil compaction, and dust as a result of vehicle use. Soil compaction would inhibit revegetation efforts. Reduced vigor as well as mechanical injuries make some plants, such as trees, more susceptible to drought or attack from insects

and/or disease. The ability of plant communities to recover from disturbance would depend upon the composition of the disturbed community. Shrubland and woodland would require more time to recover than grasslands.

Long-term impacts would occur on 6,460 acres of shrubland and 11,060 acres of pinyon/juniper woodland communities. Using the 55 percent reclamation rate of the past, approximately 7,530 acres of BLM land would be removed and 9,980 acres would be returned to vegetation production. Oil and gas production is expected to decrease annual forage production on the 7,530 acres taken from production, by about 3,000 tons based upon an average 800 pounds of annual forage production per acre. Considering that half of this annual forage production would be allocated for watershed protection and remain on site, the remaining 50 percent would be used by grazing animals. This represents a long-term loss of about 3,000 AUMs (animal unit months) for grazing animals.

Impacts From Proposed Oil Shale And Sodium Management On Plant Communities

Disturbing the surface during oil shale and sodium development would result in similar impacts as described for oil and gas management. Long-term impacts to species composition and vegetation structure would occur on 620 acres of pinyon/juniper communities and on 270 acres of shrubland communities. An estimated 400 acres of BLM land would be taken from forage production during the long term. Annual forage production availability would decrease by 320,000 pounds of forage. With half allocated for non-consumptive use, forage loss would amount to about 160 AUMs per year for grazing animals.

Impacts From Proposed Coal Management On Plant Communities

Continuing to develop coal would result in surface disturbance with impacts similar to those described for oil and gas management. Long-term impacts to species composition and vegetation structure would occur on about 30 acres of pinyon/juniper communities and on about 170 acres of shrubland communities. About 90 acres of BLM land would be taken from forage production in the long term resulting in an annual loss of about 72,000 pounds of forage production. This would decrease forage available to grazing animals by about 36 AUMs.

Impacts From Proposed Noxious And Problem Weeds Management On Plant Communities

Management would result in a three percent per year increase of noxious weed infestation within the Resource Area. This trend would be irreversible, and the lost production would be irretrievable. Weed infestations would negatively impact plant communities, reduce rangeland productivity, and diminish recreation and aesthetic values. Weed infestations would affect the economics of all land uses and result in economic losses far exceeding the cost of a well planned, full funded, integrated noxious weed program.

Allowing unrestricted motorized vehicle travel and using heavy equipment in the building of well sites, roads, pipelines, and other facilities would create a high potential for spreading noxious weeds. While proper revegetation of disturbed areas would tend to reduce both the occurrence and rate of spread of noxious weeds, essentially nothing can reverse the establishment of noxious weeds on a previously unaffected site.

Impacts From Proposed Riparian Management On Plant Communities

Improving conditions on about 170 acres of riparian habitat and about 980 acres of wetlands would result in 1,630 acres of riparian and wetland habitats being in proper functioning condition and only 540 acres remaining in improper functioning condition within 10 years.

Impacts From Proposed Timber And Woodlands Management On Plant Communities

Harvesting Douglas-fir communities would impact 80 acres over a 20-year period through removal of older trees. If this harvest occurred totally within the forests classified as the PNC, less the one percent of the current PNC Douglas-fir stands would be converted to a late-seral plant community. Harvesting Douglas-fir stands with insect infestations would remove infected trees and maintain the ecological site classification for the treated site.

Harvesting aspen would not decrease the ecological site classification for the treated site. Most aspen stands targeted for treatment have very little regeneration and would benefit from removal of older trees.

Impacts From Proposed Livestock Grazing Management On Plant Communities

Allocating vegetation would increase desirable species in the vegetation composition by providing proper use levels of current annual forage production. Implementing minimum rest periods would provide undisturbed growth and development of forage plants during critical growth periods, resulting in increased vegetation production and increased vigor, seed production, litter accumulation, and seedling establishment. Improved vigor and reproduction in desirable species would enable them to compete more favorably with less desirable species. Deferring or delaying the grazing period during the spring or early summer growing periods, followed by a moderate level of grazing use, would favor desirable forage species, primarily perennial grasses. Continued use of these two management tools should maintain desirable forage species in a healthy, vigorous condition and on a sustained yield basis.

Shifting to perennial grass dominance on most shrub-dominated rangelands would improve rangeland condition by increasing the plant community seral phase from a mid-seral community to a high-seral community.

Continuing to implement the livestock grazing management proposal would result in improvement of desirable plant species on approximately 210,000 acres of BLM land. Improving the distribution and handling of livestock and increase the quality and quantity of forage available for livestock would result in a more uniform use of forage and complement the effects of vegetation allocation and minimum rest requirements. Constructing fences and water developments would cause a short-term removal of vegetation on 1,100 acres. Within a few years, about 650 acres would be returned to forage production, leaving approximately 100 acres occupied by facilities and 350 acres barren, primarily due to livestock and wildlife trampling and grazing on areas directly adjacent to water developments. New facilities, especially water developments, would increase grazing use in previously-unavailable areas to livestock and relieve grazing pressure around existing watering areas. Improved distribution would be a major contributor to the expected changes in rangeland conditions noted above.

Treating 14,550 acres of encroaching pinyon/juniper (5,000 acres mechanically) would decrease the composition of invading pinyon or juniper and increase perennial forbs, grasses and shrubs, moving the ecological site classification on treated sites from a mid-seral to a high-seral plant community. Prescribed burning on 9,550 acres of encroaching pinyon/juniper woodlands would change the composition to perennial grasses and forbs early after treatment with gradual increases in perennial shrubs within 5 to 10 years following burning. Treating 9,710 acres of pinyon/juniper on ecologically-classified woodland sites would convert stands to a mid-seral community, and the PNC could be lost for over 300 years.

Continuing to apply prescribed fire treatments on 27,870 acres of over-mature mountain shrub communities would reduce the shrub overstory and increase understory production of perennial grasses and forbs. Treating those areas mechanically or with chemicals, where edge effect and suitable wildlife cover cannot be achieved by prescribed burning, would result in communities remaining in mid-seral sagebrush.

Treating 19,750 acres of sagebrush and forbs with chemicals would improve about 90 percent from a mid-seral to late-seral sagebrush community, and about 10 percent would improve from a mid-seral to the potential natural sagebrush community. Prescribed burning on 48,880 acres of sagebrush plant communities would improve the site closer to the PNC than other treatment methods. Approximately 39,000 acres would improve to at least a late-seral plant community following recovery, and an estimated 25 percent of the 39,000 acres would continue to improve to the PNC within the 20-year planning period.

Impacts From Proposed Wild Horse Management On Plant Communities

Managing an estimated short-term average herd size of 50 wild horses in both the West Douglas and North Piceance Herd Areas would result in the use of forage allocated to other uses. Wild horses would be utilizing about 750 AUMs of forage within each herd area which was allocated for watershed protection, wildlife forage, or livestock forage. Management actions proposed are slightly less than historical use. No significant improvement in forage availability would be expected by limiting horse use to 750 AUMs within each herd area.

Limiting wild horse numbers within the Piceance Basin/East Douglas HMA to 140 head would improve some early-seral rangeland communities that are not near horse watering areas. It is estimated that 50 percent of the early-seral plant communities would improve to a mid-seral plant community. The remaining 50 percent would lack sufficient opportunity for improvement because of proximity to watering areas and the preferential grazing habits created by the territorial nature of horses.

Adding the Greasewood area to the HMA and not increasing forage allocations to horses would result in lower horse densities and aid in the improvement of 50 percent of the early-seral plant communities.

Impacts From Proposed Big Game Management On Plant Communities

Continuing to improve forage production on 19,000 acres of antelope habitat (4,500 acres would be on critical winter range and 6,700 acres on winter range) would support the long-term antelope forage allocation of 207 AUMs with minimal impact to plant communities.

Increasing forage allocation for elk from 5,004 AUMs to 10,853 AUMs would result in only localized impacts from increased elk use. Improved forage production on 55,600 acres of elk habitat (including 31,200 acres of winter range) would support the long-term elk forage allocation of 10,853 AUMs with minimal impacts to plant communities. No improvement would occur on 4,600 acres of critical winter range which is primarily in the Danforth/Jensen Geographic Reference Area (GRA). Specific localized problem areas would be identified with changes in forage allocation addressed in an activity plan or integrated activity plan.

Improving forage production on 85,300 acres of deer winter range and 61,900 acres of deer summer range would support long-term deer forage allocations for all GRAs, except Danforth/Jensen and Piceance GRAs. No long-term improvement in forage production or availability would occur on 64,000 acres on deer severe winter ranges, of which 45,500 acres (70 percent) occur in the Piceance Basin GRA and 13,300 acres (20 percent) occur in the Danforth/Jensen GRA.

Manipulating 12,740 acres of aspen and Douglas-fir would change community structures, but the change in composition would not be sufficient to influence the ecological site classification of either community unless it occurred in a PNC. Treating mid-seral aspen communities could initiate an increase in the composition of desirable plant species that have been suppressed by past grazing pressure, moving it to a late-seral community.

Manipulating 23,000 acres in the mountain shrub community, 4,500 acres of sagebrush, and 4,000 acres of pinyon/juniper woodland would have much the same effect as discussed for livestock grazing management treatments. Most mountain shrub treatments would occur in late-seral communities, and treatments would not change the ecological site classification of the community. It is expected that 3,375 acres of treated sagebrush communities would improve to late-seral plant communities because of treatment. The remaining 1,125 acres treated would remain in the mid-seral community. It is expected that of the 4,000 acres of pinyon/juniper treated, 60 percent would occur within mid-seral communities and would remain in mid seral after treatment.

Impacts From Proposed Special Status Wildlife Management On Plant Communities

Continuing to manage prairie dogs for desired black-footed ferret habitat would maintain an early-seral plant community on an estimated 13,000 acres (20 percent) of sagebrush and/or saltbush shrublands within the 64,690 acres of active prairie dog colonies.

Impacts From Proposed Motorized Vehicle Travel Management On Plant Communities

Continuing off-road motorized vehicle travel on plant communities with the greatest forage production for wildlife and livestock (the grassland and shrubland communities), and travel during wet soil conditions, would destroy vegetative cover, resulting in soil loss, soil compaction and a decrease in vegetation production.

Travelling off-road during big game hunting seasons, when soil conditions are usually wet sometime during the season, and creating new trails that receive repeated use each year, would cause permanent disturbance resulting in a long-term loss of vegetation production. Vegetation production is also decreased on undisturbed soils adjacent to trails devoid of vegetation. Runoff, which is normally slowed by

vegetation and infiltrates soils on site, is lost as water is channeled away from the site by both roads and trails. Long-term loss of vegetation production from both the trail and the adjacent undisturbed soils occurs as a result of the newly-created trails.

Restricting travel to designated roads and trails or existing roads and trails during wet soil conditions would protect plant communities from excessive damage such as vegetation loss, decreased production, and soil compaction and loss.

Impacts From Proposed Fire Management On Plant Communities

Continuing to suppress natural fire events would prevent the development of fire-dependent or fire-maintained plant communities. Many grassland communities have converted to sagebrush shrublands or pinyon/juniper woodlands for lack of recurring natural fires. Without fire, shrublands have become decadent and are converting to monocultures consisting principally of shrubs, having lost important species diversity offered by herbaceous plant species. The desired plant species diversity expected from fire would not be achieved on fire dependent-plant communities protected from fire.

Cumulative Impacts On Plant Communities

On BLM land, PNCs would increase by 85,290 acres, late seral communities by 133,050 acres, mid-seral communities would decrease by 206,420 acres and early seral communities would decrease by 11,920 acres.

Use of non-native species in combination with native plant species in re-vegetating disturbed plant communities could impact about 59,310 acres of BLM land. An estimated 43,530 acres of BLM land has had non-native reclamation plant species established as a result of past management practices. A cumulative total of 102,830 acres of BLM land or seven percent would be impacted by use of non-native plant species. The significance of the impact would relate to the success of establishing desirable vegetation cover on the 59,310 acres expected to be disturbed or treated. Successful establishment of reclamation species included in the standard seed mixes (combinations of both native and non-native species) would prevent long term soil losses and forage production losses that would result if non-native weeds or noxious weeds were to become established on disturbed or treated areas.

Long-term loss of vegetation production would occur from development and maintenance of facilities devoid of vegetation, such as roads, well pads and livestock watering areas. It is estimated that 12,330 acres of BLM land have been taken out of vegetation production because of past management actions. An additional 16,500 acres would be taken out of vegetation production because of management actions proposed. It is estimated that a cumulative total of about 23,000,000 pounds of annual forage production would be lost from BLM lands. About one-half of this would be available for use by grazing animals. A cumulative loss of about 11,500 AUMs of annual forage availability would be lost.

NOXIOUS AND PROBLEM WEEDS MANAGEMENT

Impacts From Proposed Noxious And Problem Weeds Management On Noxious Weeds

Noxious plant species infestations would occur in direct proportion to their rate of spread and degree of infestation. The rate of spread, under each alternative, would largely depend upon the number of acres of land disturbed (see Cumulative Impacts on Noxious and Problem Weeds). Severe infestations would be irreversible, and the loss of vegetation production would be irretrievable. Weed infestations would reduce rangeland productivity and diminish recreation and aesthetic values. Weed infestations would adversely affect biodiversity and the health of the ecosystem and negatively affect the economy of all users. The economic loss to those users would far exceed the cost of a well-planned, fully-funded, integrated noxious weed management program.

The designation of five areas as weed-free zones and enforcing stipulations to prevent introduction of spread of noxious weeds would decrease the rate of spread by an undetermined amount.

Impacts From Proposed Minerals Management, Timberland and Woodland Management, Wildlife And Livestock Management, And Land Use Authorizations On Noxious Weeds

Any disturbance that provides a site suitable for noxious weed establishment would initiate a cycle which, if not interrupted by constructive management, would degrade individual plant communities and contribute to the spread of noxious weeds. Ultimately, entire ecosystems could and would be compromised.

Chapter 2, Plant Communities Section, of the Draft RMP, lists the number of acres, by vegetation type, that would be disturbed by oil and gas development, coal development, timber and woodland harvest, and livestock and wildlife vegetation manipulations. Motorized vehicles used in the maintenance of facilities would have the greatest potential for infestation over the long term. Two-thirds of this potentially infested area could be expected to be in the Douglas/ Cathedral GRA and another 20 percent in the Piceance Basin GRA. Proper revegetation and application of preventative and remedial noxious weed management measures could reduce this potentially infested area by 90 percent, bringing total acres affected to 970.

Surface stipulations, especially NSO, proposed by the various resources would decrease but not prevent the spread of noxious weeds by reducing the amount of land subject to surface-disturbing activities. The number of acres subject to no lease and NSO stipulations are listed in the Cumulative Impacts on Noxious and Problem Weeds Section.

Impacts From Motorized Vehicle Travel Management On Noxious Weeds

Restricting motorized vehicle use to designated roads and trails would reduce the rate and extent of disturbance created by promiscuous off-road vehicle use. Enforcement of this restriction would reduce the likelihood of noxious weed establishment and infestation.

Cumulative Impacts On Noxious And Problem Weeds

Noxious plant species infestations would occur in direct proportion to their rate of spread and degree of infestation. The rate of spread would largely depend upon the number of acres of land disturbed. Severe infestations would reduce rangeland productivity and diminish recreation and aesthetic values. Weed infestations would affect biodiversity and the health of the ecosystem, and affect the economics of all users. The economic losses to those users would far exceed the cost of a well-planned, fully-funded, integrated noxious weed program.

RIPARIAN AREAS MANAGEMENT

Impacts From Proposed Riparian Management On Riparian

Implementing the riparian management objectives would result in improved ecological conditions on about 170 acres of riparian habitat and about 980 acres of wetlands. Within 10 years, 1,630 acres of riparian and wetland habitats would be in proper functioning condition. Only 540 acres would remain in a functioning-at-risk or not-functioning condition.

Impacts From Proposed Soils And Surface Water Management On Riparian

Decreasing runoff and erosion under the proposed management for soils and surface water would help stabilize riparian habitats.

Impacts From Proposed Minerals And Land Use Authorizations Management On Riparian

Developing minerals and authorizing land uses within these critical areas would be avoided by use of CSU stipulations. Disturbances within the watershed could have an impact on riparian/wetland habitats from increased siltation and increased runoff coming from disturbed sites such as roads. These impacts would be minor because of the stipulations applied during development would require avoidance of sensitive areas.

Impacts From Proposed Livestock Grazing, Wild Horse, And Big Game Management On Riparian

Livestock grazing, wild horse and big game impacts to riparian vegetation are adequately addressed in the *White River Resource Area Grazing Management Final Environmental Impact Statement* - 1981. The management proposed would result in general improvement in riparian vegetation. These improvements, however, would not be far-reaching, because riparian communities would remain as one of the most desirable grazing areas on the range. The cumulative effects of forage allocation, grazing management and rangeland improvements would cause a reduction in grazing pressure in riparian areas through decreased grazing use and improved animal distribution. This would lead to increased vigor and reproduction of important riparian plant species resulting in increased plant cover and an overall improvement in condition and trend.

The additional objectives for riparian management since development of the 1981 grazing program have been developed to place more management emphasis on attaining properly functioning riparian habitats. These items relate directly to grazing use and when achieved, would result in the improved riparian conditions noted in the Impacts From Proposed Riparian Management section above.

Cumulative Impacts On Riparian Management

Improved conditions would occur on 53 percent of the riparian habitats within the planning area. Approximately 75 percent of all BLM land riparian habitats would be in a proper functioning condition. Improved ecological conditions would occur on about 170 acres of riparian habitat and about 980 acres of wetlands. Within 10 years, 1,630 acres of riparian and wetland habitats would be in proper functioning condition. Only 540 acres would remain in a functioning-at-risk or not-functioning condition.

SENSITIVE PLANTS (SP) AND REMNANT VEGETATION ASSOCIATIONS (RVAs) MANAGEMENT

Impacts From Proposed Sensitive Plants And RVA Management On SP/RVAs

Designating 895 acres of sensitive plants and 3,625 acres of remnant vegetation associations (RVAs) (4,520 acres total) as NSO would make this acreage unavailable for surface disturbing activities, subject to valid existing rights, unless the stipulation was exempted through environmental analysis. Of the 4,520 acres protected by NSO, 1,950 acres (670 acres of sensitive plants and 1,280 acres of RVAs) occur within six designated ACECs. Prohibiting surface-disturbing activities would protect important plant species or plant communities within the RVAs and sensitive plant habitats. However, NSO stipulations would be subject to valid existing rights.

Impacts From Proposed Minerals Management And Land Use Authorization Management On SP/RVAs

Applying NSO stipulations on new oil and gas leases within known populations of sensitive plants and RVAs (4,520 acres) would make those areas unavailable for placement of oil and gas surface facilities. However, because an unknown number of leases have been issued in these areas without NSO stipulations, an unknown number of acres within the leases would be subject to surface-disturbance. Conditions of approval developed through the environmental analysis process could mitigate some losses caused by development. The important element(s) of the site could be lost, but conditions of approval would require reclamation of disturbed areas with the same plants as lost through disturbance. Impacts would be the same for mineral materials, locatable minerals, and land use authorizations.

Indirect impacts from development of all minerals could affect sensitive plant species and RVAs. Disturbances within or near habitats for sensitive plants or RVAs could subject these species to (1) introduction of plant species that would compete with desired species for available habitat, (2) deterioration of localized air quality from dust or other substances which could adversely impact desired plant species, and (3) destruction of individual plants or populations from accidental application of herbicides or other toxic chemicals associated with oil and gas development.

Impacts From Plant Communities And Noxious Weed Management On SP/RVAs

Manipulating vegetation and implementing weed control projects that use herbicides could destroy sensitive plant species if herbicides drift from the treatment area. Conversely, invasion of noxious weeds into sensitive plant habitats or RVAs could create a loss of important plant species. Specific treatment proposals would be subject to separate environmental analysis before treatment.

Controlling the spread of noxious weeds in the "weed free" zones of Blue Mountain, Calamity Ridge, and Piceance North Slope would ensure protection of numerous RVAs from invasion of noxious weeds.

Impacts From Proposed Timber, Woodlands, Recreation, And Motorized Vehicle Travel Management On SP/RVAs

Continuing to allow motorized vehicles to drive off existing roads and trails on upland plant communities to gather firewood, to hunt and to pursue other activities could destroy sensitive plants and RVAs.

The extensive recreation management areas would disperse recreational activities and facilities within RVAs associated with riparian vegetation on BLM lands along the White River. These activities destroy species important to the RVA plant community.

Restricting motorized vehicle travel to existing roads and trails and/or to designated roads and trails would reduce impacts to sensitive plants and RVAs and enhance ACEC values.

Impacts From Proposed Livestock Grazing And Wild Horse Management On SP/RVAs

Developing livestock control facilities or watering locations could impact sensitive plants or RVAs through redistributing or concentrating livestock and/or wild horses onto habitats in higher densities than present levels. Likewise, changing the kind of livestock or the period of use could increase the palatability of important plant species for livestock. Increased grazing use levels, which would decrease the vigor and reproduction of important plant species, could create decreases or losses of these important plant species. Increased presence of livestock and/or horses in sensitive plant habitats or RVAs could impact plants from trampling damage resulting in loss of injured plants.

Implementing proposed management would not remove all wild horses from known sensitive plant habitats and RVAs and horses would continue to use several RVAs in the Piceance Herd Management Area and in the North Piceance Herd Area. Historical horse numbers have been reduced in both herd areas. The number of horses proposed for these herd areas could be compatible with maintaining the condition of the RVAs. All grazing use would be monitored in the RVAs to ensure the proposed grazing levels are compatible.

Impacts From Proposed Big Game Management On SP/RVAs

Continuing to maintain increased elk numbers could impact some of the RVAs in some geographical reference areas (elk population increases in the Blue Mountain and Piceance GRAs could impact some RVAs). Growing-season grazing use by elk, if concentrated, could decrease herbaceous species composition in the plant association, thus decreasing the importance of the RVA. Decreasing forage allocations for mule deer would maintain deer populations close to present numbers which would be compatible with protection and conservation of sensitive plants and RVAs. Implementing habitat improvement projects could impact some sensitive plant populations or RVAs if they increase wildlife densities or change the period of occupation.

Impacts From Proposed Areas Of Critical Environmental Concern Management On SP/RVAs

Designating 13 ACECs (48,130 acres) would provide priority management for and help protect and conserve sensitive plants and RVAs within those ACECs. Sixteen of the 19 sensitive plant species would be protected within the ACECs. Not all RVAs are represented within ACECs.

Impacts From Proposed Land Ownership Adjustment Management On SP/RVAs

Acquiring non-federally owned habitats for sensitive plants or RVAs within or adjacent to the proposed ACECs would provide protection of important vegetation resources occurring on non-federal lands.

Impacts From Proposed Withdrawal Management On SP/RVAs

Continuing the oil shale withdrawal in the Piceance GRA would prohibit mineral entry on 890 acres of sensitive plant habitat and 3,620 acres of RVAs.

Impacts From Proposed Fire Management On SP/RVAs

Fire suppression actions which use habitats for sensitive plants could impact the plants or their habitat. Fire suppression activities could create enough disturbance in the RVA to impact the ability of the plant communities to replicate.

Cumulative Impacts On Sensitive Plants And Remnant Vegetation Associations Management

The quality and quantity of sensitive plants and RVAs would be maintained. Accidental loss could occur due to any form of land use and resource disturbance. Loss of some habitat could occur through the exercise of valid existing rights.

Accidental loss of some plant species could occur from off-road operation of motorized vehicles and equipment. Most of this use is associated with recreational pursuits on BLM lands. This use is expected to increase above historical levels and has the potential to destroy some populations of sensitive plants. The extent of loss cannot be assessed with current data.

Some sensitive plant populations and RVAs that occur outside designated ACECs could be lost. Sixteen of the 19 sensitive plant species would be protected within the ACECs. Not all RVAs are represented within ACECs, with the loss of some RVAs possible from surface-disturbing activities.

Management actions proposed would protect and conserve habitat for all sensitive plant species and would protect and enhance the important plant communities represented by the RVAs. Special designations would provide priority management for almost all sensitive plant species and a majority of all RVAs.

T/E SPECIES AND SPECIAL STATUS PLANTS MANAGEMENT

Impacts From Proposed T/E And Special Status Plants And ACEC Management On T/E And Special Status Plants

Continuing ACEC designation on three areas (Dudley Bluffs - 1,630 acres, Yanks Gulch/Upper Greasewood - 2,680 acres, Raven Ridge - 2,090 acres) where known populations and potential habitat of T/E and special status plants occurs would place priority management on 6,600 acres of known and potential habitat for T/E and special status plant species. Designating an additional three areas as ACECs for T/E and special status plants would provide priority management on an additional 7,760 acres. This acreage, together with the 6,600 acres of existing ACECs would protect 14,360 acres where known populations and potential habitats occur. This acreage encompasses almost all known populations of T/E and special status plant species within the Resource Area.

ACEC designation would flag these areas for special management which would restrict motorized travel to designated roads and trails within ACECs and ensure greater protection for T/E species and special

status plants by limiting or prohibiting activities such as public utilities, new roads, and rangeland improvements. Providing priority management for all the major known populations of these species would help ensure continued and long-term survival of these species. ACEC designation is considered a priority in the recovery plan for the two listed species that occur in these areas and could lead to de-listing of one or both species.

Impacts From Proposed Oil And Gas And Mineral Materials Management On T/E And Special Status Plants

Destruction and loss of any population of T/E and special status plant species could jeopardize the survival of the species. The two species most likely to be impacted by oil and gas development are *Physaria obcordata* and *Lesquerella congesta,* both federally-listed threatened species. The only known locations for these species are within a 200-square mile area with high oil and gas development potential. These species are restricted to small populations on small acreage which could be subjected to off lease impacts which could eliminate a small population.

Attaching NSO stipulations on all oil and gas leases and surface-disturbing activities within known populations of T/E and candidate plants (1,440 acres) and potential T/E plant habitat (46,840 acres - all within areas of high potential for oil and gas development) would prohibit surface-disturbing activities in those areas. The NSO stipulation could be exempted by the Area Manager through environmental analysis. This NSO exemption would be applicable to potential habitat inventoried and found to have no T/E plants.

Direct and indirect impacts to known populations and potential habitat of special status plant species from development would be addressed in separate environmental analysis on any specific proposal with appropriate mitigation and USFWS consultation.

Impacts From Proposed Oil Shale And Sodium Management On T/E And Special Status Plants

Oil shale and sodium development would have the potential of impacting two federal threatened plant species, *Physaria obcordata* and *Lesquerella congesta*. The areas identified for surface and underground development of oil shale, sodium development and multiminerals development encompass all but one population of both threatened plant species. A majority (90 percent) of the potential habitat for both species also occurs within this development area. The potential for impact to both species from oil shale, sodium, and/or multimineral development is high.

Direct and indirect impacts to known populations and potential habitat of both species from development would be addressed in separate environmental analysis on any specific proposal with appropriate mitigation and USFWS consultation.

Impacts From Proposed Plant Communities And Noxious And Problem Weeds Management On T/E And Special Status Plants

Manipulating vegetation and controlling weeds with herbicides could destroy T/E plant species if herbicides drift from treatment areas onto T/E plants. The greatest potential for adverse impact is from weed control along roads and rights-of-way as several known populations are close to roads or rights-of-way. Conversely, not controlling the invasion of noxious weed species could adversely impact T/E plants from competition for habitat.

Direct and indirect impacts to known populations and potential habitat of special status plant species from vegetation manipulations or use of herbicides would be addressed in separate environmental analysis on any specific proposal with appropriate mitigation and USFWS consultation.

Impacts From Proposed Woodlands, Recreation, And Motorized Vehicle Management On T/E And Special Status Plants

Allowing motorized vehicles to travel off existing roads and trails to gather firewood, hunt, and pursue other activities could destroy individual T/E and special status plant species. Increased frequency of motorized vehicles traveling off roads and trails use could impact soil conditions and thus the suitability of the site to continue to support T/E plants. Off-highway vehicle use associated with big game hunting and firewood gathering has steadily increased.

T/E plant species habitat would be closed to off road motorized vehicle travel within the Dudley Bluffs, Raven Ridge, Ryan Gulch, Duck Creek and Yank's Gulch ACECs by designating non-impacting roads and trails for motorized use. Designating roads and trails would result in closing existing roads which cross two populations of *Lesquerella congesta*. Closing these two-track 4-wheel drive roads branching off Duck Creek Road and Ryan Gulch Road would provide previously disturbed habitat for plants to recolonize.

Restricting motorized vehicle travel to existing roads and trails would occur outside designated ACECs on known and potential habitats and would protect T/E plant species from off-road vehicle disturbance associated with firewood harvest, post/pole harvest, hunting, and other activities beyond a 300 foot open area adjacent to existing roads or trails. Potential loss of protected plant species could occur where plants exist within the 300 foot open area.

Impacts From Proposed Livestock Grazing And Wild Horse Management On T/E And Special Status Plants

Grazing use of T/E plant species by livestock and wild horses is usually incidental and not significant because the plant species are of relatively low palatability, or in many cases, the permitted livestock grazing use occurs after the growing season when the plants are dormant. Grazing use of special status species could impact individual plants by reducing the plant's vigor and seed production which over an extended period of time, could impact the stability of the affected population. Past authorized grazing practices have not been shown to negatively impact special status plant species and continuation of those practices should result in continued minimal impacts.

Development of livestock control facilities or watering locations could impact T/E plants either from surface disturbance during facilities development or from livestock or wild horse trampling resulting from development of facilities or waters which concentrate animal presence in T/E specie habitats.

Grazing management practices which increase the frequency and intensity of livestock presence, change the kind of livestock, or change the period of grazing use within T/E plant habitats in GRAs 2 and 5, could impact T/E plants through loss of plant populations or changes in habitat.

Development of grazing management practices and improvements would be subject to appropriate environmental analysis. These practices would be subject to appropriate mitigation to protect T/E and special status plant species.

As horse numbers increase in a herd area, so does the conflict for territory for individual bands of horses, thus, increasing the potential for trampling damage to special status plant species. Some bands are forced to establish their territories in less desirable sections of the herd area which generally also contains habitat for T/E plants. If wild horses are eliminated from the Square S, pastures A, B and F, and from the Fletcher Draw, Hammond Draw, Boise Creek, and Little Spring Creek areas of the North Piceance herd area, 95 percent of the T/E plant species habitat would be outside areas occupied by horses. The numbers of horses proposed for the Piceance Basin/East Douglas herd management area should keep horse numbers at a level where trampling damage would be insignificant, however, loss of individual plant species would continue to occur.

Impacts From Proposed Big Game Management On T/E And Special Status Plants

Pronghorn grazing use of the White River *Penstemon* and the *Graham's Penstemon* on Raven Ridge does impact the vigor and reproduction of both plant species. Pronghorn numbers have increased as has their frequency along the west and south sides of Raven Ridge, and they are the primary grazing users of both plant species. Grazing use occurs during the growing season and is keeping both plant species from producing sufficient seed for reproduction. Decreasing pronghorn numbers on Raven Ridge would benefit both plant species by the decrease in grazing use allowing improved plant vigor and seed production.

Wildlife habitat improvement projects and increased wildlife numbers could impact T/E plants from surface disturbance and from increasing the density and frequency of wildlife presence or changing the period wildlife are present on T/E plant habitats.

Impacts From Proposed Land Use Authorizations Management On T/E And Special Status Plants

Maintaining roads under several existing land use authorizations could impact both threatened plant species by destroying individuals but would probably not affect populations adjacent to the roads. The plant *Physaria obcordata* occurs within the disturbance and borrow ditches of the Calamity Ridge Road (Rio Blanco County Road 24X) and the Piceance Creek Road (Rio Blanco County Road 5). Broadcast applications of herbicides for control of weeds and brush within the right-of-way could destroy the small populations adjacent to the roads from drift of herbicides.

The plant *Lesquerella congesta* is adjacent to the Duck Creek road (Rio Blanco County Road 20) and could be impacted the same as discussed for *Physaria obcordata*.

Placing utilities within several mile-wide corridors could impact the two threatened plant species. The Highway 64-Ryan Gulch corridor could impact both *Physaria obcordata* and *Lesquerella congesta* within the Ryan Gulch portion of the corridor. The Price Creek-Greasewood corridor could impact *Physaria* within the corridor near Piceance Creek. The Park Canyon to Magnolia corridor could impact both species within the corridor near Piceance Creek. Specific proposals to place utilities within these corridors would have to address impacts to these species through separate environmental analysis.

Impacts From Land Ownership Adjustments Management On T/E And Special Status Plants

Known populations of T/E and special status plants would be identified for retention. However, some areas containing potential habitat would be classified as Category 2, lands available for disposal by means other than sale. The impacts of any specific disposal proposal would be subject to further environmental analysis which could require an inventory for T/E or special status plants on potential habitat. Any populations discovered by inventory would not be subject to disposal as they would become lands identified for retention (Category 3 lands).

Impacts From Proposed Fire Management On T/E And Special Status Plants

Fire suppression activities could impact T/E plants or their habitat. Their habitats are usually natural fire barriers and may be used to tie in fire lines created during suppression activities. Individual plants and their habitat could be destroyed as a result of fire line construction.

Prescribed fire in prescribed natural fire areas would not impact special status plant species.

Cumulative Impacts On T/E And Special Status Plants

NSO stipulations to protect known populations and potential habitat of T/E and special status species would be applied to surface-disturbing activities. Pre-disturbance inventories required prior to issuing permits for surface-disturbing activities would locate all populations within a proposed area and protect them by requiring avoidance of the plants.

Accidental loss of some plant species could occur from off-road operation of motorized vehicles and equipment. Most of this use is associated with recreational pursuits on BLM lands. This use is expected to increase above historic levels and has a potential of destroying some populations of T/E and special status plants. The extent of loss cannot be assessed with current data.

The most significant threat to the two federally-listed plant species in Piceance GRA is from mineral development. All the known habitat for both species lies within or is immediately adjacent to the area with greatest potential for development of oil shale, sodium and multimineral resources. The area is also high potential for oil and gas development. Known and discovered populations of these plants would be protected from any direct loss resulting from surface disturbance of known habitats. However, indirect impacts from mineral development has the potential to impact and could destroy some populations of these species. Because of the extremely limited distribution of these species, it could be possible to affect the survival of either or both species. These species are located nowhere else in the world. A significant loss of either species could result in its eventual extinction.

Direct and indirect impacts to known populations and potential habitat of special status plant species from development or other land use activities would be addressed in separate environmental analysis on any specific proposal with appropriate mitigation and USFWS consultation.

IMPACTS ON FORESTRY MANAGEMENT

TIMBERLANDS MANAGEMENT

Impacts From Proposed Timberland Management On Timberlands

As a result of no timber harvest, the timberlands would be managed for the maintenance of stand structure and forest health. All timberlands would be maintained as mature old growth.

Aspen stands would be inventoried for condition and production capability. The inventory would determine needs for special management practices needed for the maintenance and enhancement of aspen forests.

Impacts From Proposed Livestock Grazing Management On Timberlands

Continuing to over-graze aspen stands, by livestock and elk, could have a negative impact on the regeneration of these stands. Implementing use limits and requirements for retention of 50 percent of current annual growth would prevent livestock problems.

Cumulative Impacts On Timberlands Management

Because timberlands would not be harvested and would be managed for the maintenance of stand structure and forest health, timberlands would be maintained as mature old growth.

WOODLANDS MANAGEMENT

Impacts From Proposed Woodlands Management On Woodlands

Harvesting 45 acres/year within the Piceance and Douglas/Cathedral GRAs would maintain more than 50 percent of the commercial, suitable woodland in an age Class of over 300 years. This would allow maintenance of stand structure, relative to an old growth type, on approximately 80 percent of the commercial woodland within the Piceance and Douglas/Cathedral GRAs.

Impacts From Proposed Oil And Gas Management On Woodlands

Harvesting 45 acres/year within the Piceance and Douglas/Cathedral GRAs would maintain more than 50 percent of the commercial, suitable woodland in an age Class of over 300 years. This would allow maintenance of stand structure, relative to an old growth type, on approximately 80 percent of the commercial woodland within the Piceance and Douglas/Cathedral GRAs.

Continuing to construct roads for oil and gas development would continue to increase/improve access to woodland areas and create additional opportunities for woodland product sales. Cutting woodlands for oil and gas development would make woodland products available for removal by individuals. Access and availability to these woodlands is generally good, which focuses gathering into these areas, decreasing human pressures on more remote areas.

Continuing to develop oil and gas at a projected rate of 1,100 wells over the next 20 years would reduce the annual allowable harvest of commercial woodlands by 60 percent in the Douglas Arch and 16 percent in the Piceance Basin. The Axial and Subthrust belt would not be affected by commercial harvest as no harvest is proposed. Noncommercial woodlands on all units would be affected by less than five percent each.

Impacts From Proposed Sodium Management On Woodlands

Developing sodium, based on projections of future development, would require the removal of 80 acres of commercial woodland and 250 acres of noncommercial woodland over the life of the project. Since there are no figures to indicate time frames for development, determining impacts is difficult. In the worst case, sodium development in the Piceance Basin would tie up commercial woodland harvest for 2.5 years.

Impacts From Proposed Livestock Grazing Management On Woodlands

Of the 27,260 acres of pinyon/juniper identified for manipulation to enhance livestock grazing, 19,080 acres (70 percent) would be located on non-woodland sites (areas that are being invaded by pinyon/juniper) currently identified as manipulation areas, and 8,180 acres (30 percent) would be located on woodland sites.

Of the 8,180 acres of pinyon/juniper proposed for manipulation on woodland sites, 570 acres would be in commercial woodlands suitable for harvest, and 7,610 acres (the remainder) would be located in noncommercial woodlands. Removing 570 acres of suitable commercial woodlands would reduce the commercial harvest base by two percent but would not reduce the annual allowable harvest because many of the manipulations would be accomplished through woodland sales and thus be counted toward the annual allowable harvest. Removing 7,610 acres of noncommercial woodlands would reduce the woodlands by two percent.

Impacts From Proposed Big Game Management On Woodlands

The wildlife resource proposes to treat a maximum of 2,000 acres of pinyon/juniper over the next 20 years. Most, if not all of this acreage would be incorporated/coordinated with the range resource. If the wildlife resource were to treat 2,000 acres, this in itself would not be significant, occupying less than 3/10 of one percent of the pinyon/juniper woodlands in the Resource Area.

Within the pinyon/juniper type, the 60:40 forage cover ratio would be approximately a 40 percent reduction to the allowable harvest base acreage. Acreage available for cutting would be reduced to 33,120 acres with 55 acres/year available for clearcutting.

The other implementation guidelines pertinent to woodland habitats would have an insignificant impact on the forest/woodland resource, in that by proper siting and preparation of sales, these guidelines can be met without further affecting the allowable cut.

Impacts From Proposed Fire Management On Woodlands

Natural fire probably maintains woodlands at a constant overall acreage. Human interference in this natural cycle, by fire suppression, reduction of fine/ladder fuels has extended the range of these woodlands. Overall, the impacts of fire are highly debatable and cannot be considered as a loss of woodlands.

Converting approximately 30,000 acres of pinyon/juniper, by wildfires, from a woodland to a shrub/grass vegetation association would affect 130 percent of the yearly commercial harvest acreage. On an annual basis, 1,500 acres would be converted per year (four percent of the total woodlands). Loss of commercial forest base would be 320 acres/year, and noncommercial would be 1,180 acres/year. Approximately 30 percent of wood on a burned site would be salvageable.

Cumulative Impacts On Woodlands

Over a 20 year period it is estimated that 1,060 acres of suitable/commercial woodland will be lost to harvest, vegetation manipulations and development. This is one percent of the total woodland base. Loss of suitable/commercial forest base is estimated at four percent over 20 years, and is sustainable.

Over a 20 year period 10,750 acres of non-commercial woodlands would be converted. This is three percent of the noncommercial woodland base which is sustainable with a 660 year rotation age.

Within the Piceance and Douglas/Cathedral Geographic Reference Areas, 194 acres of commercial woodland would potentially be lost to development or natural causes per year. Loss by fire and other development is estimated at 149 acres per year, which is three times the woodland allowable harvest level. Loss of woodland by fire, livestock, wildlife and oil and gas is sustainable within the commercial forest base maintaining a rotation age of over 800 years. The acres of suitable commercial woodland in climax old growth condition would not drop below 70 percent at any time.

IMPACTS ON LIVESTOCK GRAZING MANAGEMENT

Impacts From Proposed Livestock Grazing Management On Livestock Grazing

Improving long-term forage production would provide an allocation to livestock grazing of 146,059 AUMs. This allocation would meet the demand for livestock forage that existed in 1980. Most long-term increases in forage production would come from rangeland improvement on 130,520 acres of vegetation manipulations.

Proposing minimum rest requirements for the 54 allotments in the "improve" category would increase the need for intensifying livestock control and management. Intensifying livestock management would create an economic impact to affected livestock operations through increased operational costs.

More detailed impacts to livestock grazing can be found in the 1980 *White River Resource Area Grazing Management Final Environmental Impact Statement* (EIS).

Impacts From Proposed Soils And Surface Water Management On Livestock Grazing

Improving soil productivity would improve forage production and availability to livestock. Soils management may impact livestock management and distribution through limitations on development of livestock handling facilities.

Continuing to incorporate best management practices to improve water quality in non-attainment perennial streams would have some economic impact on affected livestock operations through increased operational costs.

Impacts From Proposed Mineral Management And Land Use Authorization Management On Livestock Grazing

Oil and gas development would disturb 17,500 acres of forage on BLM land. An estimated 2,500 of these acres would be lost in the short term until vegetation could be reestablished. The remainder (15,000 acres) would be lost in the long term. This would represent a long-term annual forage loss of 6,000 AUMs. An estimated 58 percent of this annual forage loss would come from existing livestock grazing use, decreasing livestock AUMs by 3,480. A significant portion of this forage loss would occur on rangelands utilized for spring livestock forage. Spring forage losses usually cannot be supplemented during that season and, as a result, livestock operators may have to reduce the herd size even though forage resources would be sufficient for the remainder of the year. The forage loss would be sufficient forage to sustain about 290 cows year-long. As most of the allotments in this area are large, only a few allotments could be affected. Because much of the land within the few allotments is BLM land, a loss of 3,480 AUMs spread over a relatively few allotments could threaten the survivability of some livestock operations.

Oil and gas development activities could impact animal distribution by interfering with the planned grazing schedules developed in an allotment management (AMP). Development could disrupt grazing schedules designed to defer livestock grazing on a specific area for a specific period of time.

Removing forage on salt desert shrub communities would decrease winter forage for sheep in the long term because reclaiming these ranges would be difficult. These sheep operations depend on these areas for winter forage.

Developing oil and gas could increase siltation in livestock ponds, and the decreased water storage capacity could reduce or eliminate the usefulness of these improvements. Increasing activity around springs or wells could force livestock to use other water sources, and decreased water availability would directly impact distribution which, in turn, would affect rangeland condition.

Developing oil shale and sodium would take about 750 acres of BLM land permanently out of forage production and result in a long-term annual forage loss of 300 AUMs. This would decrease the livestock forage allocation by 174 AUMs. Coal mining would take about 170 acres of BLM land out of forage production and decrease annual livestock allocation by 40 AUMs. Most surface-disturbing land and realty activities would be associated with mineral development.

Impacts From Proposed Plant Communities Management On Livestock Grazing

Implementing plant community management objectives would improve forage quality and quantity. Short-term decreases in forage availability would occur on vegetation manipulation areas designed to improve ecological condition and forage production.

Impacts From Proposed Noxious And Problem Weed Management On Livestock Grazing

Continuing to implement an aggressive weed management program would benefit livestock grazing. Lack of sufficient weed control would result in the invasion of rangelands by plant species with little forage value. Significant decreases in forage production would occur on rangelands invaded by noxious weeds. Aggressive management of noxious weeds would prevent forage losses for livestock grazing.

Weed management actions would require increased operation costs for livestock operations to control noxious weed invasions onto rangelands. Likewise, the weed-free zones could require added operational costs by requiring the use of certified weed-free seed and feed, the cleaning of equipment, and holding livestock on a weed-free pasture prior to entering a weed-free zone.

Impacts From Proposed Riparian Management On Livestock Grazing

Continuing to improve riparian habitat would require an investment from livestock operators which would be recovered by future improvements in riparian quality and forage quantity.

Proposed riparian management actions would require more intensive livestock management in priority riparian habitats. Some past livestock management practices are incompatible with the management objectives proposed for riparian and wetland habitats. Affected livestock operations would be impacted in one of two ways: (1) increased operation costs to relocate and keep livestock out of riparian habitats when grazing limits are reached or (2) forage losses when livestock are removed from an allotment early because riparian grazing limits have been reached.

Riparian management objectives would require more fences and more water developments to manage livestock grazing in priority habitats. Operator costs would increase because of the increased maintenance needs and increased labor costs associated with necessary livestock management and control. However, forage quality and quantity would be improved on riparian habitats, benefitting livestock grazing.

Impacts From Proposed Wild Horse Management On Livestock Grazing

Horse numbers in all herd areas have consistently been above their forage allocation level. Forage use by these excess numbers of horses comes, in part, from forage allocated to livestock. Achieving wild horse management levels as proposed, in a reasonable time frame, would result in minimal impacts to livestock grazing. If horse numbers remain above proposed management levels, as has happened in recent history, livestock grazing allocations would be affected by short-term loss of forage available to livestock.

Maintaining non-viable, small populations of horses on the West Douglas and North Piceance Herd Areas may require a reallocation of available forage within these areas. The reallocation would come from the livestock allocation. In the case of West Douglas, about 750 AUMs allocated to one livestock operation may need to be reallocated to wild horses. A total of 750 AUMs from two livestock operations may need to be reallocated to horses in the case of the North Piceance herd area.

The forage loss created for livestock would occur during periods critical to all three livestock operations. In the case of West Douglas, this critical period is spring and winter use. Winter and spring grazing is critical to this livestock operation, as the operation does not have sufficient land base to supplement this loss.

The critical use period for livestock grazing in the North Piceance herd area is summer range. Without exception, all dependable drinking water supplies for both wild horses and livestock occur on private lands. Forage was allocated to livestock on BLM lands, in part, to the extent of water availability and usability from private lands. A forage loss to livestock is currently occurring on both public and private lands, and a reallocation of forage to horses would continue this loss over a longer term.

Impacts From Proposed Big Game Management On Livestock Grazing

Proposed habitat improvements for big game would benefit livestock grazing through increased forage production available to livestock on improvement areas. Forage allocations developed in the 1981 *White River Resource Area Grazing Management Environmental Impact Statement* (EIS) for deer and pronghorn are adequate for the forage demand of current populations for both species in all GRAs except in the Wolf Creek/Red Wash GRA. Increasing deer populations in Wolf Ridge/Red Wash GRA (3,000 above long-term allocation levels) could result in additional livestock forage losses. It is estimated that these deer would be using about 12 percent (1,840 AUMs) of the forage allocated to domestic sheep in Wolf Creek/Red Wash GRA.

Likewise, current elk populations have increased to where 5,849 AUMs of elk forage use are above the 5,004 AUM level allocated. Cattle and elk diets are very similar, so it is anticipated that on some grazing allotments there is a potential for overuse of the forage resource. Increased elk forage needs occur in the Blue Mountain, Wolf Ridge/Red Wash, Crooked Wash/Deep Channel, and Piceance GRAs. It is estimated that about 1,460 AUMs would come from livestock forage allocations, representing a two percent loss in livestock forage in these GRAs.

Some conflicts for forage competition between livestock and big game wildlife could be anticipated on some grazing allotments. Forage use conflicts would be identified through monitoring programs. Forage allocations would require adjustment based upon monitoring within specific conflict areas.

Cumulative Impacts On Livestock Grazing Management

Most impacts to livestock grazing would be short term and could be mitigated through conditions of approval when authorizing impacting activities. Long-term loss of forage production would occur from development of facilities such as roads and mineral production facilities. A significant forage loss could occur on one or two livestock operations resulting in income loss to those operators. Mitigation for these losses has not occurred in the past, and mitigation is not proposed for future losses of livestock forage.

About 12,330 acres of BLM land have been permanently taken out of forage production because of past management actions. An additional 16,500 acres would be permanently taken out of forage production because of management actions proposed (see Cumulative Impacts on Vegetation). A cumulative loss of 11,500 AUMs of annual forage production could occur. Assuming a loss in proportion to allocation

levels, about 58 percent, or 6,670 AUMs, of this would be a cumulative loss for livestock grazing (3,300 AUMs from past management actions and 3,670 AUMs from proposed actions).

Increased elk forage needs occur in the Blue Mountain, Wolf Ridge/ Red Wash, Crooked Wash/Deep Channel, and Piceance GRAs. It is estimated that about 1,460 AUMs would come from livestock forage allocations. An additional loss of about 1,840 AUMs to domestic sheep use could occur in Wolf Ridge/Red Wash GRA from increased deer forage needs.

Livestock forage losses created from maintaining non-viable, small populations of wild horses in the West Douglas and North Piceance Herd Areas could amount to 1,500 AUMs.

A cumulative forage loss of 8,470 AUMs currently allocated for livestock grazing use could occur. This would represent about 6.5 percent of the livestock forage allocation in the Resource Area or sufficient forage for 705 cows yearlong.

IMPACTS ON WILD HORSE MANAGEMENT

Impacts From Proposed Wild Horse Management On Wild Horses

Expanding the Piceance-East Douglas HMA to include the unfenced Greasewood Allotment in the North Piceance HA would improve our ability to manage the HMA and increase the amount of managed horse habitat, offsetting any habitat loss as a result of mineral development. Managing the expanded Piceance-East Douglas HMA to accommodate 95-140 horses and provide 2,100 AUMs would enhance habitat conditions for wild horses and maximize their productivity.

Impacts From Proposed Oil And Gas Management On Wild Horses

Continued development of oil and gas would be a principal impact upon the wild horse HMA in two areas: (1) The Douglas Creek area, specifically in the Rocky Point and Philadelphia Creek fields, and the (2) Piceance Basin, specifically in the Sagebrush Hills gas field. Up to 2,000 acres could be disturbed in the Douglas Creek area. Due to the prevailing topography, the majority of this disturbance would result from access road construction. The principal negative impact to horses in this area would result from physical and spatial disturbance associated with development and maintenance of oil and gas production. This would be a continuing long-term impact.

In the Piceance Basin, within the Boxelder portion of the wild horse range, projected development could disturb up to 970 acres. Approximately 50 percent of this disturbance, 440 acres, could be expected to occur within the pinyon-juniper vegetation type. Because the principal value of pinyon-juniper in this area is cover, the negative impact to wild horses in the short term would be loss of cover. In addition, there would be an associated short and long-term spatial and temporal disturbance due to production and facility maintenance.

Impacts From Proposed Oil Shale Management On Wild Horses

Developing oil shale, specifically in the C-A off-tract disposal area, would reduce cover and forage and increase temporal and spatial disturbance.

Impacts From Proposed Sodium Management On Wild Horses

Developing sodium on approximately 1,300 acres immediately west of Yellow Creek on the east end of 84 Mesa, within the HMA, would reduce wild horse winter range. This area provides 130 AUMs of winter forage for wild horses, which is critical to horse survival during winters of heavy snowfall.

Impacts From Proposed Woodland Management On Wild Horses

Implementing proposed woodland management practices would tend to limit physical disturbance of wild horses in their habitat by confining that impact to localized areas. This would be a positive impact relative to the present situation. Managing wood product harvest would also eliminate negative impacts from loss of cover which result from indiscriminate wood and post cutting. Positive benefits to wild horse habitat could occur (enhanced forage production) as a result of managed, block harvest of wood products for multiple resource benefits.

Impacts From Proposed Livestock Grazing Management On Wild Horses

Wild horses would continue to benefit from enhanced rangeland productivity as a result of continued implementation of improved management systems as described in Alternative A, Grazing Management Draft EIS, WRRA, April 1980 (USDI, BLM) and those described in this document. Wild horses also have and will continue to benefit from physical range improvements such as water developments and vegetation manipulations. These practices have substantially increased both the dependability of water sources and forage quality and quantity.

Impacts From Motorized Vehicle Travel Management On Wild Horses

Restricting motorized vehicle traffic to designated roads and trails, closing unnecessary roads and trails, and regulating vehicle use within the HMA would both reduce disturbance to horses and help prevent destruction of vegetation, thus minimizing impacts of motorized vehicle travel on horses.

Cumulative Impacts On Wild Horse Management

Surface-disturbing activities within the HMA would reduce cover and forage proportional to the amount of acreage disturbed as a result of development. Successful post-production revegetation of disturbed areas could offset the loss of up to 75 percent of the forage, but any loss of tree cover (pinyon/juniper) would be long term.

New roads associated with development would constitute long-term loss of habitat. Temporal disturbance associated with the roads would be periodic, but also long term.

Managing the expanded Piceance-East Douglas HMA to accommodate 95-140 horses and provide 2,100 AUMs would enhance habitat conditions for wild horses and maximize their productivity.

Adding the Greasewood allotment to the existing Piceance-East Douglas HMA would solve the problem of the presently unfenced HMA boundary and also provide additional horse habitat to offset

disturbance associated with mineral development. 84 Mesa and the Douglas Creek part of the HMA are the two primary areas where physical disturbance associated with energy development is most likely to occur during the life of this plan. Both of these areas would be expected to be negatively impacted over the long term by surface disturbance associated with the above activities. There would be a continuing long-term negative impact to horses as a result of increased human presence and degradation of habitat due to surface disturbance.

IMPACTS ON WILDLIFE HABITAT MANAGEMENT

BIG GAME

Impacts From Proposed Big Game Habitat Management On Big Game Habitat

Total average forage requirements for all big game under CDOW's most current population objectives are about three percent lower than that currently authorized in the long term. However, the distribution of calculated forage allocations are imbalanced, with insufficient forage allocated, but not necessarily unavailable, in the Blue Mountain, Wolf Creek, and Douglas Creek GRAs. The largest contributor to these forage discrepancies are elevated deer population objectives in GMU 10 and 21, which resulted from significant underestimation of deer populations in 1979. It is likely that allocation deficits are actually no higher than four percent in the Blue Mountain and Douglas Creek GRAs and seven percent in the Wolf Creek GRA.

Proposed big game management objectives strive to integrate all land use activities in a manner which enhances big game habitat utility, thereby increasing the efficiency of herbivore use and reducing its influence on overall community expression. These measures are not intended to increase big game populations, but to help enhance big game productivity and survival (i.e. sustained recreational opportunity) and reduce the cumulative effects of ungulate grazing on plant communities serving other important functions.

Implementing forage retention guidelines would help maintain quantities (80 percent on GRA basis) and distribution of important winter forages adequate to minimize short-term reductions in habitat capacity, although strong, localized forage deficiencies (50 percent) could still occur on deer winter and pronghorn yearlong ranges, particularly where sagebrush is the principal winter forage (i.e., Wolf Ridge/Red Wash, Crooked Wash/Deep Channel and Douglas/ Cathedral GRAs). Limiting sagebrush manipulations on deer severe winter ranges would minimize the potential for strong localized overuse of browse forage and should prevent short-term reductions in local forage capacity.

Proposed cover retention guidelines would not necessarily optimize habitat utility for deer within any treatment area, but adequate quantities of cover on all big game ranges (i.e., minimum of 30 percent) would be retained. Although optimum cover distribution could be achieved within these criteria, habitat utility on treatment sites for deer may achieve levels 60-75 percent of optimum in the worst case. Disruption of special big game cover types would be minimized. Unavoidable disruption of special big game cover types (i.e., forest and deciduous shrub cover/forage) would be conditioned such that site potential would be maintained and reclamation requirements attached to encourage natural recovery of desired stand composition and structure in the long term. Special attention is extended to aspen, serviceberry and chokecherry stands in the Blue Mountain GRA, where CSU stipulations require that advance reclamation commitments be made to reestablish stand composition, extent, vigor, density and form.

Forage and cover guidelines would help relieve excessive late winter demands on preferred and alternate woody forages in the long-term, particularly deciduous forms beneath pinyon/juniper canopies. The prescriptions would encourage treatment of excessive, non-essential or suboptimal cover and forage components, thereby increasing the long-term availability and distribution of suitable forage. Reliance on and excessive utilization of alternate and primary browse forage would persist in the short term. However, under generally reduced big game population objectives and long term improvements in range utility achieved through cover retention objectives, noticeable gains toward browse utilization targets and browse condition ratings should be realized by the end of plan life.

Pinyon-juniper, sagebrush and mountain shrub treatment targets are largely integral with the Forestry and Livestock Management programs (see cumulative impact section; also Table 2-19 in DRMP). Those specifically identified for habitat enhancement would be designed to enhance forage and cover distribution in area's unaffected by coordinated implementation. Treatment goals in spruce-fir and aspen types are redirected to maintain the value of forest stands as big game cover.

Fully implemented, big game-related road density objectives established for all big game habitats would stabilize or slightly reduce overall levels of avoidance-related influences (i.e. calculated 20-30 percent indirect habitat loss) which adversely affect big game habitat utility and animal physiology.

Modified TL stipulations would extend to an average 20 percent and 35 percent of wintering deer and elk populations and, during severe winters, up to 70 percent of deer and 85 percent of elk. Limiting harassment on these ranges would effectively minimize chronic energy expenditure during the late winter and spring periods. Imposing a conditional TL stipulation on deer and elk critical summer ranges would minimize adverse displacement and harassment on 54 percent of all deer and elk summer ranges where dispersed birthing and post-partum functions are fulfilled. These stipulations encompass the full complement of ranges that fulfill special big game function at times when animals are most susceptible to disturbance-related effects. They provide the means to strongly reduce the contribution of surface disturbing activities to the depression of habitat utility or aggravating energetic demands during sensitive timeframes.

Impacts From Proposed Soils, Surface Water, Ground Water, And Water Rights Management On Big Game Habitat

Improving watersheds complements habitat improvement goals by improving long-term herbaceous forage and water availability for big game. In particular, channel restorations would improve the distribution of seasonal water for pronghorn in the Wolf Creek/Red Wash GRA. Surface water management actions would contribute to the long-term improvement of herbaceous forage availability on up to 20 percent of the deer severe winter range in the Wolf Creek/Red Wash, Crooked Wash/Deep Channel, and Douglas/Cathedral GRAs, and 41 percent of the pronghorn year-round range in the Wolf Creek/ Red Wash and Crooked Wash/Deep Channel GRAs.

Designating NSO stipulations on landslide areas and CSU stipulations on soils susceptible to erosion would substantially reduce deterioration in soil productivity and accelerated erosion across all big game ranges.

Impacts From Proposed Oil And Gas Management On Big Game Habitat

Oil and gas development over the next 20 years would occupy up to 10,000 additional acres and another 6,700 acres would be modified with respect to big game forage and cover. Current and proposed oil and gas activities are expected to impact the Crooked Wash/Deep Channel, Piceance and Douglas/Cathedral GRAs most heavily, where established fields are coextensive with much of the GRAs' critical or important big game ranges.

At 80-acre spacing, total surface disturbance would involve long-term reductions of woody forage and cover and fragmentation of effective thermal and security cover on 12-16 percent of the land area within a field. Implementing habitat treatment guidelines would minimize or avert oil and gas development's contribution to strong long-term reductions in GRA-wide forage and cover components or further deterioration of locally important habitat elements. Collectively, these measures would reserve forage and cover elements necessary to maintain the short-term integrity of big game ranges affected by oil and gas development and aid enhancement of long-term range utility by directing development, where possible, to areas of excessive cover or suboptimal forage types and reinforcing desirable retention of cover in special use areas or travel lanes where continued use is contingent on animal security derived from concealment.

COAs requiring special reclamation measures would discourage the loss or long-term modification of special big game cover types (i.e., aspen and coniferous forest). Remnant aspen, serviceberry and chokecherry stands in the Blue Mountain GRA would be maintained by a CSU stipulation requiring advance reclamation commitments be made for accelerated reestablishment of desirable stand characteristics.

The NSO stipulation applied to BLM-administered lands within the Oak Ridge State Wildlife Area would reserve five percent of deer severe winter range and 20 percent of elk severe winter range and production areas available in GMU 23 from oil and gas-related effects.

The conditional TL stipulation on deer and elk critical summer ranges would maintain optimal utility on 56 percent of all big game summer ranges and ensure that preferred cover and forage resources are available for use when young animals are most susceptible to malnourishment and predation.

Developed oil and gas fields in the Douglas/Cathedral and Crooked Wash/Deep Channel GRAs currently support road densities of 3.0 to 4.5 miles per square mile. Within the next 20 years, at projected 80-acre well spacing, unregulated road use at 4.5 or more miles per square mile may depress big game habitat effectiveness in affected areas by 40-60 percent. Road density limitations on big game critical habitats would ultimately (i.e. upon implementation) reduce or stabilize unrestricted road densities to as low as 1.5 miles per square mile, and limit effective habitat loss to 10-20 percent during periods of animal occupation. Effective road density ceilings of 3 miles/square mile proposed for all big game ranges would stabilize road-associated disturbance and current levels of effective habitat loss (20-30 percent) throughout the Resource Area. However, in developed oil and gas fields, the objective would reduce overall road-related disturbance by up to 50 percent, and hold the level of indirect impacts on affected big game ranges to less than one-half the unmitigated loss. Road-related effects associated with oil and gas development would be expected to ultimately depress the capacity of GMU 11, 21, and 22's deer severe winter ranges by up to five percent, and GMU 21's critical deer summer and general winter ranges by no more than eight and 10 percent, respectively. Similarly, the capacity of GMU 21's elk severe winter and critical summer ranges may be depressed by up to 13 and three percent, respectively.

Impacts From Proposed Oil Shale Management On Big Game Habitat

Predefined thresholds would curtail oil shale development when forage availability and/or habitat suitability in the Piceance Basin is reduced to levels insufficient to sustain a deer population of 24,900 animals.

Impacts From Proposed Sodium Management On Big Game Habitat

Removing 1,550 acres of pinyon/juniper (in response to meeting projected sodium need) would result in localized reductions in the big game woody forage base and woodland-derived winter thermal cover, increase levels of animal disturbance, and disrupt groundwater contributions to local base flows in the Piceance GRA. Short-term improvements to herbaceous forage types may be realized following reclamation, and opportunities exist for enhancing big game cover/forage relationships provided adequate quantities of effective thermal and security cover remain properly distributed. Impacts associated with surface disturbance using solution mining techniques may be comparable to intense localized oil and gas development.

Sodium development would be incorporated within the oil shale threshold criteria. Opportunities to regulate the extent of habitat disruption would aid in the maintenance of Piceance Basin's big game populations in the event sodium or oil shale development exceeded forecasts.

Impacts From Proposed Coal Management On Big Game Habitat

Up to 117,800 acres available for surface mining (Danforth/Rangely GRAs), may be rendered unavailable for wildlife use during active mining (20-30+ years). Reestablishment of herbaceous vegetation is achieved shortly after reclamation, while reestablishment of cover, woody forage and riparian in the form of coniferous or deciduous trees and shrubs is far more prolonged.

In the Danforth Study Area (all contained within the Danforth/Jensen GRA), important elk ranges currently suitable for surface mining include 72 percent and 11 percent of the critical production areas available in GMUs 211 and 23, respectively. Of the available summer range in GMU 211 in this area, 23 percent remains vulnerable to long-term modification. Remaining deer ranges are affected at individual GMU levels of $\leq$five percent.

Pronghorn and elk habitats within the Rangely Study Area would be subject to habitat modification on the order of five to seven percent. Deer would be vulnerable to extensive loss of important winter range habitats, including 22 and 39 percent of severe winter range extent available in GMU 10 and 21, respectively.

Impacts From Proposed Mineral Material Management On Big Game Habitat

BLM estate within or adjacent to the White River comprises 28 percent (2,610 acres) of the area identified as having sand/gravel potential, all of which serves as severe winter range (critical habitat) for mule deer.

Applying forage objectives for deer severe winter ranges along the White River would limit gravel extraction's potential contribution to cumulative declines in the sagebrush winter forage base to ≤20 percent of that currently available. Surface disturbance would be confined as much as possible to areas supporting suboptimal sagebrush stands or non-forage types.

Reclaiming developed sites to favor herbaceous forage would offset short-term reductions to spring forage supplies. However, long-term losses of late winter woody forage would be unavoidable for 10-15 years post-mining.

Impacts From Proposed Hazardous Material Management On Big Game Habitat

Removing and/or preventing hazardous material release minimizes potential mortality or adverse effects on reproductive or behavioral functions.

Impacts From Proposed Plant Communities Management On Big Game Habitat

Widespread improvement to low- and certain mid-seral condition ranges would ultimately enhance woody forage utility and the nutritive quality of seasonal forage bases on up to 80 percent of BLM-administered sagebrush and saltbush types and 35 percent of the pinyon/juniper type. Plant community objectives formally recognize important big game habitat values served by mid-seral conditions (e.g. winter cover and forage) such that site-specific vegetation management objectives would be tailored to retain desirable forage and cover functions. Improved understory conditions (i.e., herbaceous diversity and density), achieved primarily through improved livestock management, would not only enhance the nutritional value of forage for spring and fall use (with no short term, direct influence on browse availability or condition), but help arrest channel erosion and the consequent desertification of adjacent uplands. Restoring disclimax shrublands on deer severe winter ranges in the Danforth, Wolf Ridge/ Red Wash, Piceance, and Crooked Wash/Deep Channel GRAs would generally promote improved severe winter range utility, and, in the longer term, increase the extent of suitable foraging area on these late winter ranges by 10-15 percent. Maintaining high-seral conditions in the long-term would tend to suppress browse regeneration (especially sagebrush) and gradually depress the production and availability of woody forage for fall and winter deer use. It is believed that this influence would be largely offset by measures which enhance cover dispersion and foraging area extent and promote diet diversification. Perennial herbaceous production would generally favor the year-round forage base of elk, reduce their reliance on woody forage, and help offset calculated forage deficits attributable to expanded elk populations. Similarly, pronghorn populations would certainly benefit from prescribed seral advance on low-elevation saltbush, sagebrush, and greasewood ranges typically depauperate in perennial forbs. Communities targeted for improvement constitute up to 40 percent of pronghorn range in the Wolf Creek GRA.

Woodland modifications conducted to improve community condition would be designed to optimize big game range utility, serving to enhance the dispersion and availability of forage producing areas on big game winter ranges and increase long-term range utility and capacity for both deer and elk. Allowing woodlands to regenerate as big game cover on former pinyon/juniper chainings and larger woodland burns would eventually (50-60 years) restore full winter utility on, for example, 15 percent of severe winter range extent in the Piceance GRA.

Requiring the use of native species in the Blue Mountain GRA would forego opportunities to establish plants that offer prolonged availability and superior production relative to native species and enhance diet quality (e.g., leguminous forbs). This limitation would remove a management option, but would not compromise big game objectives to any meaningful degree.

Impacts From Proposed Noxious And Problem Weed Management On Big Game Habitat

Controlling noxious and problem weeds in compliance with Area and Bureau National Environmental Policy Act (NEPA) documents would minimize short-term losses of forage and cover and prevent expansion of noxious weeds that threaten big game habitat suitability in the long term.

Impacts From Proposed Riparian Management On Big Game Habitat

Restoration or enhancement of identified riparian systems would improve water availability and herbaceous forage quality and availability on 10-15 percent of critical big game summer ranges in the Blue Mountain, Piceance, and Douglas/Cathedral GRAs. Riparian improvements would offer linear water sources serving large habitat tracts while enhancing important herbaceous broadleaf vegetation necessary to maintain a high nutritive plane for lactating females. Long-term riparian and channel improvements on major low-elevation systems (e.g. Crooked Wash/Deep Channel and Yellow Creek) would restore or reverse degradation of primary and tributary valleys on 20 percent and 25 percent of severe winter ranges in the Crooked Wash/ Deep Channel and Piceance GRAs, respectively.

Impacts From Proposed Special Status Plants And ACEC Management On Big Game Habitat

Applying NSO stipulations to several entire ACECs would reserve big game habitat from incompatible surface disturbance, including 4.5 percent of the severe winter range (but less than one percent of general winter and summer range) in the Piceance GRA, and about three percent of the Wolf Creek/Red Wash GRA's winter range extent. Protecting plant associations within the Oil Spring Mountain and Moosehead Mountain ACECs would prevent adverse surface occupation or disturbance on two percent of all spruce-fir and 48 percent of aspen forest types available in the Douglas/Cathedral and Blue Mountain GRAs, and about 14 percent of Blue Mountain GRA's deciduous browse community.

Impacts From Proposed Timber And Woodland Management On Big Game Habitat

Timber harvest conducted in small, widely-dispersed projects as a tool to achieve other resource objectives would involve up to three percent of the spruce and fir types in the Resource Area. Incorporating big game-oriented design features and objectives to such canopy modifications would effectively maintain or enhance the utility of big game cover in the short and long term.

Harvesting aspen in response to other resource (including big game) needs and deteriorated stand conditions would enhance both the long and short-term forage and cover values associated with aspen on big game summer and fall ranges.

Commercial pinyon/juniper harvest would impact big game habitats only in the Piceance and Douglas/Cathedral GRAs. It is assumed that selection-cut acreage would retain adequate cover properties while serving with half the forage capacity of clearcuts.

By integrating proposed cover retention objectives, commercial woodland harvest designs would optimize big game range utility and maintain adequate levels and distribution of thermal cover on all affected big game winter ranges. In the long term, clearcut and selection harvest would effectively increase foraging area extent by two percent and four percent on Piceance and Douglas/Cathedral GRA winter ranges, respectively, and by up to one percent on Douglas/Cathedral GRA's summer ranges. Considered alone, long-term clearcut acreage would be capable of optimizing cover and forage distribution on up to three percent of Piceance GRA's severe winter ranges, but less than one percent of general summer and winter ranges in either GRA.

Impacts From Proposed Livestock Grazing Management On Big Game Habitat

Continuing to implement the primary objectives of the grazing EIS would increase the vigor, abundance and availability of herbaceous forage and reduce the intensity of ungulate grazing use. Fencing, water development, and construction of trails on big game ranges generally benefit big game habitat conditions. Constructed waters have been influential in enhancing the utility of big game summer and fall ranges lacking reliable water, most notably in the Piceance and Douglas/Cathedral GRAs for elk.

Scheduled sagebrush manipulations would convert sagebrush types to a grass-dominated character for 20 to 30 years post-treatment and represent a temporary reduction in woody forage available for seasonal deer and pronghorn use. However, sagebrush retention guidelines would limit losses of suitable sagebrush forage to relatively minor levels (20 percent) by GRA, thereby preventing long-term suppression of overall winter range capacity and minimizing significant short-term forage reductions on severe winter ranges. Strong localized reductions in suitable sagebrush forage could still be experienced on general deer winter ranges and pronghorn overall ranges. However, these treatment levels are generally consistent with the maintenance of desirable long term sagebrush forage properties. Treatment guidelines would tend to encourage manipulation of stands unsuitable or suboptimal for big game use and would be capable of increasing the extent of suitable forage stands by up to 25 percent in the long term.

Woodland treatments, on average, would be capable of achieving cover distribution at levels equivalent to optimum on five to 10 percent of all BLM-administered deer and elk ranges, and notably, up to 25-40 percent of BLM's critical severe winter ranges in the Piceance and Crooked Wash/Deep Channel GRAs. Woodland treatments would concurrently increase foraging area extent by 10 to 20 percent across all winter ranges in the long term. Conversely, cover retention ceilings would not prevent cover deficient situations, but by distributing adverse affects over a larger area, they would minimize the potential for strong localized influences. In the worst case, woodland treatment could impose cover deficient conditions (somewhat less than optimum at 30 percent) on two to four percent of overall winter range extent. Similarly, optimal quantities of thermal cover would be developed or maintained on overall winter range extent, but distribution could be skewed such that about 60-75 percent of optimal distribution is achieved.

Conditional public land grazing within SWAs would serve to improve or maintain wildlife habitat values. Failure to manage accordingly would result in revocation of Public Land grazing privileges and, by default, reserve forage production on BLM lands within SWAs strictly for big game use.

Impacts From Proposed Wild Horse Management On Big Game Habitat

Horses compete with elk, and particularly, deer for herbaceous and woody forage on all seasonal ranges, but authorized use (about six percent of total allocated use) within the herd management area (HMA) has been integrated in a multiple use context. The HMA coincides with about 15 percent of the general deer winter ranges in the Douglas/Cathedral and Piceance GRAs and 16 to 17 percent of Piceance GRA's summer ranges and critical deer severe winter range.

Adding the Greasewood Allotment into the HMA would validate horse use on an additional four percent of GMU 22's general deer winter ranges and winter concentration areas and five percent of its total critical severe winter range habitat. The Greasewood Allotment would increase HMA extent by about 15 percent, and overall grazing intensity by the maximum allowable number of horses would decline proportionately. In either case, horse use would continue to represent about six percent of the total grazing load in affected allotments.

Removing horses from the West Douglas and remainder of the North Piceance Herd Areas would eliminate coincident horse use on nearly 50 percent of GMU 21's deer winter range and 14 percent of its critical summer range habitats. In the long term, horse removal from these areas would reduce overall forage use intensity by four to eight percent and would be capable of increasing plant material remaining after livestock and big game use by two to five percent.

Impacts From Proposed Grouse Habitat Management On Big Game Habitat

Enhancing grouse brood and nest habitats (e.g., increased herbaceous cover, channel restoration) would improve herbaceous cover and forage conditions on 25 to 30 percent of big game summer ranges in the Blue Mountain, Danforth and Piceance GRAs, and about 15 percent of big game summer ranges in the Douglas/Cathedral and Crooked Wash/Deep Channel GRAs.

Impacts From Proposed Fisheries Habitat Management On Big Game Habitat

Explicit priorities for stream and riparian improvements on fishery habitats would improve the availability and persistence of herbaceous forage available to big game during the summer months on about eight percent of the critical deer and elk summer ranges in the Douglas/Cathedral and Piceance GRAs. Maintenance of the two identified impoundments in the Wolf Ridge/Red Wash GRA would continue to provide reliable pronghorn watering sources on about seven percent of overall pronghorn range in GMU 10.

Impacts From Proposed Special Status Wildlife Management On Big Game Habitat

The influences of candidate fisheries management on big game are integral with the fisheries discussion. Management of remaining special status species has no discernible influence on big game management.

Impacts From Proposed Wilderness Management On Big Game Habitat

Wilderness designation would reserve six percent and 13 percent of the critical summer and general winter habitats available for deer in GMU 10, and two to five percent of the total deer severe winter range and elk severe and general winter range habitats available in GMU 10 from incompatible forms of land use. Because predominant big game use occurs in winter, it is unlikely that intensified non-vehicular recreation use would cause undesirable levels of big game harassment and displacement from preferred habitats.

Reverting Black Mountain, Windy Gulch and Oil Spring Mountain Wilderness Study Areas (WSAs) to multiple-use status would open 39,940 acres of an essentially roadless nature. Managing the Windy Gulch/Black Mountain complex as a semi-primitive, non-motorized area for public forms of land use that may occur attendant and subsequent to mineral development would be capable of reducing deer capacity by up to three percent in GMU 11, but in the longer term, full range capacity would be restored.

Energy-related access development and subsequent recreational vehicle use on Oil Spring Mountain WSA would reduce the long-term utility of involved habitats for big game. Application of road density objectives and designating more compatible forms of public access would limit levels of indirect habitat loss attributable to road-related influences to 30 percent or less, and would contribute less than one percent to the depression of range capacity in the Douglas/ Cathedral GRA.

Impacts From Proposed Motorized Vehicle Travel And Recreation Management On Big Game Habitat

Extending road-density objectives to all general big game ranges would, in the long term, stabilize road-related influences on big game and limit declines in habitat effectiveness (i.e., animal avoidance response) to about 30 percent across 85 percent of the BLM lands within the Resource Area. Road-density objectives applied to big game critical habitats would stabilize current levels (10-20 percent) of effective habitat loss on 15 percent of BLM big game range in the Resource Area. Since critical habitats are considered limiting features, stabilizing or reducing habitat disuse and animal harassment would be influential in maintaining long-term range capacity and herd production and recruitment. In conjunction with limiting vehicle travel to designated roads and trails, at least during the period of animal occupation, these measures (once fully implemented) would effectively deter continued proliferation of roads and the consequence of road use on big game habitat utility. Under interim travel management prescriptions, it is likely that road and trail establishment and incremental deterioration of big game habitat utility would continue, but at somewhat lower rates.

Intensifying non-motorized recreation use on Moosehead may reverse recent gains made since instituting motorized vehicle restrictions (i.e., dramatic increases in the number and longevity of elk occupying public lands through the summer and early fall). This small tract of public land encompasses 10 percent of the total critical summer habitats available to elk in GMU 10 and 45 percent of all aspen within the Blue Mountain GRA. Because of its size and the limited extent of key big game features (i.e., aspen), seasonal big game use on Moosehead Mountain is both sensitive and vulnerable to disturbance. By promoting day use through most of the year (i.e., shorter term and less intensive form of disturbance), animal contact with recreationists and subsequent animal avoidance response/displacement (e.g. aggravated elk distribution problems, forage competition with livestock) should be reduced to acceptable levels.

Restricted vehicular access on the Moosehead Mountain road closure area (Blue Mountain GRA) and BLM lands within the Oak Ridge State Wildlife Area (Danforth Hills GRA) would prevent adverse avoidance-related vehicular influences on about 14 percent of the total critical summer elk habitat available in GMU 10 and 23 percent of critical elk severe winter range and 18 percent of critical elk production areas delineated in GMU 23, respectively.

Impacts From Proposed Land Use Authorizations Management On Big Game Habitat

Facilities maintenance and their access requirements have in some cases compromised intended management or control in sensitive wildlife areas (critical ranges) and add incrementally to avoidance or disturbance-related impacts.

Exclusion and avoidance status applied to nearly 294,000 acres would, in many cases, contribute to the maintenance of big game winter range availability and function, and promote land use treatment consistent with high-value big game habitats.

Impacts From Proposed Land Tenure Adjustment Management On Big Game Habitat

Designating over 90 percent of the Resource Area as Category 2 and available for conditional exchange would provide the opportunity to evaluate wildlife issues and concerns and adjust proposals to alleviate or offset significant losses of important wildlife values. Through negotiated application of special stipulations or provisions, it is thought that any acquisition would prove neutral or advantageous to wildlife, including big game resources.

Retention of lands associated with ACECs would contribute to the maintenance of relatively large segments of important deer and elk habitats, including 13 percent of deer winter range in the Douglas/ Cathedral GRA.

Impacts From Proposed Access Management On Big Game Habitat

The inherent conflict between expanding access to public lands versus the effects of intensified land use on important wildlife habitats or during crucial timeframes is unavoidable. Problems associated with the expansion of public access, road proliferation once primary access is established and intensified land use on important big game habitats would be minimized with the incorporation of proposed road density objectives and designating compatible forms of access.

Proposed public access would help alleviate problems associated with seasonally concentrated big game forage use, particularly in the southeast corner of Piceance Basin and in the Crooked Wash GRA. Those accesses which improve big game hunter distribution could also play an important role in improving the effectiveness and reliability of hunting as a means of achieving CDOW's harvest objectives.

Acquisition of administrative access would allow more timely response to management-related problems.

Impacts From Proposed Withdrawal Management On Big Game Habitat

With the exception of lands withdrawn for oil shale, the various withdrawals have not proven influential in regard to wildlife management. Modifying the oil shale withdrawal provisions would offer opportunities to conduct exchanges advantageous to the consolidation of important big game habitats.

Impacts From Proposed Fire Management On Big Game Habitat

Small-scale fires up to 60 acres in the sagebrush/greasewood and pinyon/juniper types can generally be considered advantageous in maintaining the dispersion and distribution of forage and cover components for big game. More aggressive fire suppression strategies would be applied to fires that jeopardize residual woodlands in the Spring Creek/Greasewood area (Piceance GRA), which have been subjected to large, contiguous wildfire events and would minimize further long-term deterioration of late-winter habitat utility.

Cumulative Impacts On Big Game Habitat Management

Reducing deer population objectives by 18 percent, increasing suitable winter forage base by 20 percent, improving cover distribution on a minimum eight percent, and improving alternate or supplemental herbaceous forage availability on 24 percent of all big game range would provide discernible improvement in woody forage vigor and condition within plan life. Improving habitat utility, derived through BLM program integration, would be additive and result in long-term improving trends in habitat condition, herd productivity and recruitment, and moderate the tendency for dramatic periodic population declines.

Integrating most land use activities through cover and forage retention guidelines would improve and offer opportunities to optimize big game habitat utility on any project site, increasing the long-term availability and distribution of suitable forage and the efficiency of herbivore use. Although the flexibility within vegetation treatments guidelines may allow strong short-term and localized reductions in the sagebrush forage base on deer winter range and year-round pronghorn range, forage retention guidelines would maintain sufficient supply and distribution of winter forages to sustain overall GRA population objectives, prevent short-term reductions in GRA-wide range capacity, and provide for long-term improvement in the vigor and growth form of primary and alternate forages. Collectively, these effects would relieve excessive demands on preferred forage and reduce the influence of herbivores on understory expression. Improving the distribution and persistence of water, attributable to riparian restoration, would improve habitat utility on a minimum five percent of total deer summer range.

Implementing watershed, riparian and plant community objectives in the Wolf Creek/Red Wash and Crooked Wash/Deep Channel GRAs would promote widespread, long-term improvement of pronghorn ranges. Increasing herbaceous ground cover and water availability associated with channel and watershed restoration activities and improvements in the composition of early- and mid-seral shrubland communities (i.e. particularly perennial forbs) would be expected to enhance forage quality and availability on up to 41 percent of total pronghorn range.

Enhancing herbaceous understory conditions and increasing forage area extent would improve forage availability on up to 55 percent of all seasonal elk range, and would be expected to exceed compensation for additional elk use within plan life. Cumulative herbaceous forage use intensity would be expected to decline slightly on virtually all elk range in the long term.

Limiting road density would stabilize or slightly reduce current overall levels of habitat deterioration associated with permitted and general public road use on all BLM-managed lands in the long term. Applying road density goals would maintain up to 70 percent of functional big game habitat utility across a minimum 66 percent of the Resource Area.

Implementing TL stipulations would minimize chronic expenditure of energy reserves and displacement from preferred habitats on a balanced range of habitats that fulfill special big game functions at times when animals are most susceptible to disturbance-related effects. Applications would extend to as much as 70 percent of the wintering big game population (average 25-30 percent) and would serve to maintain the functional utility on at least 42 percent of summer range extent.

NON-T/E RAPTORS

Impacts From Proposed Non-T/E Raptor Management On Raptors

Raptor nest stipulations and habitat protection guidelines would adequately protect ongoing nest efforts and maintain nest habitat character for sustained site utility. Land uses would be modified to preclude or reduce adverse alterations to levels acceptable to BLM. Incremental decline in the availability of more continuous woodland nest and foraging habitat would continue, but inventory provisions would improve nest detection on 60-70 percent of permitted surface disturbing activities and, together with nest habitat provisions, help minimize alteration of habitats most preferred by breeding birds. It is likely that developments that fail to receive desirable forms or levels of survey coverage (e.g. wildcat and exploratory wells) would occur where disruption of subsequent or ongoing nest efforts would be of lesser consequence in the context of maintaining overall breeding bird production.

Requiring reclamation measures to promote accelerated reestablishment of former plant community characteristics, rather than relying on "natural" reestablishment processes, would not only abbreviate adverse habitat modifications, but strengthen incentive to avoid surface involvement of favored aspen, oakbrush, Douglas fir and spruce-fir nest and foraging habitats.

Establishing minimum snag requirements, as applied to timber and pinyon/juniper selective harvest strategies would effectively minimize adverse effects of woodland modification on snag and cavity-dependent raptors and associated prey.

Use of transmission facility design which provide adequate conductor clearance would be promoted where necessary to more effectively reduce raptor electrocution hazards.

Impacts From Proposed Soils, Surface Water, Ground Water, And Water Rights Management On Raptors

Improving or restoring riparian or channel systems, soil productivity and upland vegetation (e.g., herbaceous ground cover) would contribute to the long-term enhancement of up to 65 percent of the low elevation sagebrush/saltbush habitats in the Wolf Creek/Red Wash and Crooked Wash/Deep Channel GRAs, most notably occupied by ferruginous hawk, prairie falcon, and burrowing owl.

Measures protecting groundwater would help minimize loss or deterioration of base flows which are necessary to develop, maintain, or enhance riparian and wetland communities as important features of woodland raptor nest and foraging habitats.

Securing water rights on appropriate streams and impoundments would help ensure that water sources which occur or are developed on federal land are retained and remain available to maintain the suitability of raptor nest and foraging areas associated with riparian systems.

Impacts From Proposed Oil And Gas Management On Raptors

Direct loss or modification of buteo, eagle, falcon and harrier habitats (predominantly cliff dwelling and ground nesters) attributable to long-term facility occupation ranges from six to eight percent within established fields, and is small on a GRA-wide basis (maximum three percent in Douglas/Cathedral GRA). Projected in-field development would increase by an average 55 percent such that at full field development 10-23 percent of within-field habitats would be modified (maximum 4 percent in Douglas/Cathedral GRA). Applying NSO stipulation and siting surface disturbance to minimize adverse modification of nest habitat character would generally be adequate to effectively separate disruptive oil and gas-related influences from the immediate nest vicinity and maintain the integrity of known woodland raptor nest territories for extended periods.

TL stipulations would continue to remain in effect only during project construction and would provide adequate protection to raptor nest functions during the ongoing or initial nesting season. However, occupied and potential nest habitats coincident with big game critical habitats and associated road density objectives (up to 20 percent of pinyon/juniper and 80-90 percent of aspen and coniferous forest habitats) would benefit indirectly from road redistribution and/or density reductions by reducing potential exposure of nesting pairs to road-induced activity. Outside big game critical habitats, the overall 3.0 mile/square mile road density provision would be capable of reducing long-term road densities in established oil and gas fields by 50 percent or more and would otherwise help to stabilize road-related effects on raptor nesting activities and habitat suitability.

Requiring project proponents to assume a shared responsibility in conducting raptor nest inventories would increase timely survey coverage, enhance effective use of available stipulations, and ultimately assist BLM in realizing goals of maintaining the utility of raptor breeding habitats and protecting ongoing reproductive activities. This inventory strategy would provide acceptable nest surveys on about 60-70 percent of the woodland habitats affected by oil and gas. It is likely that developments that fail to receive desirable forms or levels of survey coverage would involve less intensively developed fields or isolated wildcat wells, where disruption of nest efforts would be of lesser consequence in the context of maintaining overall breeding bird populations.

Mortality of raptors from entrapment within, or ingestion of fluids from oil and gas reserve and production pits would be minimized by flagging/netting requirements. Emphasizing conductor separation, rather than installing deterioration-prone perch deterrent devices on electric transmission facilities, would enhance long-term protection of raptors from electrocution.

Impacts From Proposed Oil Shale Management On Raptors

Developing oil shale on 50,000+ acres would cause long-term rest and foraging habitat losses for all breeding raptors. Pinyon/juniper habitats would be reduced by about 10 percent in the Piceance GRA, or five percent Resource Area wide. Buteo hawk and golden eagle nest territories encompassing extensive open pit or disposal areas would be vulnerable to abandonment.

Impacts From Proposed Sodium Management On Raptors

Full field development of all current sodium leases would involve the long-term removal or deterioration of up to 1,000 acres (0.3 percent) of the GRA's suitable pinyon\juniper breeding or foraging habitat. With advance survey information on woodland raptor breeding activity, application of raptor TL and NSO stipulations would fully protect current year nesting functions and short-term nest habitat utility. Application of the nest habitat provision, designed to help maintain the long-term availability of woodland raptor nest and foraging habitats, may not be entirely workable in these mining situations.

Impacts From Proposed Coal Management On Raptors

Application of coal unsuitability criteria (1981 MFP Coal Amendment) would maintain nest and foraging habitats associated with about half the raptor nest sites (151 of 325) known to occur in the coal study areas. Ten ferruginous hawk, 80 red-tailed hawk, 36 golden eagle, 21 accipiter (primarily Cooper's hawk), and 3 prairie falcon sites occur in areas suitable for surface mining.

Land use objectives and stipulations often cannot reasonably be applied to surface mining operations and raptor values are usually compensated to a mutually acceptable degree (e.g., BLM, CDOW, USFWS) through special lease stipulations. Nesting substrate and habitat of those raptors not considered in the unsuitability criteria or law (especially owls and accipiters) remain vulnerable to loss or adverse modification.

Although prey populations may be depressed for a period after mining, buteo hawks and eagles would be capable of exploiting available prey soon after reclamation. Use by woodland adapted species would be foregone for extended periods of time. Woodland restoration is prolonged and, in many cases, extensive reestablishment of these components is not considered feasible.

Although not forecasted, any surface mine activity in the Danforth Area would likely involve aspen and mixed brush communities occupied by woodland dwelling raptors (e.g., northern goshawk, Cooper's hawk, pygmy and flammulated owl). Over 9,000 acres of preferred aspen nest substrate (primarily private surface), or 81 percent of that in the Danforth Study Area, remains subject to surface mining.

In the Rangely Study Area, pinyon\juniper habitats subject to long-term modification represents about 15 percent of woodlands available in the Wolf Creek/Red Wash GRA and about five percent of those in both the Piceance and Douglas/Cathedral GRAs (about five percent

Resource Area wide). About nine percent of the resource area's ferruginous hawk and burrowing owl habitat remains vulnerable to surface mining. Compatible post-mine land use objectives and reclamation would abbreviate the longevity of impacts imposed on shrubland/herbaceous habitats required by these species such that impacts could be reduced to minor proportions in the long term.

The full range of raptor-related land use decisions (TL and NSO stipulations) are normally applicable to the ancillary facilities of underground mining operations. These stipulations would be sufficient to minimize or compensate impacts on raptor nesting activity to the satisfaction of BLM, CDOW and USFWS.

Impacts From Proposed Mineral Materials Management On Raptors

Application of TL and NSO stipulations and nest habitat objectives would maintain the short-term integrity of occupied cottonwood stands for woodland raptor use and promote maintenance of long-term site potential.

Implementing the CSU stipulation in the White River ACEC, designed to maintain and promote development of riverine woodland associations, would help prevent significant involvement of riverine nest and foraging habitats. Shifting development emphasis to floodplain or terrace situations devoid of riparian vegetation would provide opportunities to create or promote development of riparian communities where none previously existed.

Impacts From Proposed Hazardous Materials Management On Raptors

Removing and/or preventing hazardous material releases would have the obvious benefit of minimizing potential direct mortality or adverse effects on reproductive or behavioral function.

Impacts From Proposed Plant Communities Management On Raptors

Improving range or woodlands from early-seral condition to conditions which more closely reflect natural community characteristics would be desirable and consistent with long-term raptor management. Raptor and associated prey response to communities progressing from mid to high-seral condition would be less pronounced than improvements applied to early-seral ranges, but because of widespread application, it is reasonable to predict long-term, broad-based benefits to these groups.

Woodland understory components would be enhanced without compromising dominant canopy structure on about 35 percent of the pinyon/juniper base, and would be conducive to the development of a more diverse assemblage of prey available to woodland dwelling raptors. Improving woodland habitats through long-term canopy modifications would be integral with the woodland, timberland, wildlife (big game), and livestock grazing programs, and are discussed under those sections. However, woodland canopy conditions associated with mid-seral stages would be explicitly reserved from canopy modification practices where necessary to maintain the suitability of woodland raptor nest habitats. Treatment of encroaching pinyon/juniper woodlands would target younger regeneration (trunk diameters of eight inches or less) which provide little roost or perch substrate and appear to support inferior prey populations. Although it is unlikely that conversion represents a reduction in historic woodland habitat, disallowing woodland maturation may limit future opportunities to offset reductions in habitat attributable to unavoidable mature canopy manipulations. Maintenance of disclimax brushlands would enhance the forage utility of this land base for wintering and resident buteos and eagles. Open ranges suited for winter foraging use by such species as rough-legged hawk would increase by about 10 percent for up to 50 years. Although breeding buteos and eagles whose territories encompass project locales may enjoy slightly improved reproductive success, overall population levels would remain static.

Improving herbaceous expression beneath shrub canopies in the short term, and opening closed shrub canopies in the longer term, would be expected to enhance foraging opportunity across 41 percent of shrub and grassland types for wintering and breeding buteos and eagles (e.g., ferruginous hawk and golden eagle) and would contribute to the maintenance of local populations.

Impacts From Proposed Riparian Management On Raptors

Enhancing riparian conditions may dramatically improve or create nesting and/or foraging habitat for several species of owls, accipiters, and the northern harrier, as long as the system possesses the potential to develop vegetation forms amenable to raptor occupation. Directed management of high and medium-priority riparian systems would extend potential raptor-related benefits to 50 percent of the riparian acreage available in the Blue Mountain GRA and 80 to 90 percent of riparian habitats available in the remaining GRAs.

Impacts From Proposed Special Status Plants And ACEC Management On Raptors

Applying ACEC-wide NSO stipulations would reserve about 710 acres of spruce-fir in the Douglas/Cathedral GRA (two percent GRA-wide) and about 520 acres of aspen in the Blue Mountain GRA (48 percent GRA-wide) from adverse surface occupation or disturbance. These forest habitats represent preferred nest and foraging habitat for woodland-dwelling raptors.

Application of riparian-related COAs and the bald eagle CSU stipulation to riverine riparian communities within the White River ACEC would help promote the long-term development and continued availability of raptor nest and foraging habitat on about 120 acres of BLM-administered lands along the river.

Impacts From Proposed Timber And Woodland Management On Raptors

Applying NSO and TL stipulations and treatment prescriptions to all commercial timber and woodland harvest operations would be sufficient to maintain the integrity of known nest territories in the short term.

Commercial timber harvest operations would involve up to three percent of federally-administered spruce-fir types in the Resource Area over plan life. These treatments, applied in small, widely dispersed tracts, would be compatible with the maintenance and continued development of mature forests suitable as woodland raptor nest and foraging habitat. Incorporating raptor-oriented design features and objectives (e.g. diverse structural properties, contiguous mature canopies) would ensure that the subsequent utility or availability of woodland raptor nest and foraging habitats would remain essentially unaffected. Harvest effects on aspen habitats would be similar to those discussed for the coniferous forest types. Although harvest effects cannot be quantified prior to stand inventory and evaluation, it is believed that stated aspen management objectives would tend to enhance long term nesting and foraging properties associated with aspen (e.g. cavity dwelling raptors and prey species).

Small annual harvest increments in forest types would allow thorough nest inventory prior to harvest. Application of raptor nest provisions would effectively prevent disruption of ongoing nest activity or short-term deterioration in nest habitat suitability. Applying snag retention objectives would reduce localized, short-term effects of timber harvest on cavity dwelling species.

Until the status of arboreal (i.e. >5 inch basal diameter) oakbrush types is established, it remains uncertain what influence personal use harvest limits would have on the long term availability of this vegetation form as nest substrate and canopy structure/cavity substrate for raptors and associated prey species.

Implementing a prescribed rotation age of 300 years for commercial clearcutting of pinyon-juniper is believed adequate to achieve mature/over-mature canopies or cavity development required by many woodland-dwelling raptors and their prey (e.g., bushy-tailed woodrat, northern goshawk, ash-throated flycatcher) through rotation. Although selection-cut areas would likely remain suboptimal for nesting use by mature canopy obligates, they would remain adequate as foraging habitat and available for more generalized prey species at reduced diversity and population levels. Through plan life, commercial harvest of pinyon-juniper woodlands would reduce habitat suitable for mature canopy obligates by less than one percent in the Douglas and Piceance GRAs; impacts on more common woodland associates would be about half that amount. In the long term, harvest areas composed of sub-200 year trees would involve about four percent of the resource area's mature to over-mature nest and foraging habitat. Effective loss of habitat would be limited to about five percent for mature canopy obligates and less than three percent for more generalized pinyon/juniper associates.

Snag retention would be effective in minimizing adverse effects on cavity dwelling species and prey in the short term (e.g., mountain bluebird), particularly as applied to selection cut areas.

Impacts From Proposed Livestock Grazing Management On Raptors

Implementing the primary objectives of the grazing EIS would increase the vigor, abundance and availability of herbaceous forage in the interest of improving watershed conditions and reducing the intensity of ungulate grazing influences. Well developed vertical distribution of vegetation is essential for maintaining or enhancing conditions necessary to sustain the variety and abundance of prey required by all raptors.

Reducing pinyon/juniper canopies during forage enhancement treatments would decrease habitat suitable for woodland raptor foraging and future nesting functions by about 1 percent Resource Area-wide. These effects would persist until reestablishment of mature woodland canopies (minimum 150 years post-treatment). Big game cover objectives would tend to distribute shrub and grassland types more uniformly through woodland habitats, and focus efforts on larger or more contiguous woodland tracts. Conversely, contiguous woodland stands of up to 800 acres in size could qualify for maintenance under cover distribution criteria.

Application of raptor nest stipulations and treatment restrictions would be sufficient to maintain the integrity of known nest territories in the short term, and would be capable of reserving up to 500 acres of surrounding woodland for longer-term nest and foraging functions.

Impacts From Proposed Wild Horse Management On Raptors

Horse management and its influence on raptor prey and habitat would be similar in nature and additive with the grazing-related effects of livestock and big game. The influence of maintaining horse numbers at desired levels within the HMA (involving about 17 percent of the Piceance and Douglas/Cathedral GRAs) would be indistinguishable from that currently authorized (i.e., about three percent herbaceous production).

Vegetation removal attributable to horses in the West Douglas and remainder of the North Piceance Herd Areas would persist at reduced levels for up to 10 years. At objective populations, forage use would decline from an average of about six percent to three percent of herbaceous production. In the long term, horse removal from these Herd Areas would reduce overall forage use intensity across 24 percent of the Douglas/Cathedral and Piceance GRAs by a minimum four to eight percent and would be capable of increasing plant material remaining after livestock and big game use by at least two to five percent. Horse removal would contribute incrementally to reductions in forage use intensity and improved understory expression--a key determinant in the condition and capacity of habitats to support raptors and their prey base.

Impacts From Proposed Big Game Management On Raptors

Overall big game grazing use and its influence on herbaceous and woody understory development within shrubland and woodland habitats would remain static in the short term. Under current big game population objectives and as big game habitat utility is incrementally improved through the implementation of big game habitat management objectives, it is anticipated that understory expression and associated conditions for raptors and associated prey would undergo slow, widespread improvement in the long term.

Big game's influence on the habitats of raptors and associated prey species is most pronounced on late winter ranges where concentrated use by deer make heavy demands on woody and herbaceous vegetation beneath pinyon/juniper canopies. Particularly during severe winters, cumulative ungulate use depresses vigor and reproduction of deciduous browse and subsequently suppresses subdominant expression and the woodland's structural complexity. Strong reductions in deer population objectives in the Crooked Wash/Deep Channel and Piceance GRAs would contribute to decreased use and improved vigor of browse forage, and would expectedly enhance understory expression beneath woodland canopies and improve the overall suitability of these habitats as woodland raptor foraging and nesting habitat in the long term.

Vegetation treatments designed to reduce forage use levels and improve the vigor of deciduous browse is consistent with broad-scale, long-term enhancement of raptor foraging and nesting habitats. Improvements to herbaceous cover (e.g., cover and forage for granivorous birds, small mammals) and shrub expression (e.g., nest and foraging substrate for insectivorous birds) enhances the capability of any community to support a varied and sustained prey base.

Habitat improvements (i.e. woodland and timber treatments) would be heavily integrated with the livestock and forestry programs. Manipulating a maximum three percent of BLM's spruce and fir and up to six percent of aspen types in manners which improve age-class distribution in small, dispersed units would not affect the integrity of

occupied nest habitats and should maintain or enhance the long-term suitability and extent of nest and foraging habitat. Implementing big game objectives would tend to disperse pinyon-juniper woodland manipulations more uniformly across the area, but would also serve to retain about 40 percent of woodland cover within project locales. Flexibility within big game cover retention objectives allow reservation of contiguous woodland tracts of up to about 800 acres.

Impacts From Proposed Special Status Wildlife Management On Raptors

Protecting special status wildlife habitat and activity (e.g., bald eagle, black-footed ferret) would serve to maintain a number of specialized habitats for breeding and wintering raptors. Minimizing or offsetting disruption of habitats occupied by prairie dogs would help to maintain habitat components considered essential for the resource area's entire burrowing owl and ferruginous hawk populations. Prohibiting activities which detract from the suitability or utility of riverine bald eagle habitats would preserve existing cottonwood stands highly preferred by a number of breeding, migrant and wintering woodland-dwelling raptors.

Impacts From Motorized Vehicle Travel And Recreation Management On Raptors

Unregulated motorized vehicle travel with no area-specific controls during sensitive wildlife timeframes, likely exerts subtle influences on the successful outcome of raptor breeding attempts. Limitations on the proliferation of primitive roads or trails from off-road travel, would also influence raptor breeding attempts. Assuming raptors tend to locate nest sites >100 yards from road-related influences, average road densities of 1.5 miles per square mile would reduce potential nest habitat extent up to 10 percent; at road densities greater than four miles per square mile, indirect habitat loss may exceed 25 percent.

Implementing road-density objectives would contribute indirectly to the long-term maintenance of nest habitat suitability and utility by stabilizing road densities on up to 85 percent of the Resource Area, particularly for woodland-dwelling raptors occupying higher elevation pinyon/juniper, aspen and spruce-fir woodland and forest types. In the long term, these objectives would allow road density reductions of 50 percent or more in oil and gas development areas, which could restore up to half the habitat utility potentially lost during development.

More specifically, application of road-density objectives to the ferret recovery areas would prevent further road-related encroachment across 28 percent of the ferruginous hawk breeding habitat available in the Resource Area (encompassing 50 percent of known nest sites). Maintaining roadless conditions in the Bull Canyon/Willow Creek/ Skull Creek WSA complex would help maintain optimal nesting conditions for associated raptors. Closures applied to the Oil Spring ACEC would maintain the utility and long-term integrity on a small (two percent) portion of the spruce-fir habitat available in the Douglas/ Cathedral GRA. Restricting motorized vehicle travel in the Moosehead Mountain area would maintain optimal nest habitat utility on 500 acres or 45 percent of the aspen habitats available in the Blue Mountain GRA.

Impacts From Proposed Land Use Authorizations Management On Raptors

Excluding right-of-way issuance on Moosehead ACEC and BLM tracts within the Oak Ridge State Wildlife Area would be consistent with NSO stipulations proposed for these areas. With the exception of about 30 acres within the Moosehead ACEC, 40-50 percent of favored aspen nest and foraging habitat available in both the State Wildlife Area and Blue Mountain GRA would be exempt from surface occupation or disturbance.

Impacts From Proposed Land Tenure Adjustments On Raptors

Conditional exchange actions would require wildlife issues and concerns to be evaluated on a case-by-case basis, and if necessary, alternate disposal packages developed to alleviate or offset significant losses of important raptor-related values. Retaining and supplementing the collective land base associated within the ACECs and WSAs would contribute to the long-term availability of raptor nest and foraging habitats (particularly for woodland dwelling species). These special management areas encompass nine percent of the resource area's pinyon/juniper woodlands, 50 percent and 32 percent of aspen in the Blue Mountain and Piceance/Douglas GRAs, and 25 percent of spruce-fir types in the Piceance and Douglas/Cathedral GRA complex.

Impacts From Proposed Access Management On Raptors

Potential for road/trail proliferation and intensified land use on raptor nesting habitats initiated once public access is developed would generally be acceptably minimized with the incorporation of appropriate travel management restrictions.

Impacts From Proposed Fire Management On Raptors

Small, high-frequency fires are generally advantageous in maintaining the dispersion and distribution of forage and cover components required to maintain nest and foraging substrate for raptors in the long term. Fire suppression strategy along the White River corridor would help maintain the short-term availability of riverine woodland and shrubland habitats as a limited and specialized habitat for nesting and winter use activities of raptors and associated prey.

Cumulative Impacts On Non-T/E Raptor Management

Manipulating woodlands and brushlands would increase the extent of suitable foraging area for buteo hawks, eagles, falcons, and harriers by up to 15 percent for 50 to 60 years. Woodland manipulations would reduce nest and foraging habitat capacity for woodland associates by an estimated four percent through plan life. Species obligate to mature pinyon/juniper would experience long-term (i.e., rotation age) reductions in habitat capacity of about eight percent, with reductions in any individual GRA not exceeding about 10 percent (Douglas/ Cathedral GRA). Habitat capacity for more generalized breeding raptors and other non-game species and winter foraging habitat would decline by no more than about five percent in the long term under selective woodland harvest regimens and with defined snag retention guidelines. Modification to spruce-fir and aspen habitats may approach two percent for each type through plan life, but would not be expected to depress habitat capacity for associated species.

Cover dispersion objectives (i.e., enhancement of big game habitat utility) applied to woodland manipulations would maintain or reserve tracts of woodland cover suitable for woodland raptor nest and foraging functions within treatment locales and would allow retention of contiguous woodland tracts of up to 800 acres--conditions conducive to the long-term availability and development of canopy characteristics required by more specialized woodland dwelling raptors (e.g., northern goshawk) and associated non-game species (e.g., hermit thrush).

Enhancing herbaceous understory composition and condition would improve the abundance and diversity of non-game prey available to breeding and wintering raptors on up to 50 percent of grassland/ shrubland habitats (soaring raptors) and up to 40 percent of woodland habitats (woodland raptors). These effects would be subtle, but may be expected to increase nest success and recruitment slightly in the long term. Acting similarly, general declines in winter deer populations, particularly in the Piceance and Crooked Wash GRAs, would reduce browse use by as much as one-third and promote enhanced structural complexity beneath pinyon/juniper canopies on up to 36 percent of lower elevation woodlands in the long term.

NSO and TL stipulations would fully protect annual reproductive efforts and the short-term utility of nest territories. Applying nest habitat provisions and improved nest detection gained via inventory requirements would help maintain the integrity of established territories for extended periods of time.

Limiting road densities and/or the proliferation of new roads and trails on federal lands would help stabilize or slightly reduce disruption of nesting activities or disuse of suitable habitat (estimated at 10 percent) attributable to road-related activity on up to 65 percent of the Resource Area in the long term, including 80 percent of pinyon/juniper and ferruginous hawk/burrowing owl breeding habitats, and 46 percent of aspen/spruce-fir habitats.

GROUSE HABITAT MANAGEMENT

Impacts From Proposed Grouse Habitat Management On Grouse Habitat

Habitat manipulation and enhancement objectives pertinent to grouse would be widely integrated with wildlife, livestock, riparian, watershed, and plant community objectives and would emphasize restoration of riparian systems within brood ranges and treatment of habitats suboptimal or unsuitable for grouse use. It is estimated that the treatment of suboptimal habitats would be capable of increasing the extent and continuity of suitable habitats by up to 20 percent in the long term.

Application of herbaceous cover objectives on all grouse nest and brood habitats would provide the means to enhance nest and brood concealment and favorable micro-climatic conditions at the nest site such that production (i.e. successful nest attempts) and recruitment of young (i.e. survival) would be expected to increase, by an undetermined degree, in all populations. Implementation of herbaceous cover objectives would involve plan revision or development on 34 grazing allotments (likely developed through comprehensive IAPs).

Cumulative adverse alteration of suitable sage grouse nest habitats associated with individual leks would be limited to 10 percent. Application of distribution guidelines to unavoidable involvement would promote the development of interspersed mosaics to enhance brood habitat quality or minimize adverse influences on short term nest habitat utility. Sagebrush stands which satisfy winter and brood rearing functions of sage grouse would be avoided to the extent practical.

Provisional reintroduction of sagebrush on large sagebrush removal events within sage grouse habitats would accelerate the development of sagebrush canopies satisfying general (i.e. brood, late summer, winter) grouse requirements on up to 20 percent of the treated acreage in the short term and would help abbreviate the longevity and magnitude of impact on suitable nest and overall habitat conditions.

NSO and/or TL stipulations applied to leks would be effective in preventing disruption of breeding activities and maintaining annual lek visitation and would further serve to maintain important features and sites associated with strutting activities (e.g. male loafing areas). TL stipulations applied to sage grouse nest habitat would prevent significant levels of nest failure and abandonment once 10 percent or more of suitable nest habitat associated with individual leks is adversely influenced by any land use activity. TL stipulation timeframes would allow about 75 percent of nesting attempts to progress unmolested through hatch across 90 percent of delineated nest habitat.

Priority blue grouse nesting and brood rearing areas in the Piceance and Blue Mountain GRAs are largely encompassed by those of sage grouse. Sage grouse provisions would yield concurrent benefits to approximately 35 percent of potential blue grouse nest and brood habitat extent in the Resource Area.

Blue grouse-related habitat objectives provide incentive to minimize adverse modifications of aspen/deciduous shrub (i.e. brood function) and coniferous forest (i.e. winter use) habitats by requiring incorporation of reclamation techniques that would maintain long term site potential and accelerate recovery of desirable stand characteristics. Deferral of livestock use beneath aspen canopies until brood maturation would promote optimal brood and nest conditions throughout blue grouse range and help minimize environmental and predator-related mortality associated with deficient cover. Reservation or development of 50 percent mature to over mature age classes within individual conifer stands would be sufficient to maintain the current utility and distribution of preferred blue grouse winter habitats and would prevent localized long term population reductions.

Establishing and/or augmenting native grouse populations (e.g., sharp-tailed and ruffed grouse) would be considered on a case-by-case basis, as a means of reestablishing self-sustaining populations of endemic wildlife and complementing State wildlife objectives.

Impacts From Proposed Soils, Surface Water, Ground Water, And Water Rights Management On Grouse Habitat

Implementing objectives for soils, surface water, ground water, and water rights management would complement enhancement of coincident sage grouse nest and brood habitats by promoting soil stability and the improvement or restoration of riparian systems and associated upland vegetation, notably in lower elevation sagebrush/ saltbush vegetation types. Properly designed watershed treatments would improve grouse habitat by increasing herbaceous forage availability and improving the long-term suitability of suboptimal sagebrush stands for sage grouse use. Long-term improvements may be evident on 18 percent of all grouse habitats in the Resource Area.

Improvements to upland herbaceous cover and riparian conditions would involve 20 miles of channel and up to 32 percent of BLM-administered brood and production areas in GMU 10. Watershed improvement practices applied to the Black's and Crooked Wash drainages would involve 63 percent of BLM-administered lands occupied by grouse within the Crooked Wash/Deep Channel GRA. Applying vegetation treatment guidelines to watershed improvement practices involving suitable sagebrush habitats would minimize adverse short term modifications in sage grouse habitat utility, while treatments directed at unsuitable or suboptimal sagebrush stands may improve habitat utility in the long term.

Conditional NSO stipulations applied widely to landslide areas and fragile soils would substantially reduce deterioration in soil productivity and habitat suitability associated with accelerated erosion induced by surface disturbing activities.

Impacts From Proposed Oil And Gas Management On Grouse Habitat

Current direct loss or modification of sage grouse habitats attributable to facility occupation is estimated to be seven to eight percent within oil and gas fields, which represents one to two percent of like habitats available in the Resource Area. Implementing proposed habitat objectives (i.e., avoidance of suitable nest, brood and winter sagebrush habitats) would be capable of reducing the involvement of suitable in-field habitats at full oil and gas development to half the unmitigated extent (i.e. nine to 12 percent in-field or two to three percent of population-wide habitat), and would limit cumulative adverse modification of suitable nest habitat to no more than 10 percent of that available in individual lek/nest complexes.

Clearing vegetation associated with pipeline right-of-ways may enhance certain habitat values (e.g., increased availability of insect and herbaceous forage for broods), but indirect impacts on production (nesting) areas through subsequent use of these corridors as vehicle and predator travel lanes may detract from habitat suitability or effective utility. Surface use activities within nesting habitats would likely disrupt most nesting efforts within 200 feet of disturbance through direct harassment and increasing the susceptibility of nests to predation. At average road density levels (1.5 miles per square mile), it is estimated that a minimum 10 percent of potential nest habitat would be vulnerable to road-related impacts. Current levels of in-field oil and gas development subject approximately 20 percent of sage grouse nest habitat to indirect nest habitat impacts; full-field development may involve 30-40 percent of suitable nest habitat. The eventual application of road density objectives (applied to big game critical habitats and ferret reintroduction areas) would serve to stabilize or strongly reduce road-related influences on all sage and blue grouse production areas encompassed by oil and gas fields. Both during (short-term) and after (long-term) oil and gas development.

NSOs established around sage grouse leks would be effective in sustaining long-term site utility by preventing disruption of breeding activities and the adverse modification of important physical features associated with lek attendance (e.g., male loafing sites).

Application of the conditional nest habitat TL stipulation would allow an average 75 percent of nesting attempts to progress through hatch on 90 percent of federally-administered nest habitat (i.e. 68 percent of average potential production on BLM estate) and would help encourage facility siting in suboptimal or unsuitable habitats, which may gain characteristics suitable for grouse after long-term reclamation. Up to 50 percent of blue grouse range in the Piceance and Blue Mountain GRAs, where blue grouse nesting activities are strongly coincident with sage grouse, would realize similar benefit.

The NSO stipulation applied to the Moosehead ACEC would reserve 14 percent and 48 percent, respectively, of all deciduous shrub and aspen communities in the Blue Mountain GRA from adverse surface occupation (habitat essential for blue grouse nest and brood rearing functions) and would also reserve four percent of the total nesting range and 10 percent of total brood range available to sage grouse from potential oil and gas-related influence in this GRA.

Habitat objectives and manipulation guidelines associated with blue grouse would encourage the avoidance or otherwise condition (via condition of approval) unavoidable adverse alteration of aspen, deciduous shrub and spruce-fir communities, where necessary, with special reclamation provisions requiring maintenance of long-term site potential and accelerated reestablishment of desirable community composition.

Impacts From Proposed Oil Shale Management On Grouse Habitat

In the event open-pit mining occurred on the approximately 12,800 acres of sage grouse range available for open pit mining (including about 6,400 acres of production/nesting areas), sage grouse overall range and production areas in the Piceance GRA would be reduced by about 15 percent in the long term. However, oil shale claim patenting has reduced BLM administration of overall grouse range by 60 percent, and effective management of suitable/optimal habitat has been reduced 80-90 percent.

Impacts From Proposed Coal Management On Grouse Habitat

Grouse-related impacts associated with coal unsuitability application and habitat restoration would be similar to those discussed under big game.

Extensive grouse nesting, brood and winter use areas and special habitat components (e.g., aspen and riparian types) not considered in the unsuitability criteria would be vulnerable to large scale loss or fragmentation. Sage grouse range available for surface mining (3,500 acres) in the Danforth Study Area represents about four percent of overall habitat available within portions of Game Management Units 12, 211, and 23. Sixty-eight percent of the Rangely Study Area is considered suitable for surface mining, including 90 percent of the area's delineated production/nesting habitat and two active leks delineated since 1981. This acreage represents 11 percent of GMU 10's delineated production/nesting habitat.

Full-scale development, in the Danforth Area, under current unsuitability classification, would involve no more than four percent of the Wilson Creek/Little Beaver sage grouse population and four percent of the resource area's blue grouse (within aspen and mixed brush communities) and possibly sharp-tailed grouse range. Applying surface stipulations in the Rangely area would effectively minimize adverse impacts to sage grouse, as underground mining (similar in surface use to oil and gas development) would likely remain the only form of coal extraction in this area.

Impacts From Proposed Mineral Materials Management On Grouse Habitat

Applying NSO stipulations would prevent adverse site alterations to sage grouse leks that may be affected by mineral material sales. Incorporation of proposed grouse habitat objectives would limit cumulative declines in the availability or distribution of sage grouse nesting and brood habitats to 10 percent.

Application of big game-related habitat objectives would effectively limit localized (1 mile radius) reductions in sage grouse winter habitat to 20 percent along the White River corridor, and would be instrumental in preventing severe short term losses of concentrated winter use areas associated with the Crooked Wash population.

Impacts From Proposed Hazardous Materials Management On Grouse Habitat

Removing and/or preventing hazardous material releases would have the obvious benefit of minimizing potential direct mortality or adverse effects on reproductive or behavioral function.

Impacts From Proposed Plant Communities Management On Grouse Habitat

Improving early and mid-seral sagebrush types with poorly developed herbaceous understories or canopies with excessive height and density would generally complement nest, brood, and summer/fall functions of grouse. Treatment of mid-seral sagebrush communities that serve important grouse-related functions would be maintained or treated in a manner that would not impair those values. Seral improvement in low elevation ranges in the Wolf Creek/Red Wash and Crooked Wash/ Deep Channel GRAs may increase the utility and extent of spring/ fall habitats by 10-15 percent in the long term.

Application of sage grouse habitat objectives would provide the flexibility to improve herbaceous cover and forage components of mid-seral habitats (e.g., sage grouse nesting) without compromising requisite canopy functions, would circumvent progressive declines in sagebrush canopy density associated with seral advance, and promote broad-scale maintenance of suitable sage grouse nesting and wintering habitat characteristics in the long term.

Blue grouse populations would be affected similarly to sage grouse where the species tend to use sagebrush habitats for nesting/brood-rearing functions (e.g., Blue Mountain GRA).

Maintaining disclimax mountain shrub types (i.e., preventing pinyon/ juniper encroachment) on ranges peripheral to occupied sage grouse ranges would likely reestablish function to formerly occupied habitats. These measures would be most influential in the Piceance GRA, where suitable habitat extent for sage grouse could be expanded by two to three percent.

Impacts From Proposed Noxious And Problem Weeds Management On Grouse Habitat

Timely control of noxious and problem weeds in compliance with Area and Bureau NEPA documents may temporarily suppress important vegetation components of grouse habitats on a local basis, but would serve to slow or halt weed infestations which threaten long term grouse habitat suitability on a broad scale.

Impacts From Proposed Riparian Management On Grouse Habitat

Improving identified high and medium priority riparian systems would enhance 15 and 11 percent of grouse brood ranges in the Blue Mountain and Piceance GRAs, respectively, and 34 percent of overall range extent in the Crooked Wash/Deep Channel GRA by increasing the availability of succulent herbaceous forage.

Impacts From Proposed Special Status Plants And ACEC Management On Grouse Habitat

Certain tracts of special status plants would add incrementally to the maintenance of suitable blue grouse winter habitat (e.g., Douglas-fir stands), however, due to their very small size and widely distributed nature, they cannot be expected to contribute significantly toward grouse habitat objectives when viewed individually.

Reserving 14 percent and 48 percent of all deciduous shrub and aspen communities in the Blue Mountain GRA from surface disturbance via CSU application on the Moosehead ACEC would contribute toward the maintenance of a habitat base essential for blue grouse nest and brood rearing functions.

Impacts From Proposed Timber And Woodlands Management On Grouse Habitat

Personal-use harvest limits directed at tree-like clones of oakbrush (over 5 inches diameter) may exceed the plant's regenerative capacity and, in the long term, substantially reduce a preferred source of midday cover for blue grouse through the summer and fall months. Tree-like oak clones in the Danforth/Jensen GRA epitomize savannah-type landscapes, and may constitute valuable sources of seasonal forage and cover for sharp-tailed grouse.

Harvesting small, widely dispersed stands of spruce and fir would achieve wildlife, riparian and stand structure objectives (i.e., enhancement of stand diversity, persistence and composition) without reducing local winter habitat availability or utility for blue grouse. Harvests of this nature would likely enhance blue grouse brood-rearing habitats and remain compatible with the long-term maintenance of winter use functions.

Enhancing stand age diversity and understory composition in decadent aspen sites would improve the extent and distribution of habitats suitable for summer and late brood functions of blue grouse.

Impacts From Proposed Livestock Grazing Management On Grouse Habitat

Changes in livestock management predicted in the grazing EIS would benefit grouse nesting and brood rearing functions by increasing forb availability (forage) and effective herbaceous cover (thermal cover and predator concealment) during the nesting and early brood-rearing period. Grazing use that reserves 50 percent of the annual herbaceous production through mid September is considered compatible with grouse cover and forage management objectives. Investigating opportunities to maximize the extent of brood range that retains 50 percent herbaceous growth (by weight) through the end of the brood period would extend to all brood and nest habitats in the area and would either attenuate reductions in herbaceous cover through the brood period or allow regrowth such that suitable brood properties are restored within the brood period. Implementation of this objective would apply to 34 grazing allotments.

Grazing use objectives would help restore, and/or improve riparian/wet meadow areas or upland meadows on up to 11, 15, and 54 percent of grouse ranges in the Piceance, Blue Mountain and Crooked Wash/Deep Channel GRAs, respectively. Sagebrush treatments within occupied grouse range would be encouraged on suboptimal sagebrush stands, and cumulative short term loss of nesting cover would be limited to 10 percent. Treatment of suboptimal sagebrush stands on occupied ranges would enhance long-term maintenance of sage grouse habitat in terms of diversifying age and form class, enhancing herbaceous ground cover and averting potential for catastrophic fire events. Coordination with CDOW, concerning project siting, size and configuration, would continue.

Although applicable only to the Piceance GRA, manipulation of pinyon/juniper encroachment and subsequent reversion to shrub types suitable for grouse occupation, is capable of expanding the habitat base available for grouse in this GRA by about three percent. Manipulating mountain shrub vegetation within blue grouse and remnant sharp-tailed grouse habitat would generally complement grouse management, particularly under proposed big game distribution objectives, as these communities generally develop structural characteristics suitable for grouse within 4 to 5 years of treatment.

Reestablishing sagebrush when undesirable habitat reduction events exceed 500 acres would allow restoration of sagebrush canopies to the minimum required for general sage grouse utility, and would accelerate development of conditions suitable for more specialized functions (e.g., nesting cover) in the long term.

Livestock management facilities (e.g., fences, trails, waters) would be necessary and integral tools for redistributing livestock use and enhancing management flexibility in a manner favorable to grouse.

Impacts From Proposed Wild Horse Management On Grouse Habitat

Grazing use by authorized numbers of horses is inclusive with grouse-related effects discussed in the livestock management section. Continued use of mountain shrub and sagebrush communities by wild horses would contribute to the reduction of herbaceous production as ground cover on nest and brood-rearing habitats of both species of grouse. Peak horse use within the herd areas and HMA is estimated to add 10 to 15 percent to forage consumption levels in areas occupied by blue and sage grouse. Horse use above prescribed allocation has been implicated in the past as a primary factor in seriously overgrazed herbaceous cover components on brood and nest habitats in western Piceance Basin, in particular the Square S-Pasture C and Boxelder allotments.

In the revised HMA, horse use would coincide with 13 percent of nest and brood ranges in the Piceance and Douglas GRA complex and six percent of overall range associated with the Crooked Wash population. Vegetation removal attributable to horses in the West Douglas and remainder of the North Piceance Herd Areas would persist at reduced (50 percent) levels for up to 10 years. Forage use would decline from about six percent (current situation) to three percent of herbaceous production. In the long term, horse removal from these Herd Areas would reduce overall forage use slightly on about 10 percent of the Douglas/Cathedral GRA's blue grouse range and 16 percent of sage grouse range associated with the Wolf Creek/Red Wash complex (e.g., Boise Creek). Horse removals may increase plant material remaining after livestock and big game use by two to five percent (by weight), and may increase effective ground cover height in these areas by 10-15 percent.

Impacts From Proposed Big Game Management On Grouse Habitat

Browse use objectives would relieve excessive big game use of sagebrush and facilitate long-term maintenance of lower elevation sage grouse habitats (i.e., Crooked Wash/Deep Channel and Wolf Creek/Red Wash GRAs). Implementing big game objectives under reduced big game population targets would be capable of yielding improvements in grouse habitat conditions within plan life.

Forage retention objectives applicable to deer winter and pronghorn overall ranges may reserve up to 80 percent of the Public Land sagebrush habitats delineated as brood, winter and overall sage grouse ranges in the Wolf Creek/Red Wash and Crooked Wash/Deep Channel GRAs, and about 15 percent in the Blue Mountain and Piceance and Douglas/Cathedral GRAs. This indirect reservation of sagebrush involves nearly 50 percent of all occupied sage grouse habitats in the Wolf Creek/Red Wash and Crooked Wash/Deep Channel GRAs, and five to seven percent in the Blue Mountain, Piceance, and Douglas/Cathedral GRAs.

Reserving brush cover types (40 percent on localized basis) for big game would diversify mountain browse stand characteristics and complement long-term brood and nest habitats for both grouse. Similarly, big game objectives would minimize occupancy or long-term site conversion of aspen and coniferous forest types and reduce involvement of coincident blue grouse winter and brood habitats. Directing mountain browse treatments to stands unsuitable for grouse use may enhance utility of up to 17 percent of this type within blue grouse range.

Limiting road density on big game critical habitats to 1.5 miles/square mile on 10-15 percent of all sage grouse production areas in the Piceance and Blue Mountain GRAs would indirectly maintain or slightly reduce nest disruption. Additional road density limitations (3 miles/square mile) would stabilize road densities across remaining grouse ranges.

Impacts From Proposed Fisheries Management On Grouse

Enhancing channel function on those fisheries identified for improvement would provide localized benefit to blue grouse brood habitats by increasing the availability and distribution of valley sites offering sources of herbaceous cover and forage through the entire brood period. Benefits would be realized on about two percent of blue grouse ranges in the Piceance GRA and up to eight percent of those in the Douglas/Cathedral GRA.

Impacts From Proposed Special Status Wildlife Management On Grouse Habitat

Eventual application of road density objectives in the ferret recovery areas would maintain or slightly reduce nest disruption on about 31 percent of sage grouse production areas in the Wolf Creek/Red Wash GRA.

The influence of Colorado River cutthroat trout management on blue grouse brood habitat is integral with Grouse Management-Fisheries.

Impacts From Proposed Wilderness Management On Grouse Habitat

Reverting Oil Spring Mountain and Windy Gulch WSAs to multiple use status would predispose all or a portion of these areas (comprising about three percent of federally administered blue grouse range in the Resource Area) to exploration and development of mineral resources, livestock and forestry related vegetation manipulations and attendant access networks (see associated sections).

Impacts From Proposed Motorized Vehicle Travel Management On Grouse Habitat

Implementing vehicle management objectives for big game would indirectly aid in the maintenance of nest habitat suitability and utility in the long term. The eventual implementation of road density

objectives would limit road-related disruption of nest habitat to 10 percent on 10-15 percent of sage and blue grouse production areas in the Piceance and Blue Mountain GRAs and on 32 percent of sage grouse production areas in Wolf Creek/Red Wash GRA. Road density objectives applied to the remaining extent of grouse nesting range would generally stabilize road-related disruption of nest habitat at about 20 percent.

Access restrictions applied to the Moosehead ACEC would remove road-related influences from six percent of the grouse nesting habitat and 14 percent of brood habitats available in the Blue Mountain GRA.

Impacts From Proposed Land Tenure Adjustments Management On Grouse Habitat

The conditional exchange category allows evaluation of wildlife issues and concerns prior to any action that significantly affects important wildlife values. Through negotiated application of special stipulations or provisions, it is thought that any acquisition would prove neutral or advantageous to wildlife, including grouse resources.

Impacts From Proposed Access Management On Grouse Habitat

Problems associated with the expansion of public access, road proliferation and intensified land use on grouse nesting habitats would be minimized with the incorporation, if necessary, of compatible use restrictions.

Impacts From Proposed Withdrawals Management On Grouse Habitat

Precluding disposal by any means in oil shale withdrawals would, on occasion, prevent consideration of exchange important to the consolidation of high-value wildlife habitats.

Impacts From Proposed Fire Management On Grouse Habitat

Large recurrent or contiguous fire events on sagebrush ranges may exert significant influence on grouse habitat suitability. Extensive loss of cover and forage would depress habitat utility and/or forage availability in the short and long term, and would be most influential on winter concentration areas in the Crooked Wash/Deep Channel and Wolf Creek/Red Wash GRAs and nest/brood ranges in the Piceance and Douglas/Cathedral and Blue Mountain GRAs.

It is recognized that wildfires play a major role in maintaining the long term suitability of forage and cover components on grouse habitats. In the interest of maintaining stable grouse numbers, it is desirable to increase the dispersion and decrease the size of habitat modifications to levels consistent with the vegetation/habitat recovery rates.

Immediately suppressing fires on suitable sagebrush types would help minimize short term loss of concentrated grouse winter use areas (Crooked Wash/Deep Channel and Wolf Ridge/Red Wash GRAs). Immediate suppression would also be implemented on starts that could exceed 200 acres within important sage grouse nesting and brood-rearing areas (i.e., Piceance, Blue Mountain GRAs).

Cumulative Impacts On Grouse Habitat Management

Reducing big game and horse population objectives, implementing grazing use goals on nest and brood ranges and watershed improvements would enhance herbaceous cover and forage availability on up to 80 percent of BLM-administered grouse nest and brood habitats through and beyond plan life. Enhanced nest success and chick recruitment, attributable to improved ground cover and herbaceous forage, would have an indeterminate, but substantial long-term beneficial influence on grouse populations.

Applying grouse habitat guidelines as integrated with sagebrush forage retention (i.e., big game) guidelines and maintenance of mid-seral sagebrush canopies that provide important grouse-related values would relegate short-term losses of grouse nesting habitat to 10 percent and overall summer and brood range to no more than 25 percent over a 15 to 20 year period. Treatment of sagebrush unsuitable for grouse use (i.e., canopy density, height) would be capable of expanding the extent of suitable sagebrush habitats by five to 10 percent in the long term. As manipulated acreage (20-30 percent of sagebrush habitats) regains properties suitable for grouse use, long-term habitat capacity may exceed current levels by up to 15 percent.

Limiting aspen harvest to projects that enhance long-term stand age diversity and understory composition would be capable of improving the long-term utility of up to 20 percent of aspen-based blue grouse brood and summer use habitats available in the Resource Area.

Eventual application of road density objectives to all big game habitats would reduce the current extent of sage grouse nesting habitat vulnerable to disruption from road-based activities by up to five percent and would generally stabilize current levels (estimated at 20 percent) of road-related nest disruption on all nest habitat through and beyond plan life.

Application of TL and NSO stipulations would maintain annual sage grouse breeding activities and protect important lek site characteristics in the long term. Application of a nest season TL stipulation within sage grouse nest habitat would allow an average 68 percent of annual nest attempts to succeed within individual lek complexes.

Implementing various NSO stipulations on ACECs would preclude adverse surface disturbance on 12 to 14 percent of grouse production and brood areas in the Blue Mountain GRA, and 48 percent of its aspen type, as a key component of blue grouse brood and general summer habitat.

Implementing sagebrush reestablishment criterion on undesirable modification events over 500 acres would accelerate long-term restoration of habitats for year-round use, but possesses weaknesses in abbreviating the potential cumulative influence of small clumped events.

FISHERIES HABITAT MANAGEMENT

Impacts From Proposed Fisheries Habitat Management On Fisheries

All fisheries in poor condition would be improved to increase the ratings of nearly all (97 percent) fisheries to at least fair condition within 10 years of RMP completion such that channel conditions are poised for subsequent development (i.e., woody vegetation expression, undercut banks) as quality fisheries. In the long term, and primarily attributable to cutthroat trout fishery objectives, the complement of streams in good condition would increase from three percent to 44

percent. Improvements to channel structure, bank stability, water temperature, prey abundance, and flow persistence on these stream fisheries would be achieved through intensified livestock and beaver management and riparian vegetation reestablishment.

Improving riparian and aquatic conditions on these streams would enhance coexisting and downstream native fish populations, especially speckled dace. Acquiring potential or occupied fisheries and identifying all manageable stream segments with reasonable public access for channel improvement would expand BLM recreational fishing opportunity in the long term.

Physical deterioration of aquatic habitats supporting stream or pond fisheries would be minimized on a case-by-case basis such that the long-term development potential of affected streams would be maintained and significant short term disruption would be minimized. Prohibiting surface uses not compatible with aquatic and riparian restoration objectives pertinent to special status fisheries (mainly in the East Douglas drainage) would ensure that gains made in fisheries habitat quality would be additive and that constant long-term improvement on at least 47 percent of all stream fisheries could be expected.

Designating East Douglas Creek ACEC (encompassing about 90 percent of current Colorado cutthroat trout distribution in the Resource Area) would require an integrated site-specific activity plan which would prescribe actions and uses that would promote the long-term maintenance and enhancement of native fisheries.

Maintaining protective fencing on Trapper's Creek would promote continued improvement on about 13 percent of the area's cutthroat fisheries.

Impacts From Proposed Soils, Surface Water, Groundwater, And Water Rights Management On Fisheries

Maintaining proper soil processes on rangelands and grazable woodlands would indirectly benefit adjacent and all downstream fisheries by reducing upland sediment yield (overland and gully) and minimizing sediment-related impacts (e.g., turbidity, streambed smothering, channel instability) to fish habitats.

Conditional NSO and CSU stipulations applied to landslide and fragile soil areas would aid in stabilizing or reducing long term sediment yields, attributable to surface disturbance, to all fisheries.

Stabilizing fragile watersheds and improving water quality in identified streams would help maintain and support preliminary improvement of aquatic conditions (e.g., channel restoration) on about 10 percent of stream fisheries (i.e., 21 percent of cutthroat trout habitat).

Protecting and mitigating impacts to groundwater supplies and securing water rights on over 60 percent of the resource area's fisheries would minimize loss or deterioration of base flows and water quality necessary to maintain or promote further development of all stream fisheries.

Impacts From Proposed Oil And Gas Management On Fisheries

Applying a CSU stipulation to the proposed East Douglas Creek ACEC would ensure that oil and gas development would be conducted compatible with fisheries improvement efforts on 38 percent of the resource area's cold-water stream fisheries. Preventing surface disturbance incompatible with riparian maintenance or improvement standards would generally maintain most current fishery conditions on remaining stream habitats. Collectively, these measures would prevent future oil and gas operations from contributing substantially as an impediment to fisheries recovery objectives.

Impacts From Proposed Oil Shale Management On Fisheries

Developing a large-scale shale oil industry in the Piceance GRA would require significant water resources which would result in the permanent loss or severe deterioration of nearly 50 percent of BLM stream fisheries. Augmentation of appropriated water reserves would not be effective in sustaining current fishery conditions. Mitigation of these impacts would likely entail off-site compensation strategies developed and approved by BLM and CDOW during the mine plan stage.

Impacts From Proposed Mineral Materials Management On Fisheries

Implementing proposed fisheries and riparian objectives, in addition to the management emphasis proposed for the White River and East Douglas Creek ACECs, would effectively preclude sand and gravel operations from exerting substantial short-term or measurable long-term influences on any fisheries.

Sand and gravel operations within or adjacent to the White River would be subject to review by the BLM, CDOW and U.S. Fish and Wildlife Service (USFWS) where stipulations or operating constraints necessary to prevent significant impacts to riverine conditions and associated fisheries would be imposed.

Impacts From Proposed Hazardous Materials Management On Fisheries

Removing known sources and taking measures to prevent the release of hazardous materials minimizes the risk of aquatic contamination.

Impacts From Proposed Plant Communities Management On Fisheries

Improving expansive mid-seral grassland and sagebrush ranges to high-seral conditions would be influential in reducing sediment yields (e.g., turbidity, streambed smothering, stream channel instability) and enhancing infiltration and flow contribution to most Resource Area fisheries.

Improving riparian systems in early successional states would provide preliminary recovery or improvement on up to 15 percent of Colorado River cutthroat trout habitat or seven percent of all fisheries in the Resource Area.

Impacts From Proposed Noxious And Problem Weed Management On Fisheries

Controlling noxious weeds (notably in cutthroat fisheries of the East Douglas drainage) as detailed in the *Vegetation Treatments on Public Lands Environmental Impact Statement* would contribute directly to improved fisheries conditions by decreasing sediment yield and accelerating channel and bank restoration processes.

Impacts From Proposed Riparian Management On Fisheries

Implementing riparian objectives in conjunction with grazing limits would help stabilize affected banks and restore functional floodplain and channel configurations on over 90 percent of the resource area's cold water fisheries, thereby establishing a strong foundation for additional fisheries restoration or improvement measures (e.g., woody canopy development, further channel evolution). Emphasis on physical avoidance of riparian communities would complement the achievement of long-term improvement objectives established for general coldwater fisheries.

Impacts From Proposed Timber Management On Fisheries

Timberland management, in the context of commercial harvest, would have no measurable affect on fisheries management. Timber management practices applied in the interest of stand perpetuation and structural enhancement would be compatible the maintenance of, and desired improvements to, local fisheries.

Impacts From Proposed Woodland Management On Fisheries

Improved vegetative ground cover and reduced soil erosion susceptibility associated with woodland canopy modifications generally contribute to fisheries enhancement by reducing sediment and increasing base flow contributions to downstream habitats. However, long term removal or reduction of about five percent of the woodland canopy in the Piceance and Douglas/Cathedral GRAs would have little defined influence on Resource Area fisheries. Woodland harvest would remain available to correct localized watershed problems (e.g., deficient ground cover aggravating erosion and sediment yield) that may be adversely affecting fish habitat conditions.

Conditions of Approval (COA) applied to commercial harvest operations would be sufficient to prevent direct impacts and minimize/ abbreviate indirect impacts (e.g., siltation from harvested slopes and access roads) on affected fisheries to insignificant levels.

Prohibiting personal-use firewood cutting within any riparian community would prevent adverse modification of canopy-related fisheries values (e.g., shading, nutrient/forage input).

Impacts From Proposed Livestock Grazing Management On Fisheries

Implementing forage-enhancing woodland treatments would improve vegetative ground cover on about 27,000 acres or about two percent of the Resource Area through plan life. Similarly, about 11 percent of shrub communities and about 16,000 acres of 1960s-era pinyon/juniper chainings, representing five percent of the Resource Area, would be manipulated. Shrubs often perform effectively in retaining moisture on-site, prolonging soil moisture residency, and reducing soil puddling; however, enhancing herbaceous production and ground cover is generally believed superior for increasing infiltration available for baseflow contributions and improving soil holding properties- characteristics important in maintaining or improving fishery conditions.

Establishing compatible grazing practices on high and medium-priority riparian systems would improve channel and floodplain functions on 90 percent of the resource area's fisheries and establishes the primary basis for achieving prescribed fishery condition objectives.

Impacts From Proposed Wild Horse Management On Fisheries

Providing forage necessary to sustain current horse populations is comparable to 10-15 percent of forage currently allocated to prescribed numbers of livestock, horses and big game within affected allotments. Aggravating forage use likely detracts from herbaceous growth's functional capacity for erosion control and infiltration, subsequently increasing sediment yield and runoff intensity, and reducing sustained baseflow contributions to fisheries in the White River, Piceance Creek, and East Douglas Creek. Reducing long-term grazing intensity (by removal) by a minimum four to eight percent across 24 percent of the Douglas/Cathedral and Piceance GRAs would increase residual plant material by an estimated two to five percent. Decreased rates of vegetation removal would contribute incrementally to improved watershed function and the condition of downstream fisheries.

Impacts From Proposed Big Game Habitat Management On Fisheries

Forage use by big game in excess of that allocated for in the grazing EIS may represent use of that forage base reserved for watershed function, plant health, and small/nongame values and would contribute incrementally to increased sediment yield and runoff intensity and reductions in sustained baseflow contributions to all fisheries.

The indirect influences of big game forage use on fish habitats would likely remain static in the short-term, but as prescribed livestock/big game forage, plant community, and forestry objectives are fully implemented under reduced big game population objectives, the effects of big game use on herbaceous forage and watershed function would be expected to moderate appreciably over plan life.

Upland vegetation treatments associated with big game forage or cover enhancement would be largely integral with livestock, forestry and plant community treatments (see cumulative impact section). Manipulating up to five percent of aspen and coniferous forest as a means of diversifying canopy structure, increasing aspen composition, and improving subcanopy riparian conditions would contribute to localized improvement of watershed and channel conditions on up to 47 percent of occupied fisheries, while avoiding the potential effects of large-scale alterations.

Impacts From Proposed Recreation, Motorized Vehicle Travel And Access Management On Fisheries

Implementing riparian and fisheries (including Colorado River cutthroat fisheries) management and protection standards on all fisheries would be sufficient to minimize bank and floodplain vegetation damage attendant to fishing and camping activities. Closing unnecessary vehicular traffic in riparian areas, and confining use to designated roads and trails in the long term, would help reduce or eliminate localized instances where roads are contributing to slope and channel instability, and excessive stream sedimentation.

Acquiring and managing access to remote or land-locked fisheries (e.g., Bitter Creek, West Fawn, Clear Creek) compatible with fisheries and riparian management objectives would provide additional recreational fishing opportunity, while avoiding the consequences of intensive unregulated recreational fishing use (e.g. bank deterioration, weed establishment, accelerated sedimentation) in these areas.

Impacts From Proposed Land Tenure Adjustments Management On Fisheries

Broad allowances for conditional exchange offers a potential means for consolidating an appropriate land base where more cohesive riparian/aquatic and watershed management can be applied to fisheries resources.

Retention status conveyed to ACECs would, in the case of the East Douglas Creek ACEC, solidify maintenance of the land base most important to the recovery of Colorado River cutthroat trout in this Resource Area, and would ensure that any potential acquisitions represent gains toward a consolidated fisheries base.

Cumulative Impacts On Fisheries Habitat Management

Improving bank and floodplain vegetation composition, density, and vigor through livestock and vegetation management techniques would improve channel and floodplain conditions such that all occupied streams with poor fisheries rating would be elevated to fair condition through plan life. Increased emphasis on the development or reestablishment of woody vegetation expression through fisheries, plant community, and riparian management objectives would increase the complement of streams in good fisheries condition to 30 to 40 percent.

Increases in ground cover and soil stability attributable to improved livestock and big game distribution, horse removals, vegetation manipulations, and watershed treatments would contribute to improved watershed function on up to 55 percent of the Resource Area and promote long-term reductions in sediment transport and increases in base flows contributed to adjacent and downstream fisheries, including the White River and its larger tributaries.

Requiring surface disturbance within all riparian communities and the East Douglas Creek ACEC to be conducted or conditioned in manners compatible with fisheries, aquatic or riparian improvement objectives would deter short term setbacks in improvement trends and ensure constant, additive gains toward recovery goals in all occupied fisheries. Additionally, limiting surface disturbance on fragile soils and landslide areas (e.g., NSO stipulation) and providing means to control incompatible access or vehicle use would prevent chronic sediment contribution and long-term channel disruption attributable to disturbance-induced erosion and mass wasting.

Although unlikely that oil shale development would occur through plan life, surface disturbance, base flow reductions and long-term aquifer disruption attending full scale development may lead to the long-term loss of over 50 percent of all stream fisheries, including up to 35 percent of Colorado River cutthroat trout fisheries.

SPECIAL STATUS WILDLIFE SPECIES

Impacts From Proposed Special Status Wildlife Habitat Management On Special Status Wildlife

Colorado squawfish/bald eagle. A recent programmatic biological assessment commits BLM to the reporting and tracking of water consumed (i.e., depleted) from the Upper Colorado River Basin and its special status fish habitat. This document authorized conditional use of up to 2900 acre-feet per year for the implementation of Colorado BLM's ongoing land management programs.

Establishing the White River ACEC would encompass all BLM managed riverine bald eagle habitats and floodplains designated as critical habitat for the Colorado squawfish. Managing the ACEC with emphasis on the improvement, maintenance, and protection (via CSU stipulation) of riverine floodplain associations and processes is consistent with the protection and enhancement of channel and floodplain functions as squawfish habitat and the development and sustained availability of bald eagle winter roost and nest substrate.

NSO stipulations applied to bald eagle winter roost and nest sites would effectively maintain short term site utility. Application of TL stipulations to these sites would provide relatively risk-free protection of roost and nest activities.

Minimizing adverse modification or occupation of cottonwood communities, regardless of their current status as bald eagle habitat, and encouraging development of riverine cottonwood galleries on floodplain parcels would promote long-term roost and nest site development and increase the extent of suitable bald eagle habitats on public land by a minimum 50 percent. Expansion of BLM's bald eagle habitat base would be pursued as opportunities become available. Riverine parcels which possess winter roost or nest site values would be identified as a priority acquisition criterion.

Mexican spotted owl. The discovery of Mexican spotted owl in the Resource Area would require *Endangered Species Act* consultation to assess the options necessary to protect and maintain populations and habitats.

Black-footed Ferret. Delineation of two black-footed ferret recovery areas in the Wolf Creek/Red Wash GRA would encompass about 50 percent of the resource area's prairie dog habitat. Designation of recovery areas is preliminary to the successful reintroduction and establishment of a self-sustaining ferret population consistent with BLM mandates and policy. Application of the CSU stipulation within recovery areas would provide the framework to maintain or enhance the capability for achieving ferret recovery goals (e.g., requiring compensation for deterioration of suitable habitat extent or quality), maintain a viable ferret prey base and reduce ferret mortality, predation, and disruption of reproductive activities to negligible proportions. Reintroduction activities would remain subject to development and the subsequent approval of an interdisciplinary recovery plan.

Allowing land uses that can be conducted to maintain the long-term viability of prairie dog ecosystems, outside the defined recovery areas, would maintain the availability of habitats suitable for ferret dispersal and colonization. This would also retain continuity with the adjacent prairie dog systems in Utah. Managing prairie dog ecosystems for ferret reintroduction would help maintain current populations of other special status species that rely on prairie dogs as a source of prey (e.g., ferruginous hawk), maintained burrow systems (e.g., burrowing owl) or low stature vegetation induced by prairie dog grazing (e.g., mountain plover).

Colorado River cutthroat trout and other candidate fish species. Implementing compatible livestock grazing practices, reestablishing riparian vegetation, and managing beaver use would maintain or improve fisheries condition on all occupied streams from poor to good condition within the plan life. Enhancing upstream aquatic conditions would provide direct or indirect benefits for other candidate populations of fish or riparian associates (e.g., flannelmouth sucker, roundtail chub, boreal toad).

Designating the East Douglas drainage above Cathedral Creek as an ACEC captures 90 percent of the Resource Area's native trout habitat and would prompt development of an integrated activity plan prescribing actions and uses compatible with the long-term maintenance and enhancement of these native fisheries. Expanding the protection of occupied East Douglas fisheries through a CSU stipulation would ensure that gains made in fisheries habitat quality would be additive, and that constant long-term improvement could be expected. Road density limitations (1.5 miles/square mile) would be developed through a subsequent travel management, integrated activity, or ACEC plan to reduce, where appropriate, motorized vehicle-related impacts to these fisheries.

Sharp-tailed grouse. Participation with the State and other interested parties would be considered on case-by-case basis as opportunity warrants for reestablishing or augmenting sharp-tailed grouse populations.

Candidate and BLM sensitive raptors. NSO and TL stipulations afforded candidate raptors would provide generally risk-free protection of ongoing nesting activities. Applying nest habitat provisions would maintain the utility of known nest habitats for extended periods.

Impacts From Proposed Soils, Surface Water, Ground Water, And Water Rights Management On Special Status Wildlife

Maintaining or improving soil stability and its productive capacity would complement the long-term maintenance and enhancement of habitats for all special status species. Soil management practices (e.g., channel restoration) regularly involve reservoir or pit development which depletes small quantities of water (i.e., annual increments of less than 2 acre-feet per year) from the Upper Colorado River system's listed fish habitats, and may contribute to cumulative depletion impacts discussed in Chapter 3 of the DRMP.

Improving or maintaining watersheds in an effort to meet state and federal water quality standards (e.g., reduce sediment and salinity contribution) would complement recovery goals for listed fish habitats in the Upper Colorado River Basin and contribute to the improvement of up to 20 percent of the resource area's Colorado River cutthroat trout habitat. Portions of the White River designated as critical habitat, as well as its major tributaries, are explicitly prioritized for special management consideration.

Improving herbaceous understory conditions in low-elevation sagebrush, saltbush and greasewood communities in the Wolf Creek/ Red Wash GRA would contribute to the long-term stability of the ferruginous hawk's prey base. Integrating habitat objectives and the CSU stipulation associated with prairie dog ecosystems and black-footed ferret recovery areas with salinity project work in the Wolf Creek/Red Wash GRA would also complement efforts to maintain or enhance the suitability and capacity of these habitats for ferret reestablishment and occupation. Conversely, vegetation modifications in large, incised greasewood/sagebrush drainage systems may alter the extent or capacity of breeding habitats currently favored by loggerhead shrike by an indeterminate degree (see cumulative impacts section).

Applying BMPs and aquatic protection measures would minimize loss or deterioration of base flows which are necessary to develop, maintain, or enhance aquatic, riparian and wetland communities associated with candidate and listed fish and possible western boreal toad populations.

Securing water rights on appropriate streams and impoundments would ensure that water sources which occur or are developed on federal land are retained and remain available to support special status species management. Water rights held or acquired by the BLM may be used (i.e., transferred to the USFWS) to offset the effects of BLM-authorized depletions on listed Colorado River Basin fish.

Impacts From Proposed Oil And Gas And Land Use Authorizations Management On Special Status Wildlife

Depletion impacts to listed Colorado River fishes pertinent to oil and gas industry's use of water have been rectified through formal Section 7 Consultation (see discussion in DRMP's Chapter 3). Regulating the handling, transport, and accidental release of toxic materials associated with oil and gas development through existing laws and regulation is sufficient to minimize risk of aquatic contamination.

Achieving or maintaining proper functioning channel and floodplain conditions in designated critical habitats for listed Colorado River fishes along the White River would be adopted as a minimum performance standard. Instituting measures through conditions of approval and Section 7 Consultation (e.g., siting modifications or moves exceeding 200 meters) would prevent adverse floodplain or channel alterations.

The short-term utility and function of riverine roost and nesting sites for bald eagles would be maintained through the application of an NSO stipulation. TL stipulations would be fully effective in preventing disruption of roost and nesting activities, including authorizations that necessitate the use of aircraft. Application of the CSU stipulation, in conjunction with implementation of riparian development objectives, would minimize unnecessary removal of any cottonwood association and ensure that long term site potential is maintained or restored, thereby promoting the long term development and sustained availability of suitable cottonwood habitats for bald eagle roost and nest functions.

Applying the CSU stipulation to ferret recovery areas would accommodate continued oil and gas development while maintaining the suitability and capacity of these areas for ferret establishment and associated habitat for other special status species (e.g. ferruginous hawk). In the event a ferret reintroduction and recovery plan is successfully adopted, additional ferret protection provisions may be incorporated through an integrated activity plan. Outside ferret recovery areas, the application of siting, mitigation, and/or reclamation measures as conditions of approval would be sufficient to prevent development from contributing significantly to adverse modifications in the extent or distribution of prairie dog colonies as potential black-footed ferret habitat.

NSO stipulations and the nest habitat provision, as applied to special status raptors, such as ferruginous hawk and northern goshawk, would be capable of preventing adverse habitat modification in the vicinity of functional nest sites and ensuring that nest habitat integrity would be maintained for extended periods of time. Timeframes and dimensions associated with TL stipulations applied to special status raptors would effectively prevent disruption of ongoing reproductive activities, including successful dispersal of young.

Maintaining select aquatic parameters within Colorado River cutthroat trout habitats, as derived through the imposition of the CSU stipulation, would minimize incompatible short term influences on all of the resource area's cutthroat fisheries. CSU stipulations would require reclamation or mitigation commitments such that residual development

impacts would remain inconsequential to fisheries condition or trend in the long term. Application of cutthroat trout habitat improvement goals as minimum riparian management objectives would strengthen negotiated post-lease avoidance and/or reclamation (issued as conditions of approval) such that development would, to the extent practicable, remain compatible with fisheries improvement efforts.

Implementing effective road density objectives in the East Douglas ACEC would contribute to the reduction of sediment yields from associated watersheds and provide the means necessary to arrest localized road-related sedimentation impacts.

Impacts From Proposed Oil Shale And Sodium Management On Special Status Wildlife

Oil shale development would deplete large quantities of water from the upper Colorado River Basin and would impact Colorado squawfish and other listed and candidate species. Anticipated effects have been considered and integrated within the draft Endangered Fish Recovery Program (USFWS, 1986). Oil shale projects invariably require formal Endangered Species Act consultation with the USFWS, where impacts to all listed species would be thoroughly analyzed on a case-by-case basis. Depletion influence on round-tailed chub and flannelmouth sucker populations in the White River are unknown, but it is reasonable to assume that deteriorated riverine conditions would depress, but not extirpate, current populations.

Adverse modifications to riverine bald eagle habitats along the White River (e.g., dam construction) would be minimized or offset via stipulations developed through Section 7 consultation, such that oil shale development would not interfere with regional recovery or population goals established by the USFWS.

It is likely that full scale oil shale development would reduce base flows of occupied cutthroat trout streams through surface water diversion or disruption of groundwater systems. Although minimum in-stream flows are protected in most occupied streams, current fisheries potential would likely adjust (i.e., down-size) to diminished stream capacity. This reasoning would also extend to populations of other candidate species with aquatic, wetland, or riparian affinities in the Piceance and Douglas/Cathedral GRAs (e.g., potential western boreal toad populations).

Sodium mining operations contribute to flow depletions from the Upper Colorado River system's listed fish habitats (see discussion in Chapter 3 of the DRMP).

Development of oil shale and sodium contributes to the long-term reduction of pinyon/juniper habitats occupied by wintering and breeding populations of northern goshawk.

Impacts From Proposed Coal Management On Special Status Wildlife

Consumptive water use for coal processing would contribute to flow depletions from listed and candidate fish habitats in the Upper Colorado River Basin. Mitigation strategies developed through the Recovery Plan would be sufficient to offset depletion-related habitat deterioration.

Surface mining in either the Rangely or Danforth Study Area would affect the availability of pinyon/juniper and aspen types suitable for breeding and foraging functions of woodland adapted raptors, including the northern goshawk.

Similarly, any surface mine activity in the Danforth Study Area would likely involve aspen and mixed brush communities potentially occupied by remnant populations of sharp-tailed grouse.

Impacts From Proposed Mineral Materials Management On Special Status Wildlife

Implementing land use objectives for the maintenance and enhancement of riparian condition and function (e.g., bald eagle CSU, riparian management) would prevent incompatible use or development of BLM-managed portions of the White River's 100-year floodplain as designated critical habitat for Colorado squawfish.

NSO and TL protection applied to bald eagle roosts located within the sand and gravel area would provide relatively risk free protection to all roosts from incompatible federally-approved mineral material activities. Applying the CSU stipulation to the entire White River ACEC would require, in part, that project proponents minimize involvement of cottonwood communities and demonstrate that the potential of affected floodplain areas to support or develop riverine woodland communities is not impaired. These conditions would promote the sustained availability and long-term development of cottonwood habitats for bald eagle use.

Gravel mining and subsequent reclamation on non-wooded floodplain sections would offer opportunities to create or promote riparian communities where none previously existed, possibly increasing habitats suitable for migratory populations of other special status species (e.g., white-faced ibis, sandhill crane, and black tern).

Impacts From Proposed Hazardous Materials Management On Special Status Wildlife

Removing and/or preventing hazardous material release would have the obvious benefit of minimizing potential direct mortality or adverse effects on reproductive or behavioral functions of special status species.

Impacts From Proposed Plant Communities Management On Special Status Wildlife

Treating upland sagebrush, saltbush and greasewood canopies within prairie dog complexes in the Wolf Ridge/Red Wash GRA would promote stability in existing prairie dog populations, and may expand the suitable extent of potential black-footed ferret habitat by up to five percent in the long term. Long-term improvements in herbaceous forage available to prairie dogs would be expected on 30 percent of the proposed ferret recovery areas; slightly increasing ferret capacity in response to a more stable prey base.

Improving herbaceous forage and cover conditions within targeted shrub and woodlands would improve the stability and availability of prey populations on about 25 percent of the breeding range of ferruginous hawk and up to 35 percent of woodland raptor habitats, including those of northern goshawk.

Improving early and mid-seral shrub communities in the Wolf Creek/ Red Wash GRA would enhance up to 50 percent of this area's loggerhead shrike habitat. Canopy modifications necessary to promote desired changes would be limited to about two percent of suitable habitat elements and would constitute a possible, but very minor, short-term reduction in habitat extent.

Impacts From Proposed Noxious And Problem Weeds Management On Special Status Wildlife

Controlling noxious weeds as detailed in the *Vegetation Treatments on Public Lands EIS*, would improve the condition of Colorado River cutthroat trout fisheries in the East Douglas drainage by decreasing sediment yield and speeding channel and bank restoration.

Impacts From Proposed Riparian Management On Special Status Wildlife

Extending riparian maintenance, restoration, and/or protection emphasis to all Colorado River cutthroat trout fisheries, bald eagle cottonwood habitats, and floodplains designated as critical habitat for Colorado squawfish along the White River, will assist the BLM in meeting recovery objectives established for these species. Achieving long-term riparian objectives on high and medium priority riparian systems would result in substantial improvements on up to 62 percent of current riparian acreage through plan life, and would contribute increasingly to the extent and quality of habitat available to those listed and candidate species associated with riparian communities (e.g., bald eagle, boreal toad) and, more indirectly, to the enhancement (e.g., base flow contribution) of candidate fish (e.g. Colorado River cutthroat trout) and listed fish habitat confined primarily to downstream aquatic systems. Implementation of riparian protection standards would accelerate progress in attaining desirable channel, floodplain, or vegetative features conducive to the protection or enhancement of special status species habitat.

Grazing use limits, particularly herbaceous use during the late summer and dormant season, may be insufficient to promote recovery of channel and bank conditions at rates commensurate with fisheries objectives and may require site-specific adjustment pending monitoring studies. Browse use limits may also be excessive, but provide a basis to prevent downward trends from ungulate browsing and beaver use. Applying such use standards would intensify monitoring efforts and facilitate investigations of the relationships between vegetative conditions and its influence on channel, floodplain, and bank development.

Impacts From Proposed Special Status Plants And ACEC Management On Special Status Wildlife

Protecting remnant vegetation associations through NSO or CSU stipulation, in the Oil Spring Mountain and Moosehead Mountain ACECs, would reserve two percent of Douglas GRA's spruce-fir community and 48 percent of aspen communities in the Blue Mountain GRA as favored goshawk nesting and foraging habitat.

Impacts From Proposed Timber Management On Special Status Wildlife

Timber management practices would be compatible with the maintenance and continued development of mature timberlands favored by northern goshawk. Commercial harvesting of timber would have no measurable impact on cutthroat fisheries. Managing timber for other resource values (e.g. riparian) would complement habitat maintenance and improvement goals established for this species.

Impacts From Proposed Woodlands Management On Special Status Wildlife

The long-term availability of woodland habitats suitable for nesting and winter foraging use by goshawk would be reduced by about five percent in the long term. Applying raptor nest stipulations and treatment restrictions within nest habitats would protect ongoing nest efforts and maintain the integrity of known nesting territories for extended periods.

Prohibiting harvest-related manipulations within riparian communities would avoid adverse modification of canopy-related fisheries values (e.g., shading, nutrient/forage input) and bald eagle roost and nest substrate.

Impacts From Proposed Livestock Grazing Management On Special Status Wildlife

Development of livestock waters would deplete less than two acre-feet per year from the Upper Colorado River system's listed fish habitats, but would contribute to cumulative depletion impacts as discussed in DRMP's Affected Environment. Livestock grazing on isolated tracts within the White River's 100-year floodplain, would be managed consistent with maintenance or steady, long-term improvement of bank, channel and floodplain conditions as constituent elements of critical habitat for listed Colorado River fishes.

Livestock management's influence on the special status species associated with riparian and aquatic habitats (e.g., candidate fish, bald eagle) is integral with discussions in the Riparian Management-Special Status Species section.

Similarly, livestock management's influence on woodland raptors, including northern goshawk, are presented in the Livestock Grazing-Raptors section.

Impacts From Proposed Wild Horse Management On Special Status Wildlife

Reducing overall grazing loads in herd areas within portions of the Piceance and Douglas/Cathedral GRAs would contribute to the enhancement of watershed function and herbaceous understory expression. These effects are pertinent to species associated with riparian and aquatic habitats (e.g., candidate fish, boreal toad) and shrubland or woodland habitats (prey base for candidate raptors) and are discussed in the Fisheries and Raptor sections.

Impacts From Proposed Big Game Management On Special Status Wildlife

Developing water sources for big game depletes less than 1 acre-foot annually from the Upper Colorado River system's listed fish habitats and contributes to cumulative depletion impacts discussed in Chapter 4 of the DRMP.

Impacts From Proposed Non-T/E Raptors Management On Special Status Wildlife

Application of raptor management stipulations and land use provisions would reduce and, where possible, preclude long-term involvement or deterioration of woodland nest and foraging habitats. Requiring nest surveys of project proponents would aid in minimizing the involvement or alteration of goshawk nest habitats most frequently occupied (i.e. increased detection) and help maintain the utility of known nest and foraging habitats over extended timeframes.

Impacts From Proposed Grouse Management On Special Status Species

Creating, improving, or restoring mesic meadows or riparian systems associated with grouse brood range would both complement and contradict recovery goals for listed Colorado River fishes. Riparian improvements would tend to reduce sediment and increase baseflow contribution to associated river systems, whereas water developments would deplete small quantities of water from the Upper Colorado River system and contribute to cumulative depletion impacts.

Impacts From Proposed Fisheries Management On Special Status Wildlife

Management associated with Colorado River cutthroat trout fisheries and indirect influences on downstream candidate and listed fisheries is discussed in the Fisheries section. Requiring surface uses within the East Douglas ACEC to be designed compatible with fisheries restoration objectives would prevent short-term lapses in improvement trends and increase the likelihood that contributions to downstream candidate and listed fish habitats (e.g., reduced sediment yield and enhanced flow regimes) would be realized in the long term.

Impacts From Proposed Recreation, Motorized Vehicle Travel, And Access Management On Special Status Wildlife

Implementing road density objectives and CSU stipulations associated with black-footed ferret recovery objectives would provide the framework necessary to reduce the probability of recreation-induced ferret mortality or undue disruption of reproductive activities.

Integrating NSO and TL stipulations associated with riverine bald eagle habitats would prevent BLM-sanctioned recreational developments from adversely affecting the short-term utility of identified bald eagle roost and nest habitats. Application of the CSU stipulation to the White River ACEC would ensure that recreational developments are implemented in a manner which maintains the long-term utility and availability of cottonwood habitats for use by bald eagle.

Potential road-based influences on species associated with upland habitats (e.g., northern goshawk) and riparian/aquatic systems (e.g., cutthroat trout, boreal toad) are integral with respective discussions in Impacts from Motorized Vehicle Travel Management on Raptors and Impacts from Recreation Management on Fisheries.

Impacts From Proposed Fire Management On Special Status Wildlife

Typical wildfires (small, dispersed events, mainly in the pinyon/juniper and sagebrush/greasewood types) are generally advantageous in maintaining the dispersion and distribution of forage and cover components required by special status species (e.g. northern goshawk in pinyon\juniper, loggerhead shrike in greasewood) and watershed conditions conducive to healthy aquatic systems occupied by special status fish.

Suppressing fires in woody riparian growth along the White River floodplain would help maintain the short-term suitability and extent of cottonwood stands as bald eagle roost and potential nest substrate.

Cumulative Impacts On Special Status Wildlife Management

Colorado River fishes: BLM-authorized depletions from the Upper Colorado River Basin (UCRB) associated with this Resource Area would involve about 365 acre-feet over the next 5 years (a 0.01 percent increase in basin-wide depletion or about 0.04 percent of remaining natural flow). These depletions contribute to the cumulative deterioration of occupied habitat and have required commensurate compensation (see Chapter 3 of DRMP).

Designation and management of the White River ACEC would focus and integrate all land uses toward sustained development, improvement, and maintenance of riverine floodplain associations and processes. Implementing riparian, plant community, bald eagle and noxious weed objectives would maintain or improve to proper functioning condition bank, channel and floodplain conditions and processes on eight percent of the White River's designated critical habitat in Colorado and Utah. Lease and special stipulations applied to surface use would prevent activities from impairing floodplain function or riparian expression in the long term.

Implementation of various livestock, plant community, and watershed-related objectives which focus on improving herbaceous understory characteristics would promote long-term improvement of watershed function across 50-60 percent of uplands, including 70 percent of current riparian acreage, and contribute incrementally to the enhancement of downstream conditions for special status and native non-game fisheries (e.g. improved flow regimes, water quality, and diversification of in-stream channel structure).

Bald eagle: Applying NSO and TL stipulations on bald eagle roost and nest sites would provide relatively risk-free protection of nest and roost activities from incompatible BLM-authorized actions and would effectively maintain the utility of six percent of the White River's cottonwood-based habitats.

Maintaining or restoring proper floodplain function along the White River, as a high priority riparian system, and disallowing land use influences that retard or suppress cottonwood regeneration would sustain floodplain processes and conditions required for the continued, long term development of riverine cottonwood communities and expansion of suitable nest and roost substrate on six percent of the White River. It is likely that these provisions would increase the extent of cottonwood habitat on BLM floodplain parcels by 50 percent in the long term.

Black-footed ferret: Establishing a management framework for ferret recovery areas, including the application of the CSU stipulation and application of road density objectives, would serve to maintain and/or enhance the long term suitability and capacity of 50 percent of the potential ferret habitat available in the Resource Area, and institutes formative prescriptions necessary to reduce direct mortality and disruption of reproductive activities in the event reintroduction activities occur. Conditioning land uses outside the recovery areas to prevent significant adverse modifications in the extent or distribution of prairie dog colonies would assist in maintaining viable dispersal corridors to prairie dog complexes in Utah and intervening habitat for colonization.

Improving the quality and persistence of herbaceous forage on low elevation shrublands would promote stability and enhance the long-term availability of prairie dog prey on up to 52 percent of the ferret recovery areas and 40 percent of all occupied prairie dog range.

Prescribed improvements, including vegetation manipulations, would be capable of increasing the suitable extent of ferret habitat by 13 percent in the long term.

Colorado River cutthroat trout: Modifying livestock management, fencing, planting, and managing beaver would maintain or elevate channel and floodplain conditions to good condition on all cutthroat fisheries through plan life. The overall extent and influence of vegetation manipulation practices applied to shrub, woodland and timber communities would contribute to small long term increases in base flow and reduced upland sediment yield in occupied reaches.

Applying a CSU stipulation within the East Douglas Creek ACEC and the remaining 10 percent of outlying cutthroat fisheries would limit incompatible short-term watershed and channel disturbances such that the long-term integrity and development potential of these systems would not be impaired. Conditioning land use within the East Douglas ACEC to complement or remain compatible with fisheries recovery objectives would ensure that gains in habitat quality are additive and accelerated improvement is realized.

Ferruginous hawk: Applying TL stipulations would protect nesting efforts from incompatible land uses and allow successful dispersal of young, while NSO stipulations and nest habitat provisions would ensure long-term availability of nest substrate and maintain nest habitat integrity for extended timeframes. Implementing various road density objectives would stabilize or slightly reduce the potential effects of recreational activities on up to 70 percent of available ferruginous hawk nest habitat.

Maintaining or enhancing habitat capacity within ferret recovery areas would maintain important prey base elements across 28 percent of the total breeding habitat hosting 50 percent of known breeding territories. Enhancing the density and production of perennial herbaceous cover and opening high density brush canopies would promote long-term vertebrate prey population stability and availability on 40 percent of breeding ranges. Preventing adverse alteration of prairie dog populations and distribution outside recovery areas would complement prey base maintenance across all breeding habitat.

Although unlikely, full-scale surface coal mining in the Rangely area would severely alter habitat suitability on up to 10 percent of occupied range in the short term. Reclamation, mitigation and the reestablishment of suitable habitat would minimize long-term population effects.

Northern goshawk: Woodland manipulations would reduce the short-term availability of suitable nest and winter foraging habitat by an estimated four percent (plan life), and up to eight percent through rotation. No declines in the capacity of aspen and spruce-fir habitats are expected. Implementing big game cover retention and dispersal guidelines would reserve 40 percent of woodland cover within project locales (1 mile radii) in contiguous blocks of up to 800 acres.

Applying NSO and TL stipulations would fully protect reproductive efforts and the short-term utility of nest territories. Applying nest habitat provisions and improved nest detection gained through required inventory would maintain the integrity of established territories for extended periods of time. Limiting road densities in select habitats would stabilize or slightly reduce disruption of nesting activities or disuse of suitable habitat on up to 80 percent of pinyon/juniper habitats and 46 percent of aspen/spruce-fir types.

Implementing various livestock, wildlife, plant community, and watershed management objectives that moderate grazing intensity would enhance herbaceous and woody expression beneath or among tree canopies, increase the structural complexity of woodland habitats and, ultimately, increase the diversity and availability of vertebrate prey on up to 40 percent of mature pinyon/juniper habitats.

Loggerhead shrike: Manipulating greasewood and sagebrush communities for enhancement of livestock/big game forage, plant community composition and ferret habitat compensation would involve less than five percent of suitable shrike nesting habitat. Applying special stipulations or conditions of approval would minimize adverse alteration of breeding habitat sufficient to prevent short-term reductions in overall habitat capacity. Improving early-and mid-seral plant communities and fragile watersheds would enhance prey abundance and availability on up to 82 percent of occupied habitat and expand the extent of suitable habitat by 11 percent in the long term.

Mountain sharp-tailed grouse: BLM programs, although generally compatible with long-term maintenance of sharp-tailed grouse habitats (with exception of long-term surface coal mining potential), would be ineffective in influencing grouse populations and recovery.

IMPACTS ON WILDERNESS MANAGEMENT

Impacts From Proposed Wilderness Management And Other Proposed Management On Wilderness

The impacts of designating or not designating the six wilderness study areas (WSAs) in the White River Resource Area are described in the 1990 Craig District *Final Wilderness Environmental Impact Statement* (EIS). As stated in the wilderness EIS, designating Bull Canyon, Willow Creek, and Skull Creek WSAs as wilderness would preserve their wilderness characteristics of solitude, primitive and unconfined recreation, high scenic quality, and naturalness on 41,253 acres.

Non-designation of the Black Mountain, Windy Gulch and Oil Spring Mountain WSAs as wilderness would result in the loss of wilderness characteristics for all three areas from combined resource management actions and activities. They would no longer be suitable for wilderness consideration over the long term.

IMPACTS ON WILD AND SCENIC RIVERS (WSR) MANAGEMENT

Impacts From Proposed Wild And Scenic River Management On WSRs

Not recommending as suitable for designation those streams found eligible for consideration would result in the BLM not managing the eligible streams for the protection of their wild and scenic river characteristics following publication of the RMP record of decision. The identified outstandingly remarkable values would no longer receive protection under the Wild and Scenic Rivers Act and the continued eligibility of the stream segments is not assured over the long term.

Impacts From Proposed Soils And Surface Water Management On WSRs

Implementing controlled surface use stipulations to protect fragile soils on slopes exceeding 35 percent (on approximately 23,550 acres) in the East Douglas Creek tributaries would protect outstandingly remarkable

features by reducing sedimentation and adverse affects on water quality which would threaten the existence of Colorado River cutthroat trout.

Including watershed treatments in integrated activity plans would benefit outstandingly remarkable features by implementing an ecosystem approach to resource maintenance and protection.

Impacts From Proposed Water Rights Management On WSRs

Continuing to acquire water rights, in support of BLM programs, would have a beneficial effect on the outstandingly remarkable features of eligible stream segments.

Impacts From Proposed Oil And Gas Management On WSRs

Continuing to develop oil and gas in eligible stream drainages at the reasonable foreseeable level could adversely affect Colorado River cutthroat trout habitat in the East Douglas Creek tributaries by increasing erosion, reducing soil infiltration and altering vegetation. Oil and gas exploration and development would be subjected to NSO stipulations for protection of trout habitat, beaver ponds and soils with slumping potential.

Impacts From Proposed Mineral Materials Management On WSRs

Impacts would be dependant upon the location and extent of any operations for mineral materials and generally would be restricted so as not to impact significant resources.

Impacts From Proposed Riparian Management On WSRs

Implementing activity plans on high-priority riparian habitats would provide positive impacts for outstandingly remarkable cold water fisheries and would enhance water quality.

In areas of declining riparian habitat, the trend would be reversed within 10 years and the riparian zone would be functional within 20 years. In stream corridors which are improving or contain a functioning riparian system, management would enhance the improvement or ensure the maintenance of the system.

Impacts From Proposed Special Status Plants Management On WSRs

Designating East Douglas Creek (including eligible segments of Cathedral, Lake, Soldier, and Bear Park Creeks) as an ACEC to protect outstandingly remarkable sensitive plants and remnant plant associations would provide protective and positive long-term impacts for plant communities found within the stream corridors.

Impacts From Proposed Livestock Grazing Management On WSRs

Implementing riparian management plans that reduce negative impacts from livestock grazing in riparian areas would also benefit river or stream related values.

Impacts From Proposed Fisheries Management On WSRs

Pursuing the acquisition of aquatic habitat, with priority given to known and potential Colorado River cutthroat trout fisheries, would benefit outstandingly remarkable fisheries in the East Douglas Creek tributaries.

Impacts From Proposed Special Status Wildlife Habitat Management On WSRs

Designating controlled surface use on 47,610 acres of East Douglas ACEC would protect existing conditions of, and gains made in improving, Colorado River cutthroat trout fisheries by requiring developers to submit a plan of development to the Area Manager which ensures that development would cause no increase in water temperature and no decrease in vegetation-derived stream shading or decrease in water quality.

Designating NSO which prohibits surface disturbances within 1/4 mile of approximately 830 acres of bald eagle nocturnal roosts and/or concentration areas would minimize disturbance to bald eagles, causing winter populations to remain stable. A timing limitation would prohibit development within 1/2 mile of bald eagle nests from December 15 to June 15 on 3,200 acres.

Impacts From Proposed Recreation Management On WSRs

Managing the White River ACEC to provide specific recreation opportunities would benefit outstandingly remarkable recreation and river-related values by emphasizing their importance in maintaining or improving recreation settings and protecting resources.

Impacts From Proposed Land Tenure Adjustment Management On WSRs

Acquisition of any land parcels adjacent to stream segments would enhance the ability to manage river/stream related values and resources.

Impacts From Proposed Land Use Authorizations Management On WSRs

Continuing to locate pipelines, roads, and other development within an eligible river corridor could adversely impact the eligibility of stream segments if sensitive resources are affected. Even if the eligibility of a stream segment is not affected by development, there could be adverse impacts on future suitability determinations.

Impacts From Proposed Fire Management On WSRs

Stipulating the suppression of fire in mature cottonwood galleries and bald eagle winter habitat on the White River would protect approximately 3,200 acres of outstandingly remarkable features. Establishing a White River Integrated Activity Planning area would have medium development priority and use an ecosystem approach to planning and consideration for the protection of outstandingly remarkable river-related values.

Cumulative Impacts On Wild And Scenic River Management

Failure to recommend any river or stream segment for designation as a wild and scenic river would make the study segments more susceptible to land use activities that would impair their eligibility

status. Following signature of the record of decision, the free-flowing and outstandingly remarkable values that resulted in river/stream segment eligibility would be protected, only on streams that occur on BLM land (about 22 percent of the stream habitat) by surface stipulations, ACEC designation, and the Endangered Species Act.

Designating 47,610 acres of East Douglas Creek ACEC, with a controlled surface use stipulation, would protect water quality in drainages critical to the existence of Colorado River cutthroat trout. Designating 950 acres as the White River ACEC would benefit bald eagle and the federally-listed Colorado River squawfish. Implementing activity plans to protect high priority riparian habitats on 49.7 miles of streams in the East Douglas Creek tributaries would maintain functioning riparian systems and reverse the decline of non-functional systems.

Adverse impacts could occur to the outstandingly remarkable values in certain stream segments as a result of the combined effects of oil and gas and mineral developments as well as other associated land use developments such as roads, pipelines, powerlines, etc. over the long term.

IMPACTS ON VISUAL RESOURCES MANAGEMENT (VRM)

Impacts From Proposed Visual Resources Management On VRM

Managing the Bull Canyon, Willow Creek and Skull Creek WSAs as VRM Class I would help protect the wilderness and high scenic values of these areas. Managing 412,250 acres as VRM Class II, including Oil Spring Mountain WSA and the viewsheds from Cathedral Bluffs, Douglas Pass, Baxter Pass, White River Corridor, and Blue Mountain areas, would help provide protection of important and sensitive landscape characteristics while allowing ongoing management actions that fit within the acceptable limits of change. Designating VRM Class III on 861,680 acres, including the main artery road viewsheds, would help provide limited protection against significant changes in important landscapes with management actions designed to help fit development into the landscape.

However, managing the Canyon Pintado National Historic District and the Highway 139 corridor as VRM Class III may allow significant adverse impacts and changes to occur over the long term in a very sensitive and important landscape/viewshed. This area is an important travel route and recreation/tourism resource for the town of Rangely, with increasing recreation use.

Designating VRM Class IV on 146,100 acres would allow development by all interests in the majority of areas where developmental activity is already occurring. Development would be allowed to dominate the landscape, mostly in and around the town of Rangely and south of Rangely, thus having adverse impacts on the scenic landscape and viewsheds over the long term.

Impacts From Proposed Mineral Management, Livestock Grazing, And Recreation Management On VRM

Moving, altering or prohibiting surface-disturbing activities or conditioning them so that they would not exceed levels of acceptable change allowed by the VRM classification would maintain important and sensitive landscapes and viewsheds. Authorizing individual, minor surface-disturbing activities in Class III areas could collectively alter landscapes over the long term. Authorizing large-scale activities such as vegetation manipulations, mining, oil and gas field development, etc. would adversely impact viewsheds and the landscape over the long term and this would be allowed in VRM Class IV areas including the area around the town of Rangely.

No lease and NSO stipulations would prevent surface disturbance and would help protect scenic values in the immediate areas where the stipulations apply. However, authorizing many surface-disturbing activities outside small NSO areas would cumulatively change the landscape. Except for the black-footed ferret CSU stipulation, CSU and TL stipulations would provide little or no protection since they usually defer or relocate impairment of the visual landscapes.

Continued oil and gas development and associated activities could cause significant adverse impacts to the sensitive landscape and viewshed in the VRM Class III areas of Canyon Pintado National Historic District and Highway 139 corridor over the long term. Developments would be allowed to attract attention within this sensitive area that has increasing recreation/tourism use.

Impacts From Proposed T/E And Special Status Plant Management On VRM

Continuing to stipulate NSO to protect known T/E and candidate T/E plant habitat (46,840 acres) would provide protection by allowing only natural ecological changes to occur on the landscape within the protected areas.

Impacts From Proposed Timber And Woodlands Management On VRM

Minor adverse impacts to visual resources could occur from harvest activities in sensitive landscape areas or viewsheds.

Impacts From Proposed Wilderness Management On VRM

Continuing to protect 81,970 acres of Wilderness Study Areas from surface disturbing developments, during interim management, would benefit visual resources by maintaining a scenic, natural landscape consistent with wilderness objectives. However, in the long term, only those areas designated by Congress as wilderness would continue to be protected.

Impacts From Areas Of Critical Environmental Concern Management On VRM

Continuing to stipulate CSU in designated ACECs would protect the values for which they have been designated but would provide little protection for visual resources in those areas. Requiring an inventory for special status plant habitat prior to approving surface-disturbing activities and stipulating NSO on identified and mapped resources would help preserve natural landscapes in limited areas.

Impacts From Proposed Motorized Vehicle Travel Management On VRM

Restricting motorized vehicle travel to designated roads and trails and closing highly scenic, natural areas would result in a large decrease in degradation of landscapes caused by off highway vehicle use and competitive events.

Impacts From Proposed Land Use Authorizations Management On VRM

Two proposed utility corridors in the Cathedral Bluffs area (Highway 64-Ryan Gulch and Park Canyon-Magnolia) bisect VRM Class II areas. Those two areas have been designated VRM Class III to allow development. All other proposed corridors have been located away from VRM Class I and II areas. Development within the utility corridors would be allowed to continue to alter the landscape and viewshed in many areas.

Impacts From Proposed Land Tenure Adjustment Management On VRM

Acquiring lands designated as Category II would provide the opportunity to acquire scenic lands that would help protect surrounding or adjacent public land viewsheds from undesirable landscape alterations.

Impacts From Proposed Fire Management On VRM

Stipulating the suppression of fire on approximately 3,200 acres within the lower White River corridor would help maintain mature cottonwood galleries/bald eagle winter habitat, protect the areas from loss of habitat and maintain sensitive natural landscapes. Changes in the texture and color elements of the landscape may occur in areas of large wildfires or prescribed burns. This could result in negative impacts to the visual resource over the long term in sensitive landscape areas or viewsheds in the Resource Area.

Cumulative Impacts On Visual Resources Management

Visual resources would be protected in all 6 WSAs over the short term during wilderness interim management. The visual resources on those WSAs designated wilderness would receive long-term protection, but those not designated as wilderness would be classified as VRM Class II or III. Black Mountain, Windy Gulch, and Oil Spring Mountain WSAs would be subject to landscape alternations, thus the scenic qualities of these non-designated WSAs could be degraded over the long term. Protection of important landscapes or viewsheds would occur in VRM Class II areas over the long term.

The sensitive landscapes and viewshed in the VRM Class III Canyon Pintado National Historic District and Highway corridors could receive significant adverse impacts as a result of continued oil and gas and other projects or developments within these areas over the long term. The cumulative affect of development would be to attract attention of the viewer in these landscapes.

Oil, gas, mining, roads, pipelines, vegetation manipulations, powerlines and associated developments within the VRM Class IV area, in and around the town of Rangely, would be allowed to dominate the landscape over the long term. The scenic landscapes or viewsheds (canyons and high ridges) of the area south of Rangely would be diminished. These development activities would also continue to alter the landscapes in the Piceance Basin over the long term.

NSO stipulations on 37,570 acres of wildlife habitat would provide a limited degree of visual landscape benefit, depending upon the location and extent of surface protection. Most CSU and TL stipulations would do little to protect alterations in landscape and scenery.

IMPACTS ON RECREATION MANAGEMENT

Impacts From Proposed Recreation Management On Recreation

Managing the entire White River Resource Area as an ERMA would provide for unstructured recreation opportunities for the user public with resulting experiences/benefits over the long term.

Managing the Blue Mountain GRA and the White River ACEC for specific recreation activity opportunities, settings and for targeted experiences/benefits would benefit the user public and local residents and will help protect river related values on the lower White River. Providing facilities, trails, information, interpretation, and other visitor services would enhance public opportunities for the use and enjoyment of public lands and associated waters as well as enhance resource protection.

Closing certain areas of Cow Creek and Timber/Hay Gulch to motorized vehicle use would create an opportunity for quality non-motorized hunting experiences that are not found in the area at this time.

Impacts From Proposed Surface Water Management On Recreation

Beneficial impacts to recreation would result from increased water quality and quantity.

Impacts From Proposed Groundwater Management On Recreation

Maintaining or enhancing aquifers for processing water that is potable and useable would be a benefit to recreational activities on public lands by providing water that is safe for consumption by the user public.

Impacts From Proposed Mineral Management On Recreation

Continuing to increase the number and extent of oil and gas pads, roads, pipelines, open pit mines and other developments as a result of oil, gas, or mining development would diminish, and in some cases eliminate opportunities and the resulting experiences, to engage in recreation activities in natural, non-motorized settings. The Resource Area would continue to lose physical settings toward the primitive or non-motorized end of the recreation opportunity spectrum over the long term. Scenic landscapes and viewsheds would continue to be altered in areas of intensive development activity particularly in and around the town of Rangely with resulting adverse impacts to trails and trail users (i.e. Rangely Loop mountain bike trail) and to visitors to Canyon Pintado National Historic District. These are important recreation/tourism resources for the town of Rangely and the visiting public.

Public recreation opportunities and activities would be eliminated completely on any public lands patented (into private ownership) as a result of mineral development over the long term.

Impacts From Proposed Riparian Management On Recreation

Improving both high and medium priority riparian areas would allow for a quicker recovery of the riparian systems, thus providing fisheries and other aquatic habitat that would help sustain water-based recreational opportunities and resulting experiences/benefits.

Impacts From Proposed Special Status Plants And ACEC Management On Recreation

Providing increased protection for special status plants would provide greater recreational opportunities and settings for those users interested in observing and learning about those species. NSO stipulations on 46,836 acres of known and potential T/E plant habitat would restrict and thus reduce opportunities for motorized vehicle travel within identified areas.

Impacts From Proposed Timber And Woodlands Management On Recreation

Continuing sawtimber and woodland harvest would degrade recreational settings where these activities occur. Some recreational benefit would be derived from the personal-use cutting of fuelwood, posts and poles, and Christmas trees.

Impacts From Proposed Wild Horse Management On Recreation

Restricting wild horses to Piceance/East Douglas Herd Management Area (HMA) results in the loss of opportunity to observe horses on 433,210 acres.

Impacts From Proposed Big Game Management On Recreation

Applying TL stipulations to 968,210 acres of big game ranges would improve critical big game habitat and management of habitat to create greater varieties of wildlife. This would have a beneficial impact of improving opportunities for hunting, photographing, viewing, and any recreational activity that is enhanced by the presence of wildlife.

Impacts From Proposed Non-T/E Raptor Management On Recreation

NSO stipulations designed to protect wildlife species and habitat would also prevent surface disturbance, protect recreation settings and provide improved viewing, and photographing opportunities.

Impacts From Proposed Grouse Management On Recreation

Designating 5,487 acres of NSO within 1/4-mile of identified sage grouse leks would help protect recreation settings, enhance grouse populations and improve hunting, photographing, and viewing opportunities.

Impacts From Proposed Special Status Wildlife Management On Recreation

Stipulating 11,170 acres of NSO and 128,380 acres of CSU to protect special status wildlife species and habitat would also help protect recreation settings and provide increased opportunities to encounter, view, and photograph these species.

Impacts From Proposed Wilderness Management On Recreation

Continuing to manage 41,250 acres of recommended WSAs and 40,938 acres of non-recommended WSAs to protect wilderness values during interim management would provide outstanding opportunities for solitude and primitive and unconfined recreation. The WSAs are the only remaining areas in the White River Resource Area with non-motorized types of settings and outstanding opportunities.

Impacts From Proposed Wild And Scenic Rivers Management On Recreation

Eliminating protection of the outstandingly remarkable river-related features which made river and stream segments eligible for wild and scenic river study could degrade recreation values associated with fisheries and unique vegetation communities. However, many of these values will be protected in other ways.

Impacts From Proposed Visual Resources Management On Recreation

Designating 41,250 acres of VRM Class I and 412,250 acres of VRM Class II would improve recreation opportunities and resulting experiences/benefits by allowing minimal changes to the natural landscapes and viewsheds that are very sensitive and important to the user public.

Impacts From Proposed Areas Of Critical Environmental Concern Management On Recreation

Designating 99,120 acres of ACECs, would provide opportunities to protect plant communities and result in recreational settings that include natural landscapes and solitude. Conversely, motorized vehicle use or opportunities would diminish within identified special status plant habitat but will remain available in other locations.

Impacts From Proposed Motorized Vehicle Travel Management On Recreation

Closing some areas and limiting motorized vehicular travel to existing or designated roads and trails in other areas; would eliminate use and opportunities for cross-county travel at certain times of the year and in certain areas. However, cross country use of motorized vehicles would be allowed during the summer months over much of the Resource Area, which would help meet demand for this activity and provide opportunities for these users with resulting experiences/benefits.

In addition, limitations and closures would benefit those users who seek opportunities to engage in activities in natural, non-motorized settings with resulting experiences/benefits. The Cow Creek and Timber/Hay Gulch non-motorized quality hunting areas would help meet the demand for this activity that is scarce in the Resource Area.

Impacts From Proposed Cultural And Paleontological Resources Management On Recreation

Revising the boundary of Canyon Pintado National Historic District (16,040 acres) to conform with standard legal descriptions; preserving cultural and paleontological features (rock art, fossils); developing facilities to allow visitor use, visitor understanding of resources, and prevent damage to cultural and paleontological resources; and requiring

inventory of Class I paleontological formations; would enhance recreation/tourism opportunities on public lands while protecting resources.

Impacts From Proposed Land Tenure Adjustment Management On Recreation

Designating 1,300,500 acres within the Resource Area as Category 2 lands would improve opportunities to acquire lands and/or gain access to preferred and highly valued recreation resources.

Impacts From Proposed Access Management On Recreation

Identifying areas for improved access would indicate where public access is restricted or non-existent and could now be actively pursued. Providing public access would meet the increasing demand for a variety of recreational settings, opportunities and resulting experiences/ benefits for many recreation activities.

Cumulative Impacts On Recreation Management

Managing the entire White River Resource Area as an ERMA would provide for unstructured recreation opportunities with resulting experiences and benefits. This would help meet increasing demand for and enhance opportunities for the user public over the long term.

Managing the Blue Mountain GRA and the White River ACEC for targeted recreation activities, settings, and experiences/benefits, would help meet demand and enhance opportunities for public land recreation users, in these areas, over the long term.

Stipulating 37,570 acres of NSO and 128,380 acres of CSU for protection of wildlife populations and habitat could improve recreational opportunities for hunting, viewing or photographing these species. Designating an additional 45,396 acres of NSO on potential T/E plant habitat and 39,390 acres of ACEC addition to protect sensitive plants/RVAs would enhance natural settings and provide improved solitary experiences for recreationists seeking those values.

The continued development of oil, gas, other minerals, livestock grazing, and other resources with associated developments (roads, pipelines, powerlines, reservoirs, fences, etc.) would continue to diminish experiences and resulting benefits, over the long term, that are associated with opportunities for recreationists to engage in activities in non-motorized, natural settings in portions of the Resource Area. Recreation settings toward the primitive end of the recreation opportunity spectrum would continue to decline over the long term with the primitive classification eliminated altogether on public lands in the Resource Area.

While opportunities for motorized, off-highway types of recreation would decline in some areas, they would still be available in the Resource Area. Closing certain areas to motorized vehicles and limiting this use in other areas would enhance opportunities for visitors to engage in non-motorized types of activities with resulting experiences and benefits. Access to the public lands would improve thus increasing opportunities to engage in many recreation activities.

IMPACTS ON MOTORIZED VEHICLE TRAVEL MANAGEMENT

Impacts From Proposed Motorized Vehicle Travel Management On Motorized Travel

Managing motorized vehicle use in the Resource Area would allow for the protection of important and sensitive resources, provide for the safety of the users and reduce conflicts among the various users of the public lands. While some opportunities for off-road use of vehicles would be restricted in certain areas and at certain times of the year, opportunities would be available for users to engage in this activity throughout the summer months on most of the Resource Area.

Impacts From Proposed Soils Management On Motorized Travel

Limiting motorized vehicle use to existing roads and trails in fragile soil areas would reduce the area available for off-road use of vehicles but would have no impact upon motorized travel or access to public lands in the Resource Area. Beneficial impacts would be realized by reductions in erosion of soils and protection of related resources.

Impacts From Proposed Minerals Management On Motorized Travel

Construction of new roads in some areas would increase opportunities for vehicle travel or vehicle access to public lands. However, increased traffic as a result of development and maintenance activities coupled with recreation use would also increase hazards to users of these roads. Opportunities for motorized vehicle use by the public would be eliminated in certain areas such as open pit mines, areas developed for support or refining facilities, etc. over the life of the development activity.

Public motorized vehicle travel opportunities and associated activities could be eliminated completely on any lands that would be patented (into private ownership) as a result of mineral developments in certain areas over the long term.

Impacts From Proposed Vegetation Management On Motorized Travel

Motorized vehicle use within certain riparian and sensitive plant areas would be restricted thus reducing opportunities for off highway vehicle use. However, motorized vehicle use on roads and trails to and through most of these areas would be allowed. Sensitive plants and their habitats would benefit from restrictions on motorized vehicle use.

Impacts From Proposed Big Game Management On Motorized Travel

Seasonal closures and limits on road densities in critical habitats would limit motorized vehicle use in certain areas or at certain times of the year. This should have only minor negative impacts on overall motorized vehicle use in the Resource Area and access would still be available to the public lands. However, big game animals and their habitats would benefit from motorized vehicle restrictions and closures.

Impacts From Proposed Special Status Wildlife Management On Motorized Travel

Limiting motorized vehicle use to designated roads and trails in the ferret reintroduction areas would have the minor negative impact of eliminating the use of vehicles off-roads but still allows vehicle access to and travel through these areas on designated routes.

Impacts From Proposed Wilderness Management On Motorized Travel

All WSAs would be closed to motorized vehicle use. This would cause minor negative impacts to motorized vehicle travel since these areas contain no roads and few trails because of the steep rugged terrain. The WSAs comprise only .6 percent of the public lands in the Resource Area. Natural landscapes and wilderness resources would be protected.

Impacts From Proposed Special Status Plants And Areas Of Critical Environmental Concern Management On Motorized Travel

Motorized vehicle travel would be limited to existing roads and trails in identified special status plant habitat and would be limited to designated roads and trails within designated ACECs. Cross country motorized vehicle use or opportunities would be eliminated within these areas, however, sensitive resources would be afforded protection as a result. Motorized travel to and through these areas will still occur on designated or existing routes.

Impacts From Proposed Recreation Management On Motorized Travel

Closing some areas and limiting motorized vehicular travel to existing or designated roads and trails in other areas, would eliminate off-road use or opportunities for cross-county travel at certain times of the year and in certain areas. However, off road use of motorized vehicles would be allowed during the summer months over most of the Resource Area thus providing opportunities for these users with resulting experiences and benefits. The development of motorized trails in the Resource Area would help meet demand for this activity.

In addition, limitations and closures would benefit those users who seek opportunities to engage in activities in natural, non-motorized settings with resulting experiences and benefits.

Impacts From Proposed Cultural And Paleontological Resources Management On Motorized Travel

Limiting motorized vehicle use in certain areas would help protect sensitive and fragile cultural or paleontological resources. Opportunities for cross country use of motorized vehicles in certain areas would diminish, however vehicle access to and through public lands would still be available.

Impacts From Land Tenure Adjustment Management On Motorized Travel

Designating over 1,300,000 acres within the Resource Area as Category 2 lands would improve opportunities to acquire lands and/ or gain access to preferred public land use areas.

Impacts From Proposed Access Management On Motorized Travel

Acquisition of public access would help meet the increasing demand for opportunities and experiences associated with motorized vehicle use or travel.

Cumulative Impacts On Motorized Vehicle Travel Management

Although no areas on public lands in the Resource Area would be designated as open, off highway vehicle use would be allowed during the summer months and would meet most of the demand for this activity. Opportunities for cross-country travel with motorized vehicles would be diminished, however, designating public land areas as limited or closed to motorized vehicle use would help protect important, sensitive, and fragile resources or threatened and endangered species within the White River Resource Area over the long term. The Travel Management Plan to be completed after the RMP would further define management of motorized vehicle travel in the Resource Area and would help balance the protection of resources with opportunities to engage in motorized vehicle activities and travel.

Access to and through public lands would still be available and would be enhanced.

IMPACTS ON CULTURAL RESOURCES MANAGEMENT

Impacts From Proposed Cultural Resources Management On Cultural Resources

Revising the boundaries of the Canyon Pintado National Historic District would increase the size of the historic district and increase protection for an additional 20 to 30 cultural resource sites that are estimated to occur within the revised boundary.

Continuing to conduct cultural resource inventories prior to authorizing any surface-disturbing activities would lead to the discovery of new cultural artifacts and recordation of those sites. Recordation of the site would add to our scientific data base. The number of sites recorded would vary with the amount of acreage under NSO or other restrictions that limit surface disturbing activities.

Attaching cultural resource mitigation measures (also known as conditions of approval) to permits and land authorizations would reduce or eliminate damage to cultural resources. Continuing to consult with the State Historic Preservation Officer in developing mitigation measures would continue to ensure cultural resources are properly protected.

Cooperating in the development of an interpretation/outreach program by developing interpretive displays at or near a minimum of four cultural resource sites would help to educate and inform the public about cultural resources. Monitoring resources to gauge impacts where interpretive facilities are erected would reduce vandalism through awareness education.

Developing a site patrol and protection plan, in conformance with ARPA, 1979, as amended, would reduce the threat to and loss of resources and scientific data due to unauthorized collecting and acts of vandalism.

Impacts From Proposed Air Quality Management On Cultural Resources

Continuing to reduce concentrations of air pollutants that contribute to acid deposition or particulate deposition, particularly on rock art, would slow the rate of cultural resource deterioration.

Impacts From Proposed Soils And Surface Water Management On Cultural Resources

Designating NSO and CSU on 572,042 acres of fragile soil exceeding 35 percent slope, in an effort to control erosion and surface water salinity could also protect cultural resources from development-related impacts.

Impacts From All Proposed Management Authorizing Surface Disturbing Activities On Cultural Resources

Surface-disturbance associated with activities such as mineral development, vegetation manipulation, timberland and woodland harvesting and the like would directly and indirectly destroy cultural artifacts and their archaeological context. Direct impacts would occur as the surface and subsurface is disturbed by development, e.g. road and surface facility construction, vegetation and overburden removal, dewatering wells, and the like. Indirect impacts would occur as the result of increased access and visibility of the cultural resources. Increased access and visibility would increase unauthorized collection and other vandalism.

Cultural resource inventories and mitigation measures, developed in consultation with the State Historic Preservation Office and the Advisory Council on Historic Preservation, would help reduce the loss of significant scientific data. Surface stipulations in this RMP would also help reduce loss of scientific data and destruction of the artifacts. The amount of protection afforded by the surface stipulations, especially NSO and to a lesser extent, CSU, would vary depending on the number of acres subject to surface stipulations.

Impacts From Proposed Riparian Management On Cultural Resources

Closing riparian areas to motorized vehicle travel would protect cultural and/or historical resources from direct impacts. Applying mitigation measures to road relocation efforts to avoid riparian areas would reduce impacts to cultural and historical resources. An estimated 954 acres would have designated restrictions, with the potential to involve and estimated 14 cultural resources (actual number may vary).

Impacts From Proposed Special Status Plants And Wildlife And ACEC Management On Cultural Resources

NSO stipulations on known T/E and special status habitat (73,290 acres) would prevent surface-disturbing activities within the NSO areas and thus prevent destruction of cultural resources on that acreage.

Closing all known and potential habitats of T/E plants and candidate T/E plants (26,450 acres) to motorized vehicle travel, except on designated roads and trails, would provide protection for cultural resources.

Proposing South Cathedral Bluffs and the Raven Ridge additions as ACECs, and adding 3,900 acres for protection of sensitive plants and RVAs, would provide protection for an estimated 56 cultural resource sites.

Impacts From Proposed Livestock Management On Cultural Resources

Livestock trample horizontal surfaces displacing artifacts both horizontally and vertically and destroying contexts. These impacts are especially severe where congregating and trailing occur on cultural resources. While exact numbers for impacts cannot be provided it is generally accepted that greater numbers of livestock will increase the potential for adverse trampling effects. Livestock may also rub and scratch on standing features such as walls which may accelerate the deterioration and collapse of the standing structures. Mitigating measures applied to range improvement projects will reduce potential impacts from facilities construction associated with livestock management to an acceptable level.

Impacts From Proposed Wilderness Management On Cultural Resources

Continuing to protect 81,970 acres of Black Mountain, Windy Gulch, Oil Spring Mountain, Bull Canyon, Willow Creek, and Skull Creek WSAs as wilderness, during interim management, would protect cultural and historical resources from all direct and indirect impacts associated with ground-disturbing actions.

Non-designation of wilderness and the return of WSAs to multiple resource management and development could result in the destruction of significant cultural and historical resources from surface disturbing activities.

Impacts From Proposed Recreation Management On Cultural Resources

Designating the Blue Mountain GRA and the White River ACEC for management to provide specific recreation activity opportunities and physical, social, and managerial settings for targeted recreation experiences would increase cultural impacts as a result of the increase in mountain biking and/or hiking trails, particularly those that link the Kokopeli Trail to the south with Yampa River trails to the north.

Impacts From Proposed Motorized Vehicle Travel Management On Cultural Resources

Restricting motorized vehicle use to designated roads and trails and existing roads and trails would significantly reduce impacts to cultural and historical resources. However, in those cases where the designated or existing road or trail crosses or makes physical contact with a cultural resource, impacts would continue to occur in the same manner and degree as in the past.

Significant impacts to unknown or undocumented sites could occur from cross country travel in the areas open to seasonal OHV use.

Impacts From Proposed Land Tenure Adjustments On Cultural Resources

Designating a total of 9,600 acres as Category 1 lands suitable for disposal by sale could impact approximately 137 resources.

Identifying 1,300,500 acres as Category 2 lands available for disposal on a conditional and case-by-case basis, could impact an estimated 18,580 cultural resources.

Impacts From Proposed Access Management On Cultural Resources

Improving public access in areas where none currently exists would increase the threat of impacts to cultural resources from trampling, unauthorized collection and vandalism.

Impacts From Proposed Fire Management On Cultural Resources

Suppressing fire that threatens archaeological and historical values, especially rock art, would protect identified and potential sites on approximately 16,040 acres.

Cumulative Impacts On Cultural Resources Management

Surface-disturbance associated with activities such as mineral development, vegetation manipulation, timberland and woodland harvesting and the like would destroy an unquantifiable number of cultural resources. The increased access and visibility that would occur as a result of these activities could increase unauthorized collection and other vandalism.

Cultural resource inventories and mitigation measures, developed in consultation with the State Historic Preservation Officer and Advisory Council on Historic Preservation, would reduce the loss of significant scientific data. Surface stipulations in this RMP would also help reduce loss of scientific data and destruction of the artifacts. The amount of protection afforded by the surface stipulations, especially NSO and to a lesser extent CSU, would vary depending on the area proposed for development.

NSO stipulations would prevent disturbance of the surface and also destruction of cultural sites. These stipulations also would result in not conducting as many inventories and thus decrease the amount of information recorded in the process of locating new sites.

IMPACTS ON PALEONTOLOGICAL RESOURCE MANAGEMENT

Impacts From Proposed Paleontological Resources Management On Paleontological Resources

Requiring individuals and institutions conducting paleontological work in the Resource Area to meet certain minimum standards, requiring fossils to be curated in adequate repositories, and making fossils available to researchers, would ensure that valuable data are recorded and disseminated in an orderly and professional manner.

Requiring inventory of Class I fossil formations would have beneficial impacts for fossils by identifying, recording, and evaluating an increased number of fossil localities. Requiring relocation of roads, pipelines or wellpads would ensure that fragile fossil resources are not destroyed by construction.

Impacts From Proposed Soils And Surface Water Management On Paleontological Resources

Reducing soil erosion would benefit fossil resources, especially fossils of small species, by reducing the numbers of bones and bone fragments washed away or destroyed by the abrasive action caused during transport in eroding soils. However, soil erosion in some instances would make fossils more likely to be found. Controlling water-caused erosion would benefit fossil resources by reducing direct loss of fossils from the formations where stream channels and fossil localities coincide.

Continuing to require inventory on Class I formations prior to ground-disturbing actions would ensure that loss of significant fossils and/or scientific data is minimized.

Impacts From All Surface-Disturbing Activities On Paleontological Resources

Surface-disturbance associated with activities such as mineral development, vegetation manipulation, timberland and woodland harvesting could destroy fossil resources. Impacts would include crushing of individual skeleton elements, dislocation and possible disarticulation of bones, and/or total destruction of fossil localities during construction activities. However, activities could also expose fossils that may normally not have been found. Requiring inventory of Class I fossil formations would have beneficial impacts for fossils by identifying, recording, and evaluating an increased number of fossil localities. Requiring relocation of roads, pipelines or wellpads would ensure that known localities of fossil resources are not destroyed by construction.

Surface stipulations in this RMP would also help reduce destruction of the fossils. The amount of protection afforded by the surface stipulations, especially NSO and to a lesser extent CSU, would vary depending on the number of acres proposed for surface disturbance. NSO stipulations would prevent disturbance of the surface and also destruction of paleontological localities. These stipulations also would result in not conducting as many inventories and thus decrease the amount of information recorded in the process of locating additional fossil localities.

Open pit mining of oil shale and coal in Class I fossil formations would have the greatest impact since large areas are needed for overburden and other mine wastes as well as the mine pit itself. Large numbers of fossils and fossil locations could either be buried too deep to be relocated or totally destroyed as they are excavated for the mine pit. Requiring inventory on new leases for open pit mines would result in the location, recordation, evaluation and excavation of more fossil sites than might otherwise be the case without mining. Managing existing leases in accordance with existing lease terms and conditions could result in loss of fossil resources without any data recovery. Voluntary recordation and excavation of fossil localities would be sought on Class I formations within current leases in order to reduce loss of fossil resources due to development.

Impacts From Proposed Special Status Plants And ACEC Management On Paleontological Resources

Limiting motorized vehicle travel to designated roads and trails or existing roads and trails in these areas, would also provide protection for paleontological resources that may be otherwise impacted from off road/trail travel.

Proposing Blacks Gulch and Coal Draw for ACEC designation, containing 800 and 1,840 acres respectively, would protect significant fossil resources from indiscriminate disturbance. A portion of the proposed Raven Ridge ACEC addition (1,360 acres), would also be recommended on the basis of significant paleontological resources and to protect those resources from development-related impacts.

Impacts From Proposed Wilderness Management On Paleontological Resources

Continuing to protect 81,970 acres of Black Mountain, Windy Gulch, Oil Spring Mountain, Bull Canyon, Willow Canyon and Skull Creek WSAs as wilderness, during interim management, would protect paleontological resources from all direct and indirect impacts associated with ground-disturbing actions.

Non-designation of wilderness and the return of WSAs to multiple resource management and development could result in increased disturbance in these areas and subsequent impacts to paleontological resources.

Impacts From Proposed Recreation Management On Paleontological Resources

Designating the Blue Mountain GRA and the White River ACEC for management to provide specific recreation activity opportunities and physical, social, and managerial settings for targeted recreation experiences could increase paleontological impacts as a result of the increase in mountain biking and/or hiking trails, particularly those that link the Kokopeli Trail to the south with Yampa River trails to the north. Increased development of trails and increased visitor use could result in an increase in unauthorized fossil collection. Mitigation measures that do not detract from the historic or scenic qualities of the trail may be possible should facilities or trails occur on sensitive formations or localities.

Impacts From Proposed Motorized Vehicle Travel Management

Restricting motorized vehicles to designated and existing roads and trails in certain areas would reduce impacts to Class I fossil formations. Inventory requirements for new roads and trails would provide a mechanism for further reducing negative impacts to fossil resources.

Allowing off road/trail travel on 922,200 acres could cause significant impacts to undocumented localities of paleontological resources.

Impacts From Proposed Land Tenure Adjustments On Paleontological Resources

Disposal of Category 1 lands (19,800 acres) could have an adverse effect on fossil resources due to a potential loss of scientific data. However, application of inventory requirements and other stipulations, along with the criteria to retain lands with significant paleontological resources, would ensure that losses from disposal are minimized.

Impacts From Proposed Fire Management On Paleontological Resources

Constructing fire lines would adversely impact previously unrecorded paleontological resources where construction occurs on Class I fossil formations. As more data are gathered, it would be possible to avoid surface-disturbing line construction on known fossil localities and reduce impacts to significant fossil resources.

Requiring fossil inventories on fire line construction on prescribed burn areas would ensure that impacts to paleontological resources are reduced to the lowest possible level.

Cumulative Impacts On Paleontological Resources

Although current data are inadequate to quantify the extent or significance of the loss of fossil resources, the surface stipulations and conditions of approval attached to surface disturbing activities should provide protection from significant impacts.

IMPACTS ON LANDS AND REALTY MANAGEMENT

LAND USE AUTHORIZATIONS

Impacts From Proposed Lands And Realty Management On Use Authorizations

Elimination of approximately 109,000 acres of right-of-way corridors may result in limiting siting flexibility, and in a greater need for analysis of any facilities which may be proposed for these lands in the future. However, designation of approximately 227,000 acres of those corridors which are deemed most likely to be needed, would streamline processing of Bureau rights-of-way for reasonably anticipated major facilities. Ultimately, the nature and degree of this impact would depend upon future demand and whether or not proposed routes would actually coincide with these corridors.

Impacts From Proposed Soil, Water, And Air Management On Use Authorizations

Classifying 37,700 acres of BLM lands as avoidance to protect sensitive soil resources would increase costs for some companies that develop facilities under the various lands and realty use authorizations. This would be due to increased costs of labor, supplies and transportation based on potentially longer routes and the need to use more distant sites, costs related to requirements for utilization of more expensive development and rehabilitation practices, and/or delays in project completion. Based on the fact that development is not precluded in avoidance areas, no projects would be expected to be precluded or foregone.

The increases in costs may be commensurate with the number of acres designated as avoidance.

Impacts From Proposed Vegetation Management On Use Authorizations

Classifying 5,490 acres of BLM lands as avoidance and 48,280 acres as exclusion to protect sensitive vegetation would increase costs for some companies that develop facilities under the various lands and realty use authorizations. This would be due to increased costs of labor, supplies and transportation based on potentially longer routes and the need to use more distant sites, costs related to requirements for utilization of more expensive development and rehabilitation practices, and/or delays in project completion. Based on the fact that development is not precluded in avoidance areas, and the fact that exclusion areas are highly scattered, no projects would be expected to be precluded or foregone.

The increases in costs may be commensurate with the number of acres designated as avoidance or exclusion.

Impacts From Proposed Wildlife Habitat Management On Use Authorizations

Classifying 46,870 acres of BLM lands as avoidance to protect wildlife habitat would increase costs for some companies that develop facilities under the various lands and realty use authorizations. This would be due to increased costs of labor, supplies and transportation based on potentially longer routes and the need to use more distant sites, costs related to requirements for utilization of more expensive development and rehabilitation practices, and/or delays in project completion. Based on the fact that development is not precluded in avoidance areas, no projects would be expected to be precluded or foregone.

The increases in costs may be commensurate with the number of acres designated as avoidance.

Impacts From Proposed Wilderness Management On Use Authorizations

Classifying 41,250 acres of BLM lands as exclusion to protect wilderness resources would increase costs for some companies that develop facilities under the various lands and realty use authorizations. This would be due to increased costs of labor, supplies and transportation based on potentially longer routes and the need to use more distant sites, costs related to requirements for utilization of more expensive development and rehabilitation practices, and/or delays in project completion. Based on the fact that exclusion areas are highly scattered, no projects would be expected to be precluded or foregone.

The increases in costs may be commensurate with the number of acres designated as exclusion.

Impacts From Proposed Visual Resource Management On Use Authorizations

Classifying 2,530 acres of BLM lands as avoidance to protect visual resources (Harper's Corner Road) would increase costs for some companies that develop facilities under the various lands and realty use authorizations. This would be due to increased costs of labor, supplies and transportation based on potentially longer routes and the need to use more distant sites, costs related to requirements for utilization of more expensive development and rehabilitation practices, and/or delays in project completion.

The increases in costs may be commensurate with the number of acres designated as avoidance.

Impacts From Proposed Areas Of Critical Environmental Concern On Use Authorizations

Classifying 81,220 acres of BLM lands as avoidance and 11,580 acres as exclusion to protect areas of critical environmental concern would increase costs for some companies that develop facilities under the various lands and realty use authorizations. This would be due to increased costs of labor, supplies and transportation based on potentially longer routes and the need to use more distant sites, costs related to requirements for utilization of more expensive development and rehabilitation practices, and/or delays in project completion. Based on the fact that development is not precluded in avoidance areas, and the fact that exclusion areas are highly scattered, no projects would be expected to be precluded or foregone.

The increases in costs may be commensurate with the number of acres designated as avoidance or exclusion.

Impacts From Proposed Cultural Resources Management On Use Authorizations

Classifying 16,040 acres of BLM lands as avoidance to protect Canyon Pintado National Historic District would increase costs for some companies that develop facilities under the various lands and realty use authorizations. This would be due to increased costs of labor, supplies and transportation based on potentially longer routes and the need to use more distant sites, costs related to requirements for utilization of more expensive development and rehabilitation practices, and/or delays in project completion. Based on the fact that development is not precluded in avoidance areas, no projects would be expected to be precluded or foregone.

The increases in costs may be commensurate with the number of acres designated as avoidance.

Cumulative Impacts On Land Use Authorizations Management

Classifying 205,740 acres of BLM lands as avoidance and 107,420 acres as exclusion to protect sensitive resources would increase costs for some companies that develop facilities under the various lands and realty use authorizations. Based on the fact that development is not precluded in avoidance areas (which make up only 14 percent of the Resource Area), and the fact that exclusion areas (which make up only seven percent of the Resource Area) are small and/or widely scattered throughout the Resource Area, no projects would be expected to be precluded or foregone.

The increases in costs may be commensurate with the number of acres designated as avoidance or exclusion.

Elimination of approximately 109,000 acres of right-of-way corridors may result in limiting siting flexibility, and in a greater need for analysis of any facilities which may be proposed for these lands in the future. However, designation of approximately 227,000 acres of those corridors which are deemed most likely to be needed, would streamline processing of Bureau rights-of-way for reasonably anticipated major facilities. Ultimately, the nature and degree of this impact would depend upon future demand and whether or not proposed routes would actually coincide with these corridors.

IMPACTS ON FIRE MANAGEMENT

Impacts From Proposed Fire Management On Fire Management

Continuing to implement an aggressive fire suppression action on wildfires has and would alter the natural ecosystem processes. Fire suppression actions have greatly influenced the fuel buildup and enhanced the reinvasion efforts of shrubs and woodlands, thus producing older age plant communities with decreased diversity in structure and species composition. These conditions are unhealthy and would quite often produce larger, more severe fire effects on the ecosystem, and would cost more to suppress.

Implementing a comprehensive fire plan, utilizing fire as a tool to re-establish natural fire regimes and to promote a healthy and productive

environment would, minimize undesirable fire effects, including effects on humans. Fire enhancement would be planned utilizing both management and natural ignition to produce the desired objectives. Emphasizing the natural fire disturbance would provide for the maximum plant species composition diversity, restore plant vigor, and production. Fire then would provide a means to change the plant communities from and woodland dominated sites to perennial grass early successional stage. Human impacts would be addressed and provisions to protect the negative consequences will be mitigated in the fire plan.

Impacts From Proposed Minerals And Land Use Authorizations Management On Fire Management

Increased human activity such as construction of facilities would increase the need to protect property by suppressing fires in those critical areas. Through man's intervention, the long term impact would have negative consequences on desired plant community diversity and provide fuel accumulation in critical areas. Increased fuel loading could become a safety problem and escalate fire suppression problems. Fuels would continue to successionally accumulate and potentially reach late seral stages. The process of surface disturbance and the inclusion of structures would have a negative impact on fire and the proper role of fire burning naturally within the ecosystem. These disturbances would break up continuous fuels and reduce the potential of a natural mosaic burn.

Impacts From Proposed Big Game Habitat Management On Fire Management

Small-scale fires up to 60 acres as proposed in the Blue Mountain area would not allow fire management enough flexibility to manage fires within the proposed PNF. Fire starts in the pinon-juniper vegetation would either consume less than 1 acre or far exceed the 60 acre limitation. Continued fire size restrictions have and would continue to be detrimental ecologically because small disturbed sites would concentrate both wildlife and livestock. A recommendation of establishing an annual fire size or a running 3 to 5 year total would provide greater flexibility to manage fire and achieve objectives ecologically.

Impacts From Proposed Grouse Management On Fire Management

The proposed individual fire size limitation of 200 acres in the Blue Mountain area would not allow sufficient flexibility to manage fires under the proposed Prescribe Natural Fire (PNF). Historically fires can, under ideal weather conditions, burn up to 2,000 acres in sagebrush, while other "off" years, with less than ideal burning conditions, has resulted in fires obtaining far less than the 200 acre limitation. Establishing an annual fire size cap or a running 3 to 5 year total would provide greater flexibility in managing the area on a landscape basis.

SOCIAL AND ECONOMIC IMPACTS OF THE PROPOSED MANAGEMENT PLAN

Impacts From Management of Sensitive Resources On Socio-economics

Applying surface stipulations on BLM lands to protect sensitive resources such as wildlife, plants, and fragile soils, would increase the the cost of development for some companies (see Appendix D). The increases could occur because of increased labor, supplies, and transportation, resulting from more extensive requirements for development and reclamation practices, and/or delays in project initiation/completion. Increased operating costs would lower the potential for economic production. While surface stipulations and conditions of approval would increase costs and lower production somewhat, they would not likely have a measurable economic impact on development due to the larger impact of market price on the commodity. The world crude oil price and local/regional/national price for natural gas is the driving force behind supply and demand. Higher commodity prices will likely result in increased activity. Static or lower prices may lead to a drop in development and production, enhanced to some degree because of increased stipulations. A cost breakdown of drilling typical wells in the Resource Area as well as a range of costs associated with selected stipulations and conditions of approval is included at the end of Appendix D. These costs were developed by the oil and gas industry.

The oil and gas industry is very important to this economic study area and will continue to hold that importance over the life of this plan. Oil and gas production provides several different benefits, including:

1) direct local employment;
2) increased local income and employment from: a) additional purchases from local businesses and contractor; b) additional purchases from local businesses by company employees.
3) increased tax base from: a) fifty percent of all royalties and public land rentals are redistributed to the county involved, Colorado Water Conservation Board, and Public School Fund; b) increased property tax revenues.

The extent of these benefits vary. Initial exploration leads to a temporary income benefit to the community. If a discovery is made, these effects are more long lasting.

Energy related employment as a percent of total workforce was nine percent for Garfield County, 41 percent for Moffat County, and 58 percent for Rio Blanco County in 1988/1989.

The federal revenue from energy development has been and will continue to be very important to the Area.

Amounts paid in 1994 for federal oil and gas royalties include $1,122,593 to Garfield County, $2,266,863 to Moffat County, and $3,740,311 to Rio Blanco County.

Many of the developed fields in the area are relatively old. Oil and gas production for the entire area will likely decrease, over the life of the plan, because of reservoir depletion unless new field discoveries are made. This drop in production would occur with or without the proposed management plan.

Impacts From Woodlands Management On Socio-Economics

The potential sale of 360 cords of pinyon-juniper annually would support Resource Area demand and produce $4,320 annually in federal revenue.

Impacts From Recreation Management On Socio-economics

The economic benefits from recreation opportunities could be medium to high, but are currently unmeasurable, and would depend on the area of the impact. Benefits would occur in those businesses providing tourist and recreation sales and services. Although the area is not currently dependent on tourism related incomes, a positive impact to income and employment could occur from the establishment of tourism/recreation partnerships that would promote and market these activities for the area.

Results of socio-economic research currently underway by Colorado State University, designed to assist tourism promotion groups will be incorporated into the development of future BLM activity planning efforts.

Cumulative Impacts On Socio-economics

The cumulative impacts on the local communities from implementation of stipulations may be slightly negative if commodity prices remain static or decrease. This impact would not likely be significant. Impacts resulting from development of recreation/tourism marketing efforts will likely be beneficial but is currently unquantifiable.

CHAPTER FIVE
CONSULTATION, COORDINATION AND LIST OF PREPARERS

INTRODUCTION

The Proposed Resource Management Plan and Final Environmental Impact Statement was prepared by an interdisciplinary team of specialists from the White River Resource Area office, Craig District Office, and Colorado State Office. The RMP/EIS process included resource inventory, digital data capture for the BLM's Geographic Information System analysis, public participation, interagency coordination, and preparation of a management situation analysis (on file at the White River Resource Area office).

PUBLIC PARTICIPATION

Throughout the preparation of this document, concerns and interests of all publics were addressed in a variety of public participation activities. The Area Manager, team leader, and team members met with county commissioners, environmental and interest groups, the Craig BLM District Advisory Council (representatives who advise the District Manager on local land issues), the Craig BLM Grazing Advisory Board, and other concerned citizens.

On June 21, 1990, a Notice of Intent to prepare a Resource Management Plan was published in the *Federal Register*. This notice began the formal planning process. At the same time, a scoping newsletter was mailed to 1,235 individuals, organizations, agencies, special interest groups, the media, business interests, and academic institutions inviting them to participate in the planning process. The general public was informed through news releases.

The contents of the scoping newsletter included an invitation for all publics to attend a series of three evening public meetings held in Rangely, Meeker, and Grand Junction, Colorado, during June 1990. The purpose of the newsletter and the meetings was to explain the goals and objectives of the RMP and EIS and identify, discuss, and clarify issues and management concerns related to the plan. Issue statements and comments were accepted from the public by mail and at the public meetings.

A work group of 24 representatives of various interest and user groups was formed at the scoping meetings to provide an on-going review and comments on various portions of the Draft RMP/EIS. This work group met to provide feedback on the development of management alternatives, the RMP and EIS process, and the selection of the Preferred Alternative.

In October 1991, a second newsletter was sent to the contact/ distribution list outlining three alternatives to be considered in analyzing the impacts of various management decisions upon the affected environment. This newsletter included a summary table of major decisions that could be made under the range of alternatives.

Between April 1992 and June 1994 several Preliminary Draft RMP/ EIS briefings were held with the following entities: Dinosaur National Monument; Nature Conservancy; Eastern Utah Ecosystem Plan; BLM Deputy Director for Minerals; BLM Colorado State Director; Rio Blanco County Commissioners; Colorado Environmental Coalition; livestock operators; wild horse advocacy groups; Independent Petroleum Association of Mountain States; and the RMP workgroup.

The Draft Resource Management Plan and Environmental Impact Statement (DRMP/EIS) was released for public comment on November 11, 1994. Over 700 copies of the document were mailed out and 500 copies were handed out at public meetings. Public hearings were held in Meeker, Denver, Grand Junction, and Rangely, Colorado on January 9, 10, 11, 12, 1995, respectively. The public comment period was extended from February 10, 1995 until April 28, 1995 (168 days total). In addition to the Public hearings, public informational meetings were held on the following dates and places. In some instances the group or individuals requesting the meeting are also identified:

February 4, 1995 - Meeker and Rangely, CO
February 7, 1995 - Rocky Mountain Oil & Gas Assoc., Denver, CO
February 9, 1995 - Associated Governments of Northwest Colorado, Rifle, CO
February 16, 1995 - Meeker Sportsman Club, Meeker, CO
February 22, 1995 - Livestock Operators, Meeker, CO
March 10, 1995 - Moffat County Commissioners, Craig, CO
March 21, 1995 - Craig CO
March 27, 1995 - People For The West, Grand Junction, CO
March 28, 1995 - Off Highway Vehicle representatives, Meeker, CO
April 10, 1995 - West Slope Congressional Staffs, Grand Junction, CO
April 22, 1995 - White River Land Users/OHV representatives, Meeker, CO
April 25, 1995 - West Slope Congressional Staffs and White River Land Users, Meeker, CO

CONTACT/DISTRIBUTION LIST

During preparation of the draft document and Proposed RMP and Final EIS, various federal agencies, state, and local governments and agencies, interest groups, and individuals were contacted for information and data. The Proposed RMP and Final EIS will be mailed to the numerous agencies, organizations, and individuals that participated in the document either through providing data or providing comments on the Draft. A partial list of contacts and recipients follows:

FEDERAL AGENCIES

Advisory Council on Historic Preservation
Congress, Library of Federal Energy Regulatory Commission
Federal Highway Administration
Secretary of the Army
U.S. Army Corps of Engineers
U.S. Department of Energy

U.S. Department of Transportation
U.S. Environmental Protection Agency
U.S. Government Printing Office
USDA, Colorado ASCS Office
USDA, Forest Service
USDA, Rio Blanco County ASCS Office
USDA, Soil Conservation Service
USDI, Bureau of Indian Affairs
USDI, Bureau of Mines
USDI, Bureau of Reclamation
USDI, Dinosaur National Monument
USDI, Fish & Wildlife Service
USDI, Geological Survey
USDI, Mineral Management Service
USDI, National Park Service
USDI, Office of Environmental Project Review
USDI, Office of Surface Mining and Reclamation Enforcement
USDOE, Western Area Power Administration

COLORADO STATE AGENCIES

Board of Land Commissioners
Colorado State University
Commission on Higher Education
Department of Education
Department of Energy Conservation
Department of Health
Department of Highways
Department of Natural Resources
Department of Social Services
Division of Water Resources
Division of Wildlife
Geological Survey
Historical Society
Soil Conservation Districts
State Forest Service
Water Conservation Board

COUNTY GOVERNMENTS AND AGENCIES

Garfield County Planner
Glenwood Chamber of Commerce
Grand Junction Chamber of Commerce
Mesa County Planning Department
Moffat County Commissioners
Moffat County Planning Department
Northwest Colorado Council of Governments
Rifle Chamber of Commerce
Rio Blanco County Commissioners
Rio Blanco County Planning Department
Western Rio Blanco County Parks and Recreation District

MUNICIPAL GOVERNMENTS

Associated Governments of Northwest Colorado
Colorado West Area Council of Governments
City of Grand Junction
Mayor of Meeker
Town of Rangely
City of Rifle

CONGRESSIONAL AND LEGISLATIVE OFFICES

Senators/Representatives:
Senator William Armstrong
Senator Hank Brown
Senator Tim Wirth
Senator Ben Nighthorse Campbell
Congressman Scott McInnis
State Senator Tilman M. Bishop

INTEREST GROUPS AND ORGANIZATIONS

A J Oil Company
ATC Realty Eight Incorporated
Adolph Coors Company
Alta Energy Corporation
Amax Coal Company
American Cometra
American National Petroleum Company
American Resources Management Corporation
American Rivers
American Youth Hostels
Amoco Pipeline Company
Amoco Production Company
Arch Oil & Gas Company
Audubon Society of West Colorado
Beartooth Oil & Gas Company
Beem Oil & Gas Company
Benton Engineering
Biggs, W Gale Associates
Bluebell Oil Company
Bogle Farms
Boies-Norell Ranch
Brenex Oil Company
Brownlee Cattle Company
Buckles Ranch
Burke Brothers
Burkhalter Engineering Company
Burr & Cooley
Bush Oil Company
C&G Roustabout Service
CHD Operating Incorporated
CHM Hill
Callister Company
Carter Mining Company
Center for Plant Conservation
Center for Government Research Incorporated
Chancellor & Ridgeway
Chandler & Associates Incorporated
Chaparral Resources Incorporated
Chevron USA Incorporated
Coastal Oil & Gas Corporation
Colorado Cattlemen's Association
Colorado Environmental Coalition
Colorado Farm Bureau
Colorado Indian Council
Colorado Native Plant Society
Colorado Off-Highway Vehicle Coalition
Colorado River Conservation District
Colorado University Wilderness Study Group
Colorado-Ute Electric Association
Colorado Wildlife Association
Colorado Wool Growers Association
Colowyo Coal Company
Conoco Incorporated
Consolidation Coal Company
Cox Brothers
Cripple Cowboy Outfit
Daub & Associates

Delany & Balcomb
Denver Museum of Natural History
EMRX Corporation
Environmental Defense Fund
Environmental Strategies, Incorporated
Equity Oil Company
Eros Data Center
Ertl Trust
Exxon Coal Resources USA Incorporated
Exxon Company USA
Fina Oil & Chemical Company
Fuel Resources Development Company
Gordon Engineering Incorporated
Grace Petroleum Corporation
Graham Royalty, LTD.
Grand Valley Resources, Incorporated
Great Northern Gas Company
Grynberg Petroleum Company
Halandras Brothers
Halliburton Geophysical Services
Hayes Petroleum Company
Holmes and Roberts
Homestake Mining Company
Industrial Gas Services Incorporated
Intermountain Soils Incorporated
J & D Associates
J & P Sheep Company
J C Oil Company
Jacobs Engineering Group
Jacobs Land & Livestock
Jones & Stokes Associates Incorporated
K Ranch
Kaiser Francis Oil Company
Keystone Ranch
Ko, Kenneth C. & Associates Incorporated
Leonard Resources
Luff Exploration Company
Mantle Ranch
Marathon Oil Company
Master Petroleum & Development Company, Incorporated
Meridian Oil Incorporated
Mid Continent Resources Incorporated
Mitchell Energy Corporation
Mobil Oil Corporation
Morapos Sheep Company
Morrison-Knudsen Engineers Incorporated
Museum of Western Colorado
NaTec Resources
National Fuel Corporation
National Wildlife Federation
Natural Resources Defense Council
Nature Conservancy
New Paraho Corporation, The
NORA
Northern Geophysical of America
Occidental Oil Shale Incorporated
Occidental Petroleum Corp
Oldland Brothers
Oryx Energy Company
Pace Consultants
Papoulas Livestock Company
Parker & Parsley Petroleum Company
Peacock Oil Company
Petrotech Incorporated
Phillips Petroleum Company
PIC Technologies, Incorporated
Pioneer Archaeological Consultant
Pioneer Oil & Gas
Piute Energy Company
Polfam Exploration Company
Premium Oil Company
Public Access Coalition
Public Lands Institute
Questar
Quinoco Petroleum Incorporated
RTP Associates
Reading & Bates Coal Company
Rio Blanco County Stockgrowers
Rio Blanco Natural Gas Company
Rio Blanco Oil Shale Company
Rio Mesa Resources Incorporated
Rocky Mountain Oil & Gas Association
Saunders, Snyder, Ross & Dickson, P.C.
Schuh & Associates, Incorporated
Seely Land & Livestock Company
Sharon Resources Incorporated
Shell Oil Company
Shell Western E&P Incorporated
Shipley Association
Society for Range Management
Southern Ute Tribe
Southland Royalty Company
Southwest Research & Information Center
Spade Livestock, Incorporated
Standard Oil Company (Indiana)
TXP Incorporated
Tenneco Oil Company
Texaco Incorporated
Theos Swallow Fork Ranches
Three Springs Ranch
Three States Oil Company
Timberline Energy Incorporated
Tribal Business Committee
Tribal Museum
Tri-Island Land & Cattle Company
Twin Arrow Incorporated
Twin Buttes Ranch Company
Two Tanks Oil Company
Two-J Oil Company
UNICAL Corporation
Uintah County Library
Union Pacific Railroad
United Farm Agency
University of Colorado at Boulder
University of Colorado at Denver
University of Northern Colorado
University of Southern Colorado
Upper Colorado Environmental Plant Center
Utah International Incorporated
Ute Mountain Tribe
Villard Brothers
Villard Petroleum Incorporated

Vincent Brothers
Vista Del Sol Ranch
Western Aquatics Incorporated
Western Fuels Association Incorporated
Western Gas Supply
Western Geophysical
Western Interstate Energy Board
Western Utility Group
Wexpro Company
White River Land Users
White River Nahcolite Minerals, Inc.
White Rose Exploration, Incorporated
WHOA, Eastern Representative
Willard Pease Oil & Gas Company
Winslett Ranch Incorporated
Wyoming Advocates for Animals

LIST OF PREPARERS

Although the individuals identified in the following table had responsibility for preparing sections of the Draft RMP/EIS and Proposed RMP and Final EIS, the documents were an interdisciplinary team effort.

Internal reviews of the documents were conducted at each stage of preparation. Specialists at the district and state levels of the Bureau of Land Management were consulted and reviewed the analysis and supplied information. The names of the reviewers are not listed in the table.

Name	Office	Primary Responsibility	Education	Years of Experience
James Andersen	Craig District Office	District Fire Ecologist	B.S. Range Management	1 year Forestry Fire Supp. 7 years Range Conservationist 5 years Lead Range Conservationist 14 years Fire Management Officer 1 year District Fire Ecologist
Scott Archer	Colorado State Office (Denver Service Center)	Climate and Air Quality	B.S. Environmental Science and Chemistry	15 years Air Quality Specialist
Bob DenBleyker	White River Resource Area	Third Technical Coordinator Wild and Scenic Rivers Fire/Map Coordination/Editing	B.S. Forest Management	1.5 years Planning 10 years Forester/Silviculture 2 years Timber Inventory
Duke Duzik	White River Resource Area	Motorized Vehicle Travel Recreation/Wilderness/ Visual Resources	A.S. Biology B.S. Animal Science	6 years Outdoor Rec. Planner 25 years Range Management
Dave Cooper	White River Resource Area	Recreation, OHV, Wild & Scenic Rivers, Wilderness, Visual Resource Management	B.S. Forestry (Outdoor Recreation)	2 years Park Naturalist 2 years Park Ranger 2 years Forestry Tech. 16 years Outdoor Recreation Planner
Bob Fowler	White River Resource Area	Forestry	B.S. Range and Forest Management	7 years Forester/Range Conservationist 9 years Range Conservationist 5 months Forestry Tech 6 months Range/Forest Tech
Joann Graham	White River Resource Area	Fourth Team Leader/NEPA Specialist/Technical Editor	Various BLM Training Courses	2 years Team Leader 16 years Technical Writer/Editor and Planning/Environmental Protection Specialist 12 years Administrative Field
Mark Hafkenschiel	White River Resource Area	Wild Horses/Noxious Weeds	B.A. Fine Arts M.S. Range Management	17 years Rangeland Management
Bill Hill	White River Resource Area	Assistant Area Manager/ Third Team Leader/ Minerals Fifth Team Leader	B.S. Geology	11 years Realty and Minerals Supervisor 5 years BLM Geologist 10 years Geologist, Minerals Exploration Industry
Carol Hollowed	White River Resource Area	Soil/Water/GIS Maps	B.S. Plant and Soil Science	5 years Hydrologist 10 years Hydro Tech 2 years Bio Tech
Ed Hollowed	White River Resource Area	Wildlife	B.S. Wildlife Biology	17 years Wildlife Management Biologist

Name	Office	Primary Responsibility	Education	Years of Experience
Melissa Kindall	White River Resource Area	GIS Maps	Various BLM Training Courses	1 year ADS/GIS Assistant 4 years Range Technician 1 year Editorial Clerk 3 years Lands Clerk 2 years Clerk/Typist
Pam Levitt	Craig District Office	GIS Maps	Assoc. Degree Business Management/ Computer	2 years GIS Coordinator 4 years Computer Assistant
Christy McEwen	White River Resource Area	Word Processing/GIS Maps	B.S. Natural Resource Management	1.5 years Editorial/ADS Assistant 1.5 years Clerk/Typist 3 years Forestry/Resource Mgmt Tech
John Mehlhoff	White River Resource Area	Second Area Manager	B.S. Petroleum Engineering	1 year Area Manager 1 year Program Lead WO 8 years Petroleum Engineer 1 year Congressional Fellowship 1 year Staff Assistant to Assistant Secretary
Lane Osborn	White River Resource Area	Ecosystem Technical Coordination	B.S. Biology M.S. Range Ecology	2 years Surface Reclamation Specialist 3 years Superv. Surface Reclamation Specialist 4 years Staff Leader Realty and Minerals 5 years Inspection and Enforcement Coordinator 2 years Act. Branch Chief, Oil and Gas 2 years Act. Asst District Manager, Minerals 2 years Program Coordinator 1 year Ecosystem Technical Coordinator
Jeanette Pranzo	Colorado State Office	Socio-economics	M.A. Economics	23 years Economist
Vern Rholl	White River Resource Area	Lands and Realty Activities/ Motorized Vehicle Travel Coordinator	B.S. Forest Science	15 years Realty Specialist 4 years Forester
Mark Robertson	White River Resource Area	Wildlife/Fisheries/GIS	B.S. Wildlife Biology M.S. Wildlife Sciences	3 years Wildlife Biologist 3 years Wildlife Research Assistant
Rusty Roberts	White River Resource Area	Riparian/Livestock Grazing/ Vegetation/ T/E Plants/Sensitive Plants/Remnant Vegetation Asociations/ACECs	B.S. Rangeland Ecology	20 years Range Conservationist
Cindy Saltzman	White River Resource Area	Computer Applications/ ADS/GIS	A.A.S. Natural Resource Management	1.5 years Editorial/Clerk Typist 1.5 years ADS/GIS 7 years Computers, Printing, Typesetting
Alan Schroeder	White River Resource Area	Second Technical Coordinator	B.S. Forest Science	1 year Environmental Analyst 9.5 years Surface Rec Specialist 7.5 years Forester 2.5 years Forestry Tech/Aide
Marvin Schroeder	White River Resource Area	Locatable Minerals/Geology	B.S. Geology M.S. Geology	34 years Geologist
Mike Selle	White River Resource Area	Archaeology/Paleontology	B.A. Anthropology	15 years Archaeologist/Paleontology 1 year Arizona State Museum 2 years Teaching Assistant/Pinal Community College
Larry Shults	White River Resource Area	Oil and Gas	B.S. Zoology M.S. Parasitology Ph.D. Ecology	3 years Surface Rec Specialist 18 years Research of Wildlife Diseases

Name	Office	Primary Responsibility	Education	Years of Experience
Curt Smith	White River Resource Area	First Area Manager	B.S. Botany	29 years Area Manager 2 years Range Conservationist
Mary Beth Stulz	Craig District Office	GIS Maps	B.S. Wildlife Science	7 years GIS 7 years Range Con
Dave Taylor	Colorado State Office	GIS Maps	A.S. General Education Classes in Drafting and cartography	15 years Cartography (5 years in manual Cartography 10 years automated Cartography/ GIS support)
Gary Thrash	White River Resource Area	First Technical Coordinator/ Second Team Leader/ Wild and Scenic Rivers	B.S. Biological Science	2 years Ecologist 1.5 years RMP Team Leader 2 years Environmental Analyst 9 years Realty Specialist/Recreation Planner 2 years Range Technician
Glenn Wallace	Colorado State Office	Planning Coordinator	B.A. Social Science	15 years Land Use Planner 15 years Realty Specialist
Roger Wickstrom	White River Resource Area	First Team Leader	B.S. Range Management MS Agronomy MS Urban and Regional Planning	2 months Supervisory Planning and Env. Specialist 3 years Natural Resource Specialist 7 years Supervisory Env. Protection Specialist 5 years Planning and Envir. Specialist 10 years Range Conservationist
Kermit Witherbee	Colorado State Office	Minerals Reasonable Foreseeable Development	B.S. Geology M.A. Geology	1 year Resource Group Supervisor 4 years Senior Technical Specialist-Geology 4 years Reservoir Mgt. Supervisor 6 years Geologist 8 years Minerals Exploration Industry

APPENDIX A
PUBLIC COMMENTS ON THE DRMP AND BLM'S RESPONSES TO THE COMMENTS

INTRODUCTION

The original public comment period on the Draft RMP was established to cover a 90 day period from November 12, 1994, through February 10, 1995. After receiving several requests, the decision was made to extend the comment period an additional 78 days, to April 28, 1995. A total of 1,229 comments were identified within the 211 comment letters received on the Draft document. The four public hearings resulted in 29 individuals providing testimony that accounted for 82 comments. Approximately 1,156 signatures were also received on petition type letters.

The large number of comment letters and verbatim transcripts of testimony taken at the public hearings preclude the printing of each separate letter in this document. However, the comment letters received from local, state, and other federal agencies are required to be printed in the PRMP. Copies of these letters are printed at the end of this Appendix. Copies of the other comment letters or hearing transcripts are available upon request from the White River Resource Area office.

Every comment contained in letters and in verbal testimony was assigned a number. The appropriate RMP Team member was then assigned the comments relating to his/her specialty in order to develop a response. When the responses were complete, an effort was made to combine comments that contained the same or similar subject matter. In some cases, the RMP team member may have taken different approaches to responding to similar comments based on the wording in the comment. When this occurred both responses may be included in the response section. Table A-1 contains a list of commentors and affiliation, the number of comments contained in either a letter or hearing form, and the number assigned to their specific comment(s). Individual commentors should be able to track their comments from the following table by finding their name and noting the comment numbers assigned to their comment. The comment and response can then be found by looking up the comment number in the section following Table A-1. Combining the same or similar comments resulted in reducing the number of comments that received a response from 1,229 to 675.

Table A-1 LIST OF COMMENTORS

Letter Commentors

Name/Affiliation	Number of Comments	Comment Number
Gary Brenner/Self	4	1, 2, 144, 145
Eugene F. DeMayo/Self	4	144, 145, 146, 147
Betty Naughton/Self	4	145, 146, 148, 560
Karen Wharton/Self	4	1, 2, 149, 560
Greg McKennis/Self	4	1, 2, 145, 560
Kenneth M. Gambrill/State of Colorado	1	151
Ed Talbot/Self	4	1, 144, 145, 147
Robert L. Dey/Self	7	4, 144, 145, 146, 147, 155, 156
Russell A. Roberts/State of Utah	1	157
John Spezia/Self	6	1, 2, 145, 147, 155, 560
Diane Brower/Self	7	144, 145, 146, 147, 148, 560, 562
John Randolph/Self	5	1, 146, 147, 153, 560
John Martin/Colorado Off-Highway Vehicle Coalition	5	161, 162, 163, 164, 165
Steve Boyle/BioLogic Wildlife Research and Consulting	8	1, 2, 14, 147, 156, 560, 562, 563
Lenore Styler/Self	10	1, 2, 144, 145, 146, 147, 148, 156, 168, 560
Denis B. Hall/Gunnison Basin Biodiversity Project	1	147
Tim Hogan/Self	7	14, 144, 146, 147, 148, 169, 560

Name/Affiliation	Number of Comments	Comment Number
Roy A. Karo/Self	1	178
Tonie Louder/Little Snake Motorcycle Club	13	150, 163, 173, 174, 175, 176, 177, 178, 179, 180, 605, 614, 615
Petitions/OHV (330 signatures to date)	4	175, 181, 564, 613
Kenneth K Myers, D.D.S., P.C./Self	2	149, 178
Nina Johnson/Self	2	144, 560
William J. Fitzgerald, DVM/Shillelagh Equine	8	182, 183, 184, 185, 186, 187, 188, 189
John & Cheryl Lawson/Bobcat Ranch	2	563, 566
Tom Tucker/Buford Guide Service, Inc.	1	169
Ethel A. Owens/Self	1	192
Jean Smith Executive Committee member/The Sierra Club-Enos Mills Group	8	14, 29, 144, 145, 148, 155, 560, 563
H.S. Sundin/Self	7	2, 14, 32, 144, 145, 146, 560
Florence Williams/Self	7	14, 144, 145, 146, 147, 196, 560
Neil Forsyth/Self	2	175, 197
Andrew McCorkey/Self	3	146, 198, 199
Jean Herron/Self	3	145, 146, 560
Kurt Aronow/Self	10	1, 2, 14, 144, 145, 146, 147, 560, 563, 593
Letter type petitions	1	178
J.C. Thompson/Self	3	36, 150, 615
Paul E Schulz/Conoco	3	18, 27, 200
David Brownstead/Self	7	1, 2, 14, 146, 147, 148, 563
Janet Watson/Powers Elevation Co Inc	2	15, 16
Dennis D Hamaker/Self	1	178
Don Greenwood/AA Production Inc	30	5, 6, 10, 11, 18, 27, 37, 38, 39, 40, 41, 42, 43, 44, 45, 150, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 618, 619
John L Bouwkamp/Self	1	568
Alan Green/Little Snake Moto Club	2	212, 213
John Orrell/Citizens of NW Colo	1	178
Arthur & Jean Smith/Self	15	1, 14, 144, 145, 146, 148, 153, 155, 214, 215, 216, 555, 560, 622, 624
Mark Louder/Self	5	173, 176, 178, 217, 218
Gary D Dahl/Self	1	156
Morris Meachum/Self	6	14, 144, 145, 146, 560, 563
Constance Erhard/Self	7	1, 2, 144, 145, 146, 147, 560
Dan Prenzlow/DOW	8	219, 220, 558, 621, 625, 631, 632, 633
Colleen Flynn/Self	1	1
Dan Johnson/Self	10	221, 222, 223, 224, 225, 226, 227, 228, 634, 664
Toni Louder/COHVCO Rep	2	162, 229
Richard R. Wille/White River Electric	1	230
Jody Louder/Self	3	178, 231, 232
Gary L. Hinaman/Twin Arrow	6	46, 166, 233, 234, 588, 617
Glenn A. Otness/Apache Corp	6	27, 47, 48, 150, 235, 236

Name/Affiliation	Number of Comments	Comment Number
Karin E. Sawdey/Self	5	1, 2, 14, 144, 560
John M. Wade/Self	7	1, 2, 14, 145, 146, 560, 563
Steve Lowe/SLOWECO	1	149
Charlotte Z. Rotterdam/Self	10	1, 2, 32, 144, 145, 146, 148, 560, 563, 591
Rod Ficken/Self	3	180, 217, 237
Judy Cady/Wild Horse	1	238
Grady L. McNure/Western CO Regulatory Office	1	147
James J. Adkins/Self	5	180, 217, 239, 240, 573
S.J. Williams/Celsius Energy Comp	6	16, 18, 49, 50, 51, 150
Karen Wharton/Sierra Club	30	2, 52, 53, 54, 144, 145, 155, 219, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 620, 623
Laurie Walters/Self	8	2, 55, 144, 145, 146, 178, 180, 560
Harry E. McCarthy/Self	2	239, 261
Keith Stewart/Self	3	149, 262, 263
Gary L. Hinaman/Self	7	178, 264, 265, 266, 267, 268, 615
Mark Hardy/Self	4	213, 269, 270, 271
Martha Bushnell/Self	3	2, 14, 560
Hal Wentz/Self	2	145, 155
Leeza Monge/Self	5	14, 144, 145, 146, 560
Todd Robertson/Self	19	1, 2, 13, 144, 145, 148, 173, 178, 180, 190, 200, 272, 273, 274, 275, 276, 277, 593, 603
Davie D. Robertson/Twin Buttes Ranch	9	158, 219, 278, 279, 280, 281, 584, 636, 668
Don Collier/WR Bowman Club	2	282, 283
Brad T. Barber/Utah Planning Coord	1	541
Bob Dorsett/Self	3	1, 2, 145
Colin Baker/Self	6	1, 2, 147, 560, 562, 593
P.M. Di Grappa/Self	1	476
James D. Von Loh/CO State Parks	11	219, 284, 285, 286, 287, 288, 289, 290, 291, 292, 562
David F. Banko/Banko Petroleum Mang	14	27, 56, 57, 58, 59, 60, 61, 62, 150, 204, 293, 294, 295, 296
Mark J. Choury/Snyder Oil Corp	3	19, 63, 201
Norma & Taylor Temples/Self	1	192
Sandra Green/LSMCM	1	297
Glade M. Ross/Park Ranger DINO	3	149, 298, 299
Gary Heath/Self	4	144, 155, 300, 301
John P. Wright/CEC	10	2, 19, 27, 64, 144, 145, 146, 147, 155, 560
Rodney G. Mellott/Enron Oil & Gas	2	19, 150
Richard Morrill/Self	5	65, 302, 303, 304, 567
Kirk Cunningham/Self	17	13, 66, 144, 145, 148, 251, 252, 256, 257, 274, 275, 305, 306, 599, 560, 562, 602
Carol Amy/Self	1	178
Marvin Kipp, Audrey C. Kyzs, Amanda Metcalf, Daniel Dorris, Michael & Jane Miller,	1	149

Name/Affiliation	Number of Comments	Comment Number
Keith A. Rholl/Self	1	149
Dave Skinner/Self	3	307, 308, 615
Rio Blanco Stockgrowers Asso.	15	150, 224, 226, 227, 309, 310, 311, 312, 313, 314, 315, 646, 660, 664, 671
Donald C. Peach/Self	13	66, 153, 155, 178, 316, 317, 318, 319, 320, 321, 322, 601, 665
Mildred Sims/Self	2	323, 324
Robin Smith/Chevron	21	10, 17, 18, 27, 67, 68, 150, 204, 325, 326, 327, 328, 329, 330, 331, 579, 583, 590, 604, 615, 617
Brian D. Smith/Self	2	213, 332
Vernon Lyda/Self	6	158, 173, 178, 324, 581, 600
Jim Dewitt/White River Land Users	1	178
Vicki Kendall-Dorris/Colorado West Printing	14	7, 27, 149, 193, 294, 333, 334, 335, 336, 337, 338, 339, 340, 598
Timberline Trailriders Inc.	8	178, 180, 341, 342, 343, 344, 345, 580
Bob Drgac/Self	1	297
Gus R Halandras/Self	8	173, 346, 347, 348, 349, 570, 659, 675
Sandra Green/Self	1	149
Jim Faughn/Self	15	69, 204, 306, 320, 345, 350, 351, 352, 353, 354, 355, 356, 357, 653, 658
Jim DeWitt/White River Land Users	4	149, 150, 173, 358
Eric S. Johnson/Self	8	1, 13, 144, 145, 147, 155, 274, 560
Floyd C. Robertson/Coastal	4	359, 360, 361, 592
John L. Gordon/Gordon Engineering	15	22, 36, 70, 71, 72, 73, 362, 363, 561, 591, 594, 595, 596, 626, 659
Alden H. Hamblin/Utah Field House of Natural History State Park	2	364, 365
Stan Sjostrom/Self	4	173, 572, 575, 615
Lisa Stomberg/Colorado School of Mines	1	128
Frances Green/Town of Rangely	3	217, 366, 573
Jon Facklam/Self	3	166, 367, 368
Russell George/Colorado House of Rep.	3	149, 150, 369
Eric Lundquist/American Motorcyclist Asso	5	74, 149, 370, 371, 587
Dennis Sims/Town of Dinosaur	3	150, 324, 372
Howard Stowe Jr./Self	2	560, 573
Scott Balcomb & Edward Olszewski, Delaney & Balcomb, P.C./Mobil Mining and Minerals Company	18	5, 19, 75, 76, 149, 150, 178, 200, 205, 328, 341, 373, 374, 375, 376, 377, 378, 379
Dann Milne/Enos Mills Group/Sierra Club	9	1, 144, 145, 146, 148, 155, 156, 216, 560
Molly Forsyth/Self	1	178
Jeff Whilden/Self	2	77, 380
William Workman/Self	3	158, 178, 381
Beverly & Tony Baker/Self	3	155, 560, 562
Kirk Koepsel/Self	8	1, 2, 144, 145, 146, 147, 276, 560
Diana & Frank Warner/Self	3	178, 324, 382
Alan Green/Little Snake Motorcycle Club Inc.	4	178, 383, 384, 526
Peggy Rector/Self	2	150, 324

Name/Affiliation	Number of Comments	Comment Number
J. Greg Schnacke/Colorado Oil & Gas Association	3	7, 15, 27
K. Rea/Self	2	147, 560
David Johnson/Sierra Club	2	147, 155
Adam Mehlberg/Colorado Association of 4 Wheel Drive Clubs Inc.	3	173, 385, 574
Harold Putney Jr./Self	1	386
Jim Evans/Associated Governments of Northwest Colorado	5	78, 79, 178, 387, 388
Mark Smith/Self	1	178
J. Rex Robinson Family/Self	7	346, 347, 389, 390, 391, 557, 675
Raymond Miner/Self	2	345, 611
Dennis Medina/Self	1	392, 526
Flora Dean Brown/Self	1	178
Tony Louder/Little Snake Motorcycle Club	10	149, 346, 393, 394, 395, 600, 636, 657, 659, 670
C.T. Howell/Mobil Exploration & Producing U.S. Inc.	4	19, 80, 150, 396
Jim DeWitt/White River Land Users	8	7, 27, 81, 193, 333, 336, 339, 397
Jennifer Schultz/Self	3	200, 398, 399
Richard Stark/Rangely Times	4	150, 178, 400, 656
James Parmenty/Self	2	345, 611
Joe Collins/Rio Blanco County Commissioners	6	16, 149, 150, 261, 313, 401
David Laramie/Laramie & Associates/Gas	20	7, 16, 27, 66, 68, 73, 150, 201, 204, 327, 402, 403, 404, 405, 551, 560, 626, 645, 650, 663
Donnell Robie Jr./Self	2	178, 406
Lori Potter/Sierra Club Legal Defense Fund, Inc.	1	144
Barbara Flores/American Mustang & Burro Assn., Inc.	6	172, 238, 407, 408, 409, 410
Eileen Dey/Meridan Oil	20	6, 7, 10, 15, 17, 18, 27, 67, 82, 83, 84, 85, 86, 150, 326, 327, 328, 411, 583, 617
Gayle Peery/Cathedral Ranch, LLC	8	180, 245, 320, 412, 413, 414, 415, 638
Randy Bakken/Self	2	150, 406
Chuck Sis/Moffat County Commissioners	3	178, 327, 345
Kent Ahrens/Self	2	150, 178
John Neiberger/Rio Blanco Water Conservancy District	6	150, 416, 417, 418, 419, 640
Mike Perry/Dinamation International Society	4	420, 421, 422, 423
David Brown/Amoco	26	7, 17, 18, 37, 80, 87, 88, 89, 90, 91, 92, 93, 94, 95, 150, 327, 411, 424, 425, 426, 427, 428, 429, 591, 635, 649
Larry Moyer/Uncompahgre Plateau Paleontological Society	3	149, 430, 431
Alexander Woodruff/Independent Petroleum Association of Mountain States	14	16, 96, 97, 98, 150, 208, 327, 432, 433, 434, 435, 436, 608, 609
Minford Beard/Three Springs Ranch Corporation	6	224, 311, 437, 438, 439, 671
Connie Ericson/Mitchell Energy Corporation	8	99, 100, 101, 102, 440, 441, 639, 674
Jon Hill/Cripple Cowboy Cow Outfit Inc	20	103, 104, 173, 268, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 604, 628, 637
Claire Moseley/Rocky Mountain Oil & Gas Association	26	15, 17, 18, 37, 67, 82, 86, 88, 90, 91, 93, 105, 106, 108, 109, 204, 424, 425, 427, 435, 455, 456, 457, 583, 590, 612

Name/Affiliation	Number of Comments	Comment Number
Hubert & Betty Switzler/Self	2	176, 458
J. Stewart Hollingsworth/Self	12	149, 150, 326, 422, 431, 459, 460, 461, 462, 463, 464, 465
Thomas Macomber/Self	4	178, 213, 268, 466
Gary Wright/Self	2	178, 467
John Spezea/Self	4	145, 147, 148, 155
Jim Clark/Self	1	149
Clyde Slaugh/Self	1	283
James DeWitt/Self	1	394
Michael Weigand/Deserado Mine-Western Fuels-Utah	3	468, 469, 610
Garth Baxter/Vegetation Management-Herbicide Specialist/Forest and Rangeland Ecosystems	1	470
Eric Lundquist/American Motorcyclist Assoication	10	107, 110, 178, 471, 472, 473, 606, 627, 642, 661
Kristi Hundt/University of Colorado Wilderness Study Group	3	256, 474, 673
Edward Lippoth/Self	1	475
Roland Mercer/Self	3	383, 565, 615
Steve Cumella/Self	3	150, 204, 459
Larry Moyer/Petroleum Geologist	22	3, 7, 22, 27, 111, 112, 113, 114, 115, 116, 150, 204, 430, 463, 476, 477, 478, 479, 480, 481, 482, 586
Eddie Stewart/Self	1	483
Terrence Belton/Texaco	21	7, 17, 18, 27, 67, 82, 86, 87, 90, 91, 117, 118, 150, 424, 427, 435, 456, 457, 583, 607, 652
Russell George/State Representative Colorado	1	149
Timothy Paschke/Self	1	308
David Johnson/Keystone Ranch	16	166, 261, 268, 314, 318, 484, 485, 486, 487, 488, 489, 573, 597, 599, 647, 662
Don Moyer/Independent Landman	3	150, 476, 482
Keith Eilers/Self	1	178
Donald Brown/Self	1	490
Robert Caskey/Division of Wildlife	26	1, 2, 46, 119, 120, 121, 122, 144, 155, 178, 254, 256, 491, 492, 493, 494, 495, 496, 497, 498, 499, 569, 629, 643, 654, 655
Dennis Huffman/National Park Service	38	41, 92, 94, 123, 124, 125, 126, 127, 219, 330, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 556, 593, 579, 630, 631, 648, 651, 669
Paul Nunley/Shell Frontier Oil & Gas Inc.	14	129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 351, 521, 522
Jordan Kraft/Self	2	178, 582
H.W. Stack/Cabot Oil & Gas Corporation	6	6, 66, 94, 140, 150, 523
Mandi Gates/Self	2	524, 565
John Martin/COHVCO	1	263
Toni Louder/COHVCO & LSNCI	9	149, 343, 525, 526, 527, 528, 529, 576, 578
Dave Sabo/Department of Energy	3	336, 359, 530
Donald Moore/Adobe Creek Animal Clinic	6	238, 256, 531, 532, 533, 534
Tom Tucker/Burford Guide Service	3	197, 535, 672
Walt Ducy/Ducey's White River Resort	6	178, 264, 536, 560, 611, 615
Norm Mullen/Colorado Environmental Coalition	11	141, 142, 144, 145, 147, 276, 537, 553, 562, 589, 641

Name/Affiliation	Number of Comments	Comment Number
Jim DeWitt/White River Land Users	4	149, 178, 538, 539
Karen Sussman/ISPMB	4	410, 540, 542, 543
Frank Nessinger/KN Production Company	1	82
Toni Moore/Adobe creek Animal Clinic	4	155, 254, 410, 544
Annabelle Corner and Kristi Hundt/University of Colorado Wilderness Study Group and CEC	7	148, 155, 276, 545, 552, 616, 667
Beth Ann Jones/Self	6	254, 546, 547, 548, 549, 550

Public Hearing Commentors

Commentor Name	Number of Comments	Comment Number
Ruth A. Fink	2	143, 615
Gary Bartling	1	571
Donnell Robie	1	577
Wade Norton	1	150
Don Davis	1	150
Donald C. Peach	4	152, 153, 644, 666
Simon L. Boudreaux	2	3, 154
Charles R. Brady	1	149
Terry Chase	1	158
Don Greenwood	8	5, 6, 7, 8, 9, 150, 159
Dave Laramie	3	10, 11, 160
Eileen Dey	1	12
Don Thompson	1	145
Kirk Cunningham	4	13, 146, 166, 167
Claire Moseley	4	15, 16, 17, 18
John Wright	8	1, 7, 19, 144, 145, 146, 155, 560
Alex Woodruff	3	20, 21, 150
Barbara Flores	3	170, 171, 172
Andre Wilkie	2	7, 22
Jerry McLeland	1	315
Rich Griebling	1	23
Carroll Wilson	2	24, 25
Norm Mullen	8	2, 7, 26, 27, 145, 146, 148, 155
Bill Schapley	5	28, 146, 147, 190, 560
Don Greenwood	1	554
Toni Moore	2	191, 193
Randy Leacock	1	29
Andre Wilkie	7	6, 30, 31, 33, 34, 150, 194
Tonie Louder	2	195, 585
Mike Willie	1	35

Public Comments and Comment Responses

The following narrative presents a list of comments received on the Draft RMP, followed by the BLMs response. Following the word **Comment**, will be an underlined word describing the resource component that is the subject of the comment. In some instances the comment is taken verbatim from the commentor's letter or testimony, in others, the comment may be a combination of very similar comments that dealt with the same subject.

1. Comment: MINERALS. **I urge you not to lease sensitive areas for oil and gas exploration and development. Deny leasing for steep slopes, fragile soils, the White River corridor and other riparian areas, ACECs, wildlife areas, roadless areas, especially Black Mountain, Windy Gulch, Oil Spring Mountain and Pinyon Ridge.**

Response: The RMP does not provide "carte blanche" oil and gas leasing, as can be witnessed by the number and extent of stipulations and conditions of approval that have been developed in the document. Site specific analysis and the opportunity for a 30 day comment period already occurs for every development proposal.

The BLM is prohibited from leasing oil and gas within Wilderness Study Areas (WSAs). South Shale Ridge and Pinyon Ridge are not WSAs. Leasing stipulations and conditions of approval for development identified for these areas would adequately mitigate expected impacts. Refer to comment number 2. Public notices of proposed wells are posted for a minimum of 30 days prior to approval at the Resource Area office in Meeker and State Office in Lakewood.

Areas having sensitive plant populations, slopes over 35% that also have fragile soils, riparian areas and ACECs are proposed to be leased with a no surface occupancy stipulation. This will allow potential lessees the opportunity to provide resource inventories of the site specific area needed for development and if the sensitive or protected resources are not present and will not be impacted, then the project can proceed. This meets the BLM's policy of making natural resources available for development and at the same time assuring protection of sensitive resources. Critical summer and winter ranges are leased with timing limitations that are designed to reduce impacts to big game during specific critical periods of the year. The White River Resource Area has not identified roadless areas.

Oil and gas leases are prohibited from being issued within the Black Mountain Wilderness Study Area (WSA). The southern part of the WSA contains areas within a half mile of the White River. There were no other recreational values identified on BLM lands within a half mile of the river that would warrant a no leasing decision.

Approximately 97.6% of the federal oil and gas acreage in the Resource Area is available for leasing. This large percent is made available because the stipulations identified in Appendix B provide mitigation necessary to protect sensitive resources. It is BLM policy to make lands available for oil and gas leasing that can be developed in an environmentally acceptable manner or that are not excluded from leasing by some other policy, regulation, or law. Approximately 96% of the Resource Area either is now leased or has been leased for oil and gas in the past. However, development takes place on only a small percentage of those leases. The process to make lands available for leasing is not a one sided use of the lands. Leasing is part of multiple use concept provided for in the management of the public lands. The stipulations in Appendix B and Conditions of Approval in Appendix C, help assure that oil and gas development will occur in a manner that is compatible with other uses of the land.

2. Comment: Minerals. **Do not sell oil& gas leases before site-specific studies including public comment opportunities have been done. I urge you not to sell oil and gas leases until SITE-SPECIFIC analysis and PUBLIC involvement have been done. You cannot rely on timing limitations and stipulations to protect wildlife habitat. They lead to habitat fragmentation and apply only during exploration, not production.**

Response: The purpose of the RMP is to identify general leasing stipulations on an area of +1.5 million acres. At any given time, most of the acreage that is available for oil and gas leasing in the WRRA is under lease. Leases will expire at the end of their term (usually 10 years) if no activity occurs on the lease. Most of the area is leased for speculative purposes and consequently only a small percentage of leases will ever be developed. It would be very time consuming and a waste of money to conduct site specific analyses on an extremely large acreage that will likely never be occupied or disturbed. The current process provides notice to prospective lessees of the possible restrictions that will be applied to a given legal description. After the acreage is leased and a specific proposal for Application for Permit to Drill (APD) is received, the BLM conducts a site specific environmental assessment. That analysis will result in the application of site specific Conditions of Approval to protect sensitive resources. This method saves time and money and still provides the site specific analysis required by the National Environmental Policy Act. The BLM is also required to post all APDs for a 30 day public comment period before approving the application. This procedure has proven to be the most efficient and cost effective method to analyze the impacts of development from oil and gas leasing.

Each alternative details habitat management objectives and use prescriptions for each species or species group (see pages 2-58 through 2-75). Stipulations applied to permitted activities tend to be a relatively small part of the overall wildlife management strategy. Perhaps with the exception of Controlled Surface Use stipulations, wildlife-related NSO and TL stipulations are not generally capable, nor designed, to protect or conserve complete habitats. They are appropriately applied to discrete habitat features or important animal use periods susceptible to disruption. Riparian areas will be protected through use of No Surface Occupancy lease stipulations or through the use of site specific conditions of approval. These areas are usually lenticular in shape and do not occupy large blocky shapes. Therefore, protection is provided by avoidance of the riparian areas.

Wildlife protection stipulations are included for all areas having known wildlife concerns. The standard lease terms and conditions allow the BLM to delay proposed operations up to 60 days and/or move proposed activities up to 200 meters without having specific stipulations on the lease. Refer to comment numbers 593, 53, 579, and 146.

3. Comment: Minerals. **Other aspects of the plan will drive up costs for existing and future leases. Road density will limit development of resources. Pipe lines will be restricted by many of the various management elements. In fact pipe lines may be moved? (page 2-38 & 2-39) in riparian areas and no surface occupancy areas (page 2-44).**

Response: While the Preferred Alternative puts some limitations on placement of roads and pipelines, many of these limitations are already in use. Road densities are goals which can be accomplished by several

means other than cost prohibitive restrictions and, under limitations listed in the Proposed RMP, there should be no adverse impacts to resource exploration or development. Prior existing rights, such as rights-of-way for pipelines, cannot be diminished by the RMP, and relocation of these facilities would be voluntary, not be required. The Proposed Plan has been changed to clarify this point.

4. Comment: Minerals. **It seems to me that unmitigated mineral leasing, together with the concomitant road, pipeline and power line construction, will further threaten the beauty and viability of the environment many of us have come to cherish. What will you do about reserves and migratory corridors for deer and elk? What will happen to other animal and plant species? Are they not also a valuable resource?**

Response: All resources, whether biological, cultural, etc, are considered valuable by the BLM and mineral leasing is conducted in an environmentally responsible way.

5. Comment: Minerals. **We feel it would shorten the lives of our wells and would deny the nation a tremendous resource and significant quantity of a very clean burning fuel, fuel that money stays in this country to keep us as a strong nation and of which we can develop responsively, from an environmental standpoint, the resources. We feel that the loss of this production and the loss of the ability to drill new wells, because it would significantly impact us economically, would encourage significant new Canadian imports.**

Response: The analysis of the economic impacts of applying leasing stipulations was considered inadequate in the Draft RMP. A new analysis was developed in coordination with representatives of the oil and gas industry. That new analysis is included in the Final under the Socio-economic analysis section of Chapter 4.

6. Comment: Minerals. **Incidentally, the long list of technical people (pg. 5-5) that complied the RMP contain no experienced petroleum geologists, petroleum engineers, petroleum geophysicists, or petroleum landsmen. Which may explain why recommended oil and gas operational considerations in the RMP appear consistently unrealistic. The government's exclusion of input in the RMP from the petroleum industry makes their claim of a "balance plan" more erroneous.**

Response: The authors of the document consulted a wide variety of expertise in developing the different sections of the RMP. That expertise ranges from the Petroleum Engineers and geologists in the WRRA office and BLM's State Office in Lakewood, CO., to their counter parts with the U.S. Geological Survey. Every effort was made to utilize the current or most recent information available to develop the Reasonable Foreseeable Development (RFD) Scenario.

7. Comment: Minerals. **The plan represents a no-growth policy. The projections for drilling are far too conservative.**

Response: The Reasonable Foreseeable Development (RFD) Scenario calls for the drilling of 55 wells per year over the next 20 years. Recent historical data would indicate that this level is well within a reasonable average. The average number of wells drilled over the last 10 years has been 46 per year. The in-place estimates of hydrocarbon reserves has also not changed an appreciable amount over the last 20 years. The RFD that was prepared in 1990 was reviewed for any new circumstances that may have changed the numbers. None were found. The revised RFD has been incorporated into the Final document as Appendix D

8. Comment: Minerals. **The plan also says that this area has had 90 years of development, boom and bust cycles. Over 3,000 wells have been drilled in this area. Going way back, there has been procedures in place by the State to protect groundwater and the surface and to remediate the wells. We're now increasing greater levels of regulation on that existing area that we have protected. That wildlife out there has remained subject to that development that's occurred out there during that time.**

Response: The federal government has had regulations in place that require the protection of federal downhole resources, including minerals other than oil and gas and usable aquifer systems, since the passage of the Mineral Leasing Act of 1920. The only change to the policy of protecting these down hole resources has come with the advancement of downhole technology. The RMP is not proposing any new stipulations in this regard.

9. Comment: Minerals. **They will shorten the lives of wells because there will be increased debate in the field among BLM regulators, increased phone calls, correspondence, increased time by the existing staffs. It's been my experience in the 20 years I've been in the oil business that with increased regulation, tight margin as to what you get from your product and the cost to drill and produce, that expense has to be made up somewhere to remain profitable and viable. The staffs get reduced. Those staffs then even have a shorter time to determine where to invest to gain profit and to produce a good to society.**

Response: Opening the lines of communication and discussing proposals on the ground are commendable efforts and BLM will continue to strive to improve in that regard. Multiple visits to the same field locality are not ideal, even though they are the exception rather than the rule, but sometimes necessary in order to gather the documentation needed to exempt, waive, or modify a stipulation.

10. Comment: Minerals. **We are concerned by the BLMs statement that because most of the proposed ACECs are lenticular in nature, they can be developed with the use of directional drilling. It is our understanding there have been no successful horizontal wells drilled in the Piceance Basin to date. This is because the target formations are too shallow to allow directional drilling with any control. Therefore, the proposed ACECs will be excluded from all development even though they have high potential for oil and gas resources. Therefore, while we do not oppose the designation of new ACECs, we are strongly opposed to the more restrictive management BLM is proposing for these areas. We recommend BLM reevaluate its management proposal for these highly prospective hydrocarbon areas in an effort to develop a less restrictive management scheme.**

Response: Directional drilling will no longer be utilized in the document as a means of mitigation to develop No Surface Occupancy areas of oil and gas leases. However, the ACEC areas are relatively small and future development could still occur on adjacent lands, since nearly all the adjacent lands are also high potential hydrocarbon areas. While horizontal drilling may not be the method of choice for petroleum producers, it remains a viable tool for the extraction of oil and gas.

11. Comment: Minerals. **We feel that there is about 14 trillion cubic feet in the area, and we'd like to develop it, and we'd like to be on equal footing with a lot of the other countries and try to lower our balance payments. And I think we could try to do this successfully in the oil industry, but we'd like to have an equal playing field.**

Response: It is beyond the scope of this document to analyze the energy development philosophy and practices of foreign governments that compete with the U.S. energy industries.

12. Comment: Minerals **I want the record to show that Meridian is adamantly opposed to Alternatives B, C and D, as we feel the increase of NSO/CSU stipulations and the other restrictions are unwarranted.**

Response: The record has been duly noted. However, justification for the stipulations are contained in the Draft document and have been expanded upon in the responses to comments contained in the Final document. Those stipulations found not to have adequate justification were either deleted, revised, or transferred to a less restrictive category.

13. Comment: Minerals. **It is premature for the BLM to offer almost a quarter-of-a-million acres for oil shale leases when there is currently no demand for oil shale.**

Response: The oil shale leasing decisions were carried forward from the Piceance Basin Resource Management Plan completed in March 1985. The leasing decisions developed in that document are considered valid today, even though the technology and economics for a competitive oil shale industry does not exist today. The lands involved will continue to be managed for multiple uses, including grazing, recreation, oil and gas leasing, etc.

Those decisions identify acreage that would be made available for leasing should future demand warrant. Before the BLM made tracts available for leasing, there would be a call for expressions of leasing interests, lease tract delineations, environmental documents prepared on the site specific tracts, and if a tract were to be leased, another environmental document would be prepared on the individual mine plan submitted for the tract. Before any of the above could occur, the BLM would have to promulgate permanent regulations for the administration of oil shale leases.

14. Comment: Minerals. **Exploration and development of oil and gas (including oil shale) is the activity with the greatest potential for long-term environmental disturbance and degradation of the White River RA. I urge BLM to consider this their greatest management challenge: to seek reasonable development of this necessary resource while still protecting the critically important and valuable biological and scenic resources of the RA.**

Response: The BLM recognizes the responsibility of managing the White River Resource Area for development of mineral resources in the most environmentally acceptably manner practicable. All mineral development proposals receive a site specific environmental analysis prior to approval of the action.

15. Comment: Minerals. **According to Alternative D, BLM proposes to increase the use of no surface occupancy (NSO) stipulations by nearly 800%! The use of controlled surface use (CSU) will increase by nearly 50% the timing limitations (TL) will increase by 62%. Many of these stipulations are being applied to protect potential habitat for candidate or listed species or potential sites for cultural or paleontological resources. The imposition of severe restrictions on potential habitat or potential historic sites in the same manner as known habitat or sites should be eliminated because it results in excessive, unwarranted prohibitions on access and increases the cost of operations.**

Response: The BLM is required by law to protect Threatened and Endangered Species and their habitat that may be impacted by federal actions. All approvals are considered to be federal actions. If we know a species could likely exist within a given area, we cannot authorize actions within that area until an inventory is conducted and the affected species is found not to inhabit the area. If they do occur, in most cases an action can still be allowed to proceed if specific populations can be avoided and/or if the action would not cause secondary impacts to the species.

Over the last 15 years many laws and regulations have been promulgated that affect how the BLM administers the public lands. Oil and gas lease stipulations have been essentially the same in this area since 1981. Therefore, any noticed increase in oil and gas development restrictions would be related to the attachment of Conditions of Approval or Best Management Practices identified in Appendix A of the Draft RMP/EIS. The conditions of approval are developed in a site specific environmental assessment that addresses the impacts resulting from a proposed surface disturbing activity. Their purpose is to mitigate identified impacts to acceptable or insignificant levels. This does not mean all listed COA's would be used, but rather gives a more specific protection language. There are no differences in the Best Management Practices by alternative. They are applied the same in all four of the alternatives analyzed in the Draft document. The increase in restrictions are based upon the best scientific data available to date.

16. Comment: Minerals. **The RMP/DEIS proposes which lands in the White River Resource Area will be no lease lands or which lands will carry no surface occupancy (NSO), controlled surface use (CSU), and timing limitation (TL) stipulations. The draft RMP dramatically increases stipulations applied to new leases in the area. IPAMS believes that the addition of these stipulations will negatively impact the ability of oil and gas producers to diligently develop the natural gas resource in the Piceance basin and the Douglas Creek Arch area. The BLM states at page 4-21 that applying NSO, TL, and CSU stipulations to protect other resources would increase costs of extraction but not likely prevent recovery. IPAMS believes that the excessive increase in these stipulations will most definitely prevent development of oil and gas resources which would otherwise be developed.**

Response: The economic impact of applying the NSO, CSU, and Timing stipulations has been analyzed (with industry input) in the revised Socio-economic section in Chapter Four of the Proposed Management Plan. Conclusions of the analysis is that the stipulations will not likely directly affect future development activity. Timing Limitation stipulations can be reviewed on a case by case basis. This review would be at the local BLM level and would involve the responsible resource specialist. If the review did not give the developer satisfaction, a State Director's review could be requested. Many factors could act together to slow down activities, such as supply and demand which affects the market price for the product, the cost of pipeline hook-ups, cost of construction, cost of completing wells, cost of securing easements or rights-of-way, as well as the cost of complying with environmental restrictions. However, the market price of the product would likely be the most determining factor controlling development.

Activity in this Resource Area has remained relatively constant since the industry started recovering from the economic decline of the early eighties. This is also one of the most active public land areas in the state in terms of drilling activity, and compares favorably with Fee

development on comparable sized fields. The primary force driving development is the price received for the product produced, not whether the land is public or private. Permit approvals to drill an oil and gas well are required by law to be delayed a minimum of 30 days to allow public comment. Nearly all permits for a one or two well program are processed and approved within that 30 day timeframe in this Resource Area. An incomplete application or environmental problems can result in delays beyond the 30 days.

17. Comment: Minerals. **Another problematic aspect of the impact analysis is the BLMs oil and gas surface disturbance assumptions described in Chapters 2 and 3. For example, BLM predicts 1,154 wells will be drilled over the next 20 years which will result in 11,540 acres of surface disturbance. First, 10 acres of disturbance per well is excessive. On page 3-9, it is stated the average exploration well site is 2 acres. However, it is also stated 1 mile of road equals 22 acres of disturbance. This figure is astronomical. According to our sources, paved roads using a 40-foot estimated width of disturbance result in an average of 2.91 acres of disturbance per mile.**

Response: The 10 acre figure is considered to be a high estimate and can be compared to the disturbance associated with the construction of four miles of road and a well pad. Most in-fill drilling that is occurring now in the Area does not require four miles of access road. However, in the future, as fields become internally developed, industry will be required to look to new areas to exploit. Wildcat wells tend to have significantly more associated disturbance per well than in-fill development wells. The 22 acres of disturbance for road construction is a typographical error. The figure has been changed in the Draft to 2.2 acres.

18. Comment: Minerals. **Regardless of which figures are used, the BLM has not taken into consideration the actual long-term disturbance of producing wells as opposed to the short-term disturbance associated with exploration or initial development activities. Chevron recommends the BLM use a "Net Effects" approach to the impact analysis. BLM currently uses as its baseline for determining environmental consequences of alternatives the number of wells which could be drilled rather than net acreage disturbed by oil and gas operations. As such, BLM fails to consider that once a well is plugged, reclaimed and abandoned, it has no adverse effect on the environment.**

Response: If oil and gas exploration and development only occurred in grass environments your comment would be valid. However, this Resource Area contains an extremely wide variation of vegetative ecosystems and topographic relief. In the process of developing an oil and gas well, not only grasses are destroyed but also woody species, shrubs, and other vegetative components utilized by wildlife and livestock for food, escape, and shade. Reclaiming disturbed acreage with grasses, as is currently required in Alternative A and D, will not return that acreage to the uses and production of pre- disturbance lands until the natural vegetation invades the site, well beyond the 20 year life of this plan. Consequently, the impacts of that development are felt during the interim.

19. Comment: Minerals. **The Oil and Gas Management sections of the RMP/EIS should be rewritten to more accurately reflect the history, importance and future of the oil and gas industry in the RMP area. Also, the narrative in the RMP/EIS contains dated information, i.e., 1989 production data; and appears to assume only future moderate infield drilling and a continued decline in production of 7-10% annually. The RMP/EIS also downplays the beneficial socioeconomic impact of the oil and gas industry on the RMP area as well as the entire U.S. economy. A recent article in the "Daily Oil & Gas Investor" lists the Piceance Basin as the second most attractive gas exploration play in the United States, dependent on new technology, which the oil and gas industry is on the threshold of developing. The development of U.S. gas reserves is a goal of the U.S. Department of Energy and the responsibility for developing those reserves on federal lands resides with the U.S. Department of Interior, Bureau of Land Management. This responsibility should be stated in the RMP/ EIS. MEPUS would be willing to offer assistance to the BLM for redrafting this portion of the RMP/EIS.**

Response: The Socio-economic portion of the Draft RMP/EIS has been revised to more accurately reflect the concern presented in this comment. The potential natural gas reserves contained in the Piceance Basin has been documented in various publications for years. This documentation was utilized in the development of the RFD. A revised RFD, based on a review conducted by BLM and industry representatives, has been incorporated into the Final document as Appendix D. The findings of the revision was that the original RFD was a reasonable estimate of future activity.

20. Comment: Minerals. **It seems as though there are a litany of stipulations being applied to the entire area, and as the gentlemen just a moment ago sort of brought the question up, as he seemed to think that there was too much of a broad brush approach. But I can tell you, what exactly does leasing mean? It means making a choice on a Federal oil and gas lease with a controlled surface use timing limitation or a no surface occupancy. A lot of times the choice becomes clear whether you'll lease it or not, and a lot of times you won't lease it, especially from a small independent company's perspective.**

Response: Stipulations are developed to protect a given resource that is known to occupy a given location. Some are the result of the BLM requirement to comply with existing laws, others are designed to comply with BLM policy that has been shown to be an effective mitigating measure to soften or reduce impacts to acceptable levels. Conditions of Approval are similar to stipulations in that they are designed to eliminate or mitigate impacts to acceptable levels. Stipulations are attached to the lease to notify prospective bidders that there are environmental considerations that should be taken into account before bidding on a particular parcel. Conditions of Approval are more site specific and are developed after a parcel is leased and an application has been filed to drill a well, build a road or pipeline. There is no pre-lease notification regarding the application of Conditions of Approval.

21. Comment: Minerals. **The next question is the area contains a tremendous amount of potential out there to develop the natural gas resource, and that is also one of the BLMs primary responsibilities, is to ensure that the ultimate recovery of the gas occurs. And in our view, that won't happen if you follow the current direction with the stipulations that you have in the Draft Resource Management Plan.**

Response: It is the policy of the BLM to make all lands available for oil and gas leasing that have not been closed due to some discretionary or non-discretionary act, such as a withdrawal. It is also the policy of the BLM to assure that the development of oil and gas leases will take place in an environmentally acceptable manner. The use of lease

stipulations, that may or may not be accompanied by exception, modification, or waiver language, accomplishes two things: First, they alert potential lease purchasers that there are environmental conditions on the lease that may add to the cost of development; Second, they protect identified sensitive resources. Exploration and development activities in the oil and gas industry are highly dependent on fluctuations in the price producers are paid for their product. During periods of low prices, potential lease tracts having a large percent of the acreage encumbered by stipulations may go unleased. However, as market prices increase, those tracts will become more attractive and will likely be leased and developed within the constraints of the lease stipulation. Of the 1,736,548 acres that are available for leasing, 1,091,073 acres (63%) were leased as of May 1995. This acreage includes 1,278 leases. No statistics are available that show how many leases have been issued since 1981 that contain special stipulations, and how many lease parcels were made available but were not leased for some reason.

22. Comment: Minerals. **The document states: "While surface stipulations would increase costs and lower production somewhat, they would not likely have a measurable economic impact on development." (4-149) This demonstrates a total lack of understanding of basic economics and is obviously a classic example of double speak. How much will costs go up? When costs go up, how much will activity go down?**

Response: All users of the public lands that propose surface disturbing activities will be subject complying with these stipulations, including the BLM. The cost of the stipulations are analyzed in Chapter 4, Socio-economic analysis section of the Proposed Management Plan.

23. Comment: Minerals. **There could be some benefit in our perception from getting the environmental community, the Federal agencies, local governments, and the oil and gas commission, industry representatives together to look at oil and gas development, not only in the White River Resource Area, but in northwest Colorado in general.**

Response: This comment has a great deal of merit, but is beyond the scope of this document.

24. Comment: Minerals. **Management alternatives A, B, C and D were developed and proposed by the White River Resource Area of the Bureau of Land Management without consultation with energy development companies known to be active in the area.**

Response: As stated in Chapter 5 of the Draft, a notice of intent to prepare the Resource Management Plan was published in the Federal Register and a scoping newsletter was sent to 1,235 individuals, companies and organizations, including all oil and gas operators within the Resource Area. The newsletter also invited all publics to attend three public scoping meetings. A work group of 24 representatives of various interests was formed from attendees at the scoping meetings. The work group provided an ongoing review and comments during the development of the alternatives for the document. A year and 4 months after the scoping meetings, another letter was sent out that described the alternatives that would be analyzed in the document. Initially there were two workgroup members representing the oil and gas industry and one that represented pipeline interests, all of whom were active in the Resource Area. Several meetings were held with oil and gas industry representatives, after the close of the public comment period, in-order to help resolve comments on the economic analysis and Reasonable Foreseeable Development Scenario sections contained in the draft.

25. Comment: Minerals. **For the record, Snyder is particularly opposed to management plan alternatives B, C and D; and, if any of those alternatives are developed and ultimately finalized into the management plan, the feasibility of the 18 locations selected by Snyder will be placed in jeopardy.**

Response: It is assumed that if locations to drill a well have been identified, the company has the operating rights on an existing lease that encompasses those locations. The stipulations identified in the document will only apply to new leases, not to existing leases. Of course, sensitive resources occurring on existing leases that are protected by law will require mitigating measures to protect the resource in question. The Best Management Practices (Conditions of Approval) identified in the Draft document apply to all four alternatives.

26. Comment: Minerals. **One thing that is missing from the plan is the description of acreage to be leased with out any stipulations other than the standard stipulation, which is about 268,000, so that should be added to the table on page 2-9.**

Response: The comment is correct, the acreage figure has been added to the final document.

27. Comment: Minerals. **The assumption of 50 new oil or gas wells per year is too low for Reasonable Foreseeable Development, considering recent trends. Future impact for oil and gas operations does not foresee utilization of 2.5 million acres, in fact, projected development (p. 2-10) indicated that "1,154 wells will be drilled over the next 20 years and that 835 of these wells will become producing or shut in wells. It is also projected that a total of 11,540 acres will be disturbed as a result of this development activity. This development is assumed for all alternatives and takes into consideration the disturbance associated with roads, pipelines, and well pads." Segments of the industry anticipate that as a National Energy Policy emerges and utilization of natural gas increases because of its minimal environmental impact, more than the projected 50 wells per year could be drilled.**

Response: The Reasonable Foreseeable Development of 55 wells being drilled over the next 20 years was analyzed by BLM, USGS and industry representatives and was found to be a reliable estimate of future development in the Resource Area. See also the response to comment number 7. The Reasonable Foreseeable Development Scenario has taken the cyclic nature of the boom and bust oil and gas industry into consideration. Historical information would tend to support the guess that over the next twenty years, the 1,150 new wells figure is justified.

A revised RFD, completed with industry input, is included as Appendix D in the proposed management plan. The 1,154 wells presented in the draft has been shown to be a good mid range estimate of future development.

28. Comment: Minerals. **Because the area has been so heavily roaded in the past, the few remaining fragments of unroaded areas that remain, deserve absolute total protection from further roading and oil and gas development.**

Response: If oil and gas leases are issued, they carry a right to enjoy the lease. This means that the lessee has the right to develop the lease. Roads, pads, and pipelines are all required to develop a lease. Stipulations and conditions of approval to construct facilities on the

lease are developed to protect sensitive resources. If development occurs in an area that currently has a density of roads that are in excess of the threshold recommended for a given resource, such as Critical Winter Range, the new road may be barricaded to prevent access to the general public during certain parts of the year.

29. Comment: Minerals. **It is opposed to alternatives B, C and D. They feel it would restrict use on about 900,000 acres of land. Snyder has 40,000 gross acres of leases, of which they have 30,000 net acres they feel they would not be able to develop these in the manner that they have agreed to, leased them by.**

Response: The stipulations identified for Alternative D only apply to leases issued after the Decision Record is signed for the Final document. If there are existing leases in effect, development will be subject to the older stipulations attached to the lease as well as the conditions of approval that are developed upon submittal of an Application for Permit to Drill.

30. Comment: Minerals. **Some of the problems that we feel will arise though the implementation of the RMP, as mentioned before, are the affected areas of roughly 900,000 acres. There some specific concerns regarding no surface occupancy, controlled surface use and some of the concerns are who will make the decisions that implement these stipulations.**

Response: Stipulations and conditions of approval are and will be implemented by the resource specialist assigned to the White River Resource Area and approved by the Area Manager.

31. Comment: Minerals **We also favor alternative A. We feel that we are abiding by the stipulations that are attached to the leases that are issued at this time, and so far we've been able to work with these stipulations and we have had to make some adjustments and spend money to change locations to satisfy the stipulations or to satisfy the people in the different district offices.**

Response: The Colorado Oil and Gas Leasing and Development Final Environmental Impact Statement was completed in January 1991. That document developed leasing stipulations for most of the BLM lands in the state, except for this Resource Area. One of the main reasons that the oil and gas sections in Alternative D were selected as the Preferred Alternative, is that Alternative D brings this Resource Area into conformance with the decisions developed in that document. Alternative A's application of lease stipulations is not in conformance with the rest of BLM lands in Colorado.

32. Comment: Minerals. **Prohibit grazing and mineral extraction activities in riparian zones, which by their nature are fragile, and when disturbed can damage all downstream ecosystems.**

Response: It is unrealistic to prevent all grazing from riparian areas. Proper management can reduce impacts. Petroleum development is generally not allowed in riparian areas.

33. Comment: Minerals. **So we just feel that before alternative D, the preferred alternative is implemented, a hard look should be given to the future of this area and I think we tend to disagree with what is in the RMP, that I think it's going to be a lot busier in this area and a lot more development is going to take place.**

Response: A group of BLM and industry representatives met several times to review and revise, if necessary, the Reasonable Foreseeable Development (RFD) Scenario. The Revised RFD was determined to be adequate and is included in the Final document as Appendix D.

34. Comment: Minerals. **We realize that there are endangered specie and plant life and there's water shed problems to address, and we've taken the steps, and I know I've worked with people directly here to try to remedy those situations without over-implementing these restrictions and stipulations. We're hoping that before this is implemented that everyone considers the whole picture and then can work with the stipulations that are in place, because so far it seemed to have protected what this RMP has addressed as far as the problem areas of the county.**

Response: In most cases this comment is correct, however, there has been the occasion where an operator/lessee has not been as environmentally conscientious, especially when a special stipulation had not been attached to a lease. The problem is that most of the renewable resources that the stipulations are intended to protect are dynamic and change over time. The main difference, in this regard, between the Existing Management Alternative and the Preferred Alternative as presented in the document, is that the latter represents newer inventory data that was not documented in the former alternative. In other words, if the resource data available today was applied to the Existing Management, Alternative A, the number of acres included within stipulations would be very similar to Alternative D, Preferred Alternative.

35. Comment: Minerals. **From what I've seen on the four alternatives of A, B, C and D, the lowest alternative still restricts almost 23,000 acres, and I'm wondering why that's already implemented, why there isn't an alternative of just leaving it all along.**

Response: Because of the numerous environmental and other public land laws past by the U.S. Congress and the regulations resulting from those laws, any alternative of "just leaving it all alone" would be illegal. The BLM cannot consider illegal alternatives in its planning documents.

36. Comment: Minerals. **The NSO stipulation has been increased 750%...Several fairly sizeable blocks of acreage have been included in this stipulation which are found in active oil and gas areas. These are the Coal Draw ACEC, the Cathedral Bluffs Special Status Plants area and the Raven Ridge area. The Coal Draw and Cathedral Bluffs areas both have either active natural gas wells located within their boundaries or wells in very close proximity. Approximately 50,000 to 60,000 acres are involved within these two areas and when considering the potential resource along with reasonable cost for its development these areas will, in all probability, be dropped. The size of the blocks substantially reduces the potential for directional drilling to the resource and the type of anticipated production and natural gas reserves renders horizontal drilling to the resource economically unfeasible. It is anticipated that with full development of the natural gas reserves within the Coal Draw and Cathedral Bluffs areas, a maximum of 2-6% of the surface area will need to be disturbed. Protection of the Special Status Plants and the Paleontological resources certainly can be done through other means rather than a complete lockout of the surface usage.**

Response: The Coal Draw ACEC contains six wells that are capable of production and two plugged and abandoned wells within its boundary. This should be a pretty good indication that the NSO

stipulation would be exempted if new surface disturbance proposals would not affect scientifically significant fossils. The Cathedral Bluffs Special Status Plant Area has been reduced from the original size presented in the Draft. However, the original area was spread across parts of seven townships. Those townships contain 252 sections and the following oil and gas activity: 1) 29 wells drilled that are capable of production. 2) 26 wells drilled and now plugged and abandoned. 3) 5 of the above wells were drilled within the originally identified plant habitat.

From this it can certainly be inferred that the area could be developed and not encounter a problem even if the NSO were fully enforced. Add to that, the fact that the NSO has provision to be exempted and even more acreage could be developed, therefore it is not considered a "complete lockout of surface acreage".

37. Comment: Minerals. **The RMP does not contain enough scientific data. Specifically, petroleum entrapment concepts do not include hydrodynamic or "basin-centered" concepts. Thus, the area considered prospective for natural gas development is too small. Also, the projections for well drilling do not take into account larger recoverable resource estimates and larger projections for future drilling that are publicly available.**

Response: The entire Resource Area is identified as prospectively valuable and almost the entire RA is available for development. Data on natural gas reservoirs in the Piceance Basin are derived from U.S.G.S., and other private publications ie., Western Oil World, Oil and Gas Journal, etc. The Document has been changed to reflect 1994 data rather than 1990 data. The RFD was also reviewed and determined to be an adequate estimate of development activity.

38. Comment: Minerals. **Lessens the amount of immediately available natural gas for rising consumption. Diverts more private sector attention from improved natural gas development technology to being devoted to BLM communications. Causes much more pipe and electrical line miles per individual well. Increases the "crowding" in existing pipe and electrical line corridors.**

Response: The RMP does not reduce the amount of immediately available natural gas and does not influence advancement of technology, or more pipe or electric lines per individual well.

39. Comment: Minerals. **It is recommended that AA state strongly to the BLM that existing environmental regulations are severe enough and additional environmental regulatory severity is not warranted.**

Response: The RMP does not contain additional environmentally restrictive regulations. The proposed management merely implements existing policy and regulations.

40. Comment: Minerals. **During the BLM well permit process (APD), teams of both government and industry specialists meet in the field and nearly all alternatives and impacts are considered. The cost is currently great to AA's overhead for environmental regulation. AA is frustrated we and industry are not being given enough credit by the BLM, Colorado Environmental Coalition, or Sierra Club for ecosystem protection.**

Response: Federal Law requires that the BLM conduct onsite review of all potential oil and gas exploration to avoid adverse environmental impacts and to present any concerns or mitigation measures to the producer in advance of production in order to make such changes as required as efficient and cost effective as possible.

41. Comment: Minerals. **The discussion of Impacts from Visual Resources Management under Impacts on Oil and Gas Management (p. 4-21) states that prohibiting development in (VRM) Class I areas would not affect oil and gas production because oil and gas potential in these areas is low. These Class I areas are the WSAs within the Blue Mountain GRA. Map 2-6 indicates that virtually all of the Blue Mountain GRA has only low potential for oil and gas development. Given that low potential throughout the GRA, and given that prohibiting development within a portion of the area (WSAs) will not affect production because of the low potential, it follows logically that there would be no impact to oil and gas production within the Resource Area if development is prohibited on all of the VRM Class II in the Blue Mountain GRA. This provides further support for our earlier recommendation that no leasing or NSO stipulations be afforded the VRM Class II lands in the Blue Mountain GRA.**

Response: The wording of the Visual Resource Management section referred to on page 4-21 of the Draft is misleading and will be changed in the Final document. Prohibiting the ability to explore for and/or develop the oil and gas resources of an area can have an impact on the industry, regardless of what the estimated potential is for oil and gas occurring in that area. However, in this particular case the main reason the area is off limits to oil and gas development is due to the fact that the visual Class I lands are also Wilderness Study Areas. The comment, that if oil and gas development would not be impacted by being prohibited from Class I areas having low potential then there would also be no impact in prohibiting oil and gas activity in visual Class II lands that also have low potential, is not correct. Also, this does take into consideration that a large segment of the oil and gas industry's capital expenditures are based on speculation. The visual class II rating does not prohibit surface disturbing activities, but it does require that activities not attract the attention of the casual observer.

42. Comment: Minerals. **Page 1-9 describes how "The Umbrella Oil and Gas Environmental Assessment" (Umbrella EA) is currently used to determine stipulations. It goes on to say the subject RMP will supersede the Umbrella EA. Future RMPs may be considered that could further tighten environmental regulation.**

Response: More restrictive environmental guidelines could be formulated in the future if dictated by the passage of new laws.

43. Comment: Minerals. **On page 4-21 there is a statement under "Cumulative Impacts Oil and Gas" that even though exploration would continue at the rate of 50 wells per year, production is anticipated to decrease approximately 7 to 10% yearly. Production for the area is likely to increase similar to our properties.**

Response: It is a matter of statistics, that show declining production rates are occurring throughout the U.S., including within the WRRA.

44. Comment: Minerals **Page A-4 under Appendix A has the "best practices" for surface disturbing activities; namely, oil and gas drilling and they are reasonable except where a Licensed Professional Engineer (PE) is required. A PE is unnecessary and very costly. Several other BLM districts require a "competent construction supervisor" be used to supervise construction. This procedure has worked well.**

Response: The references to the requirement for a PE are associated with other than normal construction projects, such as bridge construction, large culvert placement, and road construction in difficult terrain. PEs will be required to have given approval in those circumstances.

45. Comment: Minerals. **Appendix C describes in detail the current oil and gas leasing process. This is curious for an environmental document and contains an implied threat that the leases can be purchased by non-industry groups to prevent oil and gas drilling activity.**

Response: Oil and gas leases can be bid on and purchased by any citizen of the U.S. or reciprocating foreign government, which includes environmental groups and the oil and gas industry. There was no intent for an "implied threat".

46. Comment: Minerals. **Even more important is the density of wells permitted; one well per 40 acres will have far greater impacts than one well per 320 acres (160 acres per 640 acre section vs. 20 acres/section, or put another way, 25% direct disturbance vs. 3%). The plan contains no information about well spacing.**

Response: Well spacing is a function of the Colorado Oil and Gas Conservation Division. However, the BLM, along with other surface owners, can influence well spacing based on topography or other resource concerns. Well spacing was discussed in the Reasonable Foreseeable Development Scenario which was not included in the Draft document. The RFD is included in the Final document as Appendix D.

47. Comment: Minerals. **We support the comments of the Rocky Mountain Oil and Gas Association and the Independent Petroleum Association of Mountain States. In Apache's opinion, the Preferred Alternative does not foster and promote better usage of the resources on public lands than the Existing Management Plan. The RMP should encourage and promote the economic beneficial use of the lands and provide the mechanism for individuals and companies to secure leases and permits to explore for the develop the mineral resources.**

Response: Individuals and companies have the mechanism to secure leases. Permits to explore are based upon environmental considerations on an individual basis.

48. Comment: Minerals **Please consider these comments and revise the RMP to encourage oil and gas exploration and production and other multiple uses of the public lands.**

Response: The RMP has been developed based on the principle of multiple use and sustained yield of the public lands.

49. Comment: Minerals. **We are strongly opposed to Preferred Alternative D because of the arbitrary increase in restrictions on oil and gas exploration and development activities.**

Response: There have been no arbitrary increases in restrictions to oil and gas development. Increase in acreage included in stipulations are due to more recent inventories of sensitive resources. Most of the stipulations are designed to continue to allow development to occur.

50. Comment: Minerals. **The BLMs Preferred Alternative will likely result in severe cutbacks on oil and gas activities due to the massive increase in restrictions and the resulting rise in costs to conduct operations.**

Response: The increase in restrictions for oil and gas activities is small and should not influence the cost of doing business for industry. The industry is much more influenced by the market price for the product.

51. Comment: Minerals. **The range of alternatives considered by the BLM is inadequate. A limited range of alternatives were analyzed in detail because it was assumed a high level of restriction on oil and gas activities is necessary, though, there is no basis to warrant such restrictions. Less restrictive measures must be considered and should be a fundamental element of a balanced analysis.**

Response: No alternative less restrictive than what is currently in effect is possible or realistic, due to the numerous laws and regulations that the BLM is required to administer.

52. Comment: General. **It is not clear that the BLM has a "vision" that it can articulate for the resource area. Instead, the public is presented with a collage of bits and pieces of policies and management practices that may or may not make any "holistic" sense and that may not be implementable. An important concern is that, at a time when all Federal agencies are under threat of elimination or at least severe cut-backs, there is deliberately no substantive discussion whatsoever on how the agency would prioritize its management activities in its preferred alternative or in its no-action alternative if its budget were to be reduced by some percentage. This means that the plan may be irrelevant by the time the final version is printed!**

Response: Federal agency budgets are often cyclic just as most natural resource based industry economies. Resource management planning is a tool used to define how BLM will manage resources on the public lands. Plan decisions can be categorized as statements of resource condition objectives to be achieved, allocations of land use including terms and conditions of such use, or specific management directions the BLM will follow. Decisions which identify resource condition objectives describe a desired target to be achieved in the long term through specific management actions or land use allocations. Not all plan decisions have budgetary implications or definable timeframes within which the objective will be achieved. These type of plans are intended to provide management direction over the next 20 years. If conditions change, the process allows change through Resource Management Plan amendments.

53. Comment: Minerals. **It is disturbing that the preferred alternative contains even fewer acres of no surface occupancy (NSO) stipulated leasing land than alternative B, especially in light of the statement on p. 2-10 that "...a stipulation could be excepted, modified, or waived, as stated in the stipulation, without preparing an RMP amendment...", thus rendering even a NSO stipulation of questionable protective value for exploration activities and of no value in the event of the discovery of a producing well. Therefore, it is our belief that the following types of lands MUST be protected altogether from leasing: steep slopes areas (over 35%), areas with fragile soils, all riparian areas, all 13 of the proposed ACECs, critical winter range or calving grounds for wildlife, and all roadless/wilderness candidate lands like Black Mountain, Windy Gulch, Oil Spring Mountain, and Pinyon Ridge.**

Response: These areas are protected now from development on an individual basis through application of stipulations contained in Appendix B of the Proposed Management Plan.

54. Comment: Minerals. **Most of the minable coal resources in the WRRA occur on lands around Rangely that are arid enough that reclamation will be problematic. The major coal strip mines in Colorado that we know about are all to the east in wetter environments where reclamation has some chance of success. For this reason, we support alternative Cs maximum percentage of leasable land with NSO stipulations.**

Response: Prior to any new coal lease being issued an environmental analysis would be prepared. Any area in the new lease where problematic reclamation was discovered, the reclamation would be addressed, in detail, as the new lease is added to an approved coal mine permit. Reclamation would be subject to the permit requirements.

55. Comment: Minerals. **Identify sensitive, fragile, or special areas (such as slopes steeper than 35 degrees, fragile soils, river corridors, riparian areas, ACECs, and critical wildlife areas and corridors) and restrict and/or deny oil and gas exploration, sand and gravel extraction, etc. into these areas.**

Response: The intent of the stipulations identified in Appendix B is to protect sensitive resources, such as, fragile soils on steep slopes, ACECs, riparian areas, and critical wildlife habitat. Mineral material (sand and gravel) disposal is authorized under a different set of regulations. Mineral material disposal sites are handled on a site specific basis.

56. Comment: Minerals. **After careful review of the draft RMP/ EIS, we strongly recommend one of two options: 1. Alternative A - Existing Regulatory Environment. The WRRA staff of specialists utilizing the existing laws, acts, regulations and onshore orders have managed these multiple use lands responsibly and we anticipate will continue to do so in a practical, balanced, common sense manner. 2. Return the draft RMP/EIS for further review. Re-state the impacts of Natural gas and oil exploration and development utilizing the expertise and data from qualified, experienced natural gas and oil professionals from the Department of the Interior, Colorado BLM State Office, U.S. Geological Survey, Minerals Management Service, Department of Energy as well as Colorado State, Garfield, Moffat and Rio Blanco counties and natural gas and oil industry professionals.**

Response: Neither recommendation will be followed. Alternative A stipulations are based on 1981 resource data. Alternative D represents the same restrictions as those presented in Alternative A except that it utilizes current resource information. It would not make much sense to enforce a stipulation based on 14 year old data and ignore the presence of the same resource based on current data. In addition, Alternative D brings the White River Resource Area into conformance with the stipulation base for the rest of the BLM, in Colorado. The WRRMP utilized information provided by most of the agencies mentioned in the comment to develop the Reasonable Foreseeable Development Scenario.

57. Comment: Minerals. **In the event of a national Energy emergency, an Act of Congress and/or Executive Order could wipe out BLM land use planning overnight. It is imperative that a well thought-out, short and long term, land use plan include contingencies for such an event, and should provide for orderly development now, instead of crisis management in the event of a national fuel supply disruption.**

Response: The RMP does provide for short and long term land use planning contingencies. Examples are the leasing decisions carried forward from the Piceance Basin RMP, dealing with oil shale. Oil shale has little to no value today, however, a national energy emergency could change oil shale's status overnight. The WR RMP has been developed to accommodate these factors.

58. Comment: Minerals. **Oil and Gas Leasing is the only issue wherein the criteria calls for a comparative analysis/evaluation between Oil and Gas development and other alternatives or uses. No such criteria exists or is stated for Wild Horse Management or Black-Footed Ferret reintroduction. There is no question as to whether these programs should exist; it is assumed they will exist. The criteria for Oil and Gas Leasing has an implied question of should oil and gas development exist. In this instance, the criteria should be expanded and should take into consideration the following: "(1) Determine what the country's future oil and gas demands will be and to what extent those demands will be met from non-imported sources. (2) To what extent is the national oil and gas supply dependent on oil and gas from the White River Resource Area." Incorporating these considerations into the Oil and Gas Planning Criteria would assume a National Energy Policy. Because a National Energy Policy does not exist, the Department of Interior, the Bureau of Land Management, and State and Regional offices are forced to apply policy, guidance and professional judgement that includes personal bias. Review and redefine or restate the planning criteria in a manner consistent for each issue.**

Response: The proposed management decisions developed for every resource identified in the RMP has been analyzed for the impacts those decisions will have on all the other resources. There is no implied question "... should oil and gas development exist" within the context of the RMP. Development of a national energy policy is beyond the scope of this document.

59. Comment: Vehicle Travel **Presently, only 15,560 acres are closed to public motorized vehicle travel. Alternative B, C and D would dramatically change this. It appears to be an "all or nothing" policy. Adoption of alternative A, B, C, or D within a specific Geographic Reference Area or Activity Plan Area would allow limited on and off road vehicle travel. This same approach is applicable to oil and gas operations and other areas. Change the all or nothing approach.**

Response: BLM is required to designate all public lands as either open, limited or closed to Off-Highway Vehicle (OHV) use. The OHV regulations are designed to protect resources, and allow for safety issues or conflicts to be resolved such as motorized vs. non-motorized use. As a result of public comments on the Draft RMP and the numerous public meetings, the preferred alternative has been modified to better accommodate and begin to manage motorized vehicle use in the resource area. Areas designated as closed and areas limited to designated roads and trails in the proposed plan, will be implemented after the RMP is final. Motorized vehicle use in the remainder of the resource area will be limited to existing roads, ways or trails as identified in the RMP, and a transportation plan will be developed.

The transportation plan to be completed after the RMP, will incorporate public meetings, comments and concerns. The management of OHV use on public lands is a dynamic, ongoing process and not an "all or nothing policy". More specific management actions will be developed in the transportation plan with public input.

60. Comment: Minerals. **Applying best management practices (BMPs) would help minimize impacts. Management, not taking acreage from potential use, maximizes the oil and gas resource.**

Response: Best Management Practices are a valuable tool to help reduce the potential impacts from development. However, certain resources can only be protected by use of avoidance. Much of the areas identified for No Surface Occupancy can likely be developed after inventories are completed and the exact location of sensitive resources are documented. There are no known oil and gas fields in the White River Resource Area that can't be developed because of No Surface Occupancy Stipulations.

61. Comment: Minerals. **The one major issue that impacts extraction of natural resources, (oil and gas, coal, oil shale, lumber, sodium, etc.) motorized vehicle travel and recreation is the application of surface stipulations and conditions of approvals. Is 19,000 acres subject to no surface occupancy (Alt A) or is 1,125,000 acres subject to no surface occupancy (Alt C).**

Response: Neither. The proposed Management Plan in the final document identifies 143,083 acres of NSO stipulation.

62. Comment: Minerals. **Considering the fact that existing timing limits could permit drilling operations only from the middle of August to the first of October, it seems other or other prohibition, a well definitely could be drilled in September (maybe).**

Response: The timing limitation map (3-2) has been re-drafted to show overlap of dates occurring from the different timing stipulations. In addition, the timing stipulations all have provisions, or side boards, within which the stipulation would be exempted, modified, or waived.

63. Comment: Minerals. **We also object to the surface development restrictions contained in varying degrees of severity in Alternatives B-D. We believe the surface development restrictions, whether they be NSO (no surface occupancy), controlled surface use (CSU) or T/L (timing limitations) deserve a closer look. We believe these restrictions are generally unnecessary and that under the present Management Plan (Alternative A), the Area Manager has sufficient discretion to protect the resources that are in need of protection.**

Response: One of the main problems with Alternative A, and the reason why a new RMP was required for the White River Resource Area, is that the information and inventories identified in the old planning documents were out of date. The Proposed Resource Management Plan provides the most current resource data available. This allows the Area Manager to make the most informed decisions possible. Attaching stipulations, based on this most current information to new leases, will alert prospective bidders to possible environmental concerns before bidding takes place. The other alternative would be to not identify to bidders that there are possible concerns until after the lease is issued and the lessee submits an Application for Permit to Drill. This latter alternative is against BLM policy and we are sure that the oil and gas industry would be against such a practice.

64. Comment: Minerals. **Finally, I would like to make a personal plea; It is in the interest of economics and the conservation of oil and gas resources, water resources, wildlife and ecosystems to avoid the drilling of unnecessary wells and the construction of unnecessary roads. Planned development is preferable to helter-skelter development and can reduce negative impacts. Pool agreements and other means to this end should be facilitated and encouraged where ever possible.**

Response: All alternatives take this comment into consideration. Larger projects are relatively easy to preplan the locations of roads, pipelines, and well locations to keep unnecessary disturbance to a minimum. Smaller projects or single well proposals are more difficult to incorporate into a field development type plan. Lessees and operators are encouraged to utilize existing disturbance where possible.

65. Comment: Roads. **As for the rapid expansion of road system, from what I have seen most new roads go to drilling sites. These are good roads with good base. They do not cause erosion or another problems. If they are a problem then maybe you should require oil companies to remove these roads when they are no longer needed.**

Response: Most roads to drilling sites are not roads with good bases. They do have the potential to erode. When no longer needed, oil companies are required to recontour and rehabilitate each road.

66. Comment: Minerals. **Most damaging from a purely human perspective is the proposal to allow leasing in the Oil Spring Mountain, Windy Gulch, and Black Ridge WSAs. These areas are such a small percentage of the whole WRRA and have provided refuge for wildlife as well as for people seeking solitude since they were identified as WSAs in the early 1980's. Oil Spring Mountain, in particular, is an area that I have very fond feelings about because of its scenic qualities, biological diversity, and the circus-like antics of the "wild" horses that roam about the top of the mountain on circuitous trails. Given drilling techniques that have evolved tremendously since the passage of FLPMA, it seems to me likely that "no surface occupancy" leases (if any were issued at all) for this area would be possible.**

Response: The six Wilderness Study Areas (WSA) and the Harpers Corner Road accessing the Dinosaur National Monument are the only NO Leasing Areas proposed in the RMP. The BLM has been precluded by the congress from issuing oil and gas leases within WSAs. The Harpers Corner Road has been withdrawn from appropriation under the Mineral Leasing Act. All other federal oil and gas estate is available for oil and gas leasing.

67. Comment: Minerals. **The proposed expansion of severe restrictions is not the only obstacle BLM intends to place before the oil and gas industry. Industry is also expected to bear the financial and temporal burdens of conducting countless resource surveys to identify virtually all sensitive habitats or the location of other fragile resources, such as cultural and paleontological resources. As the land managing agency, it is BLMs responsibility to have already documented the location of these resources in the WRRA. How can BLM make informed planning and land use decisions without an adequate resource data base? Industry should not be forced to comply with demands for endless resource studies in order to obtain approval for permits. We recommend BLM work with other federal and state agencies to obtain necessary data to make valid land use decisions instead of relying upon industry-funded surveys.**

Response: The option being presented in this comment is to halt further leasing in the White River Resource Area until the BLM funds and conducts site specific surveys for Threatened and Endangered plants and animals, cultural resources, and paleontological resources. Given the BLM portion of the federal budget, it is not likely that the funding would be available for conducting these types of inventories until the federal deficit has been substantially reduced or even eliminated. Other federal and the state agencies are in the same financial situation. It is our belief that the oil and gas industry would

not be willing to wait until that would happen. The most equitable alternative would then be to make the individual or company that intends to profit from the use of public lands pay for these inventories. We require inventories on only that part of the lease that is intended to be disturbed, not the entire lease. The planning process is used to identify areas of potential habitat and known populations or occurrences of sensitive resources. Many of the resources are dynamic in that they can change over a given period of time. For that reason, the most efficient practice is to conduct the inventories on only that part of the area to be disturbed and within a timeframe that would coincide with just prior to disturbance.

68. Comment: Minerals. **Statements such as: "Continuing to drill an estimated 50 wells per year over the next 10 to 15 years would yield approximately 86.7 million cubic feet of gas and produce approximately 11.5 million barrels of crude oil." (4-20); [emphasis added]." and projections such as: "...1154 wells will be drilled over the next 20 years and that 835 of these wells will become producing or shut in wells." (2-10). When taken together, appear to understate the potential reserves and demonstrate a complete lack of understanding for the relationship between the economics, the risk, and the profit motive in the decision making process in oil and gas industry.**

Response: The risk taking, profit motive, and decision making processes of the oil and gas industry are beyond the scope of BLM planning documents. The Reasonable Foreseeable Development Scenario was reviewed by a group made up of BLM and oil and gas industry representatives. The conclusion of that group was that the RFD figure was a reasonable estimate of activity.

The RFD is prepared to give the author and reader of the document an idea of what can be expected in terms of an estimated level of activity. If the level is exceeded for some reason, future development is not precluded. However, further analysis would likely be required based on whatever the new projections of development would be. This analysis would be in the form of a Resource Management Plan Amendment. This is the case for any of the different resource management decisions. If situations change over the years or new laws are passed that affect public land management then the planning decision documents also need to change.

69. Comment: Minerals. **It should not be the job of the BLM to forecast sodium demand in the United States and other countries for the next 20 years of the RMP. BLM should be only concerned with go/no go on leases involving sodium mining.**

Response: The main purpose in doing a planning document such as this is to identify the future needs of public land resources and determine the most acceptable areas and methods to supply those needs. It is imperative for the BLM to at least identify the future potential use of the lands so that we can adequately plan for the multiple uses that will be occurring on those lands. It is extremely important that, if a resource is present, we try to forecast what the future demand will be on that resource and the affected public lands.

70. Comment: Minerals. **One of the largest revenue generating programs if not the largest for the Department of the Interior is the federal oil and gas leasing program and it seems strange that the imposition of more stringent stipulations is being considered for a program that is working well. The results will adversely affect the revenue and cannot be economically justified when reviewing the changes.**

Response: Different interests will have different definitions as to what is "working well". The stipulations (many of which are required as a result of congressionally passed laws) developed within this document provide for protection of sensitive resources while at the same time allowing for the development of natural resources such as oil and gas. The economic analysis presented in the final document does not support the statement that revenues will be adversely affected by imposing the stipulations.

71. Comment: Minerals. **Topographic limitations have been greatly expanded in Alternate D with a good portion of the acreage being found north of Meeker, CO. A large coal strip mine and a sizeable oil field are in close proximity to this area and it is inconsistent to eliminate the surface usage without an intense evaluation of the resource available.**

Response: The restrictions referred to are for steep slopes (>35 %) in combination with fragile soils. Western surface coal mines do not normally occupy steep sloped areas such as are delineated here. Because of the state and other federal regulations governing coal mines, the approved mine plans would have to take the reclamation potential of slope and fragile soil into account in developing their reclamation plan. This restriction would not likely affect future coal mining operations. On the other hand, the oil field mentioned in the comment has been plagued by land slides, soil slumps and numerous other problems occurring on their roads, pipelines, and well pads. This is due primarily because the problems associated with disturbing steep slopes in combination with fragile soils were basically ignored in the development of the field. What the new restrictions are intended to do in terms of oil and gas development is to assure that future road, pipeline, and well pad locations avoid these problem areas or at least engineer the disturbances to minimize the potential impacts that could occur.

72. Comment: Minerals. **Certain areas should not be denied multiple use due to some plant or wildlife habitat unless is considered to be extremely critical to their survival. Complete lack of surface occupancy due to these reasons is not responsible land management but a lack of such or the easy way out. The loss of revenue generated from the 50,000-60,000 acres above will be in excess of $100,000 annually which will support 3-4 employees.**

Response: Multiple use will be in effect in all possible areas unless some critical plant or wildlife habitat is threatened by a requested action. All of the stipulations identified have exception, modification, or waiver language built in, unless the stipulation is protecting specific populations. The revenue loss mentioned cannot be verified.

73. Comment: Minerals. **It is my recommendation that only the NSO stipulation be placed on the leases as an additional stipulation while the TL and CSU stipulation be removed. These are considered to be normal management procedures. The CSU stipulation, if placed on the lease, is open ended within the RMP proposal and will be a catch-all for any and all future management changes or philosophies. This could result in a large number of arbitrary decisions being placed upon the oil and gas operator. Also it is much easier to add areas as needed than to remove them in these types of documents.**

Response: NSO restrictions are the most restrictive and can only be used when no development will be allowed within an area. CSU and TL limitations are for use in instances where a resource would only be impacted during a finite period of time instead of continually. Under Alternative D, NSO, CSU and TL all increase substantially due to

the necessity of planning for anticipated greater demands on and for the resources by a variety of users, not only oil and gas. Although these restrictions appear to be excessive, they should not greatly change oil and gas permitting.

74. Comment: General. **We are informed that the agency relied upon a group of advisors when developing the draft plan. It is our information that the formation and operation of this group may have been in violation of the Federal Advisory Council Act. We are told that there may have been insufficiency in the group's nominations, charter and availability of meeting minutes.**

Response: A workgroup was formed to help the BLM determine the issues that needed to be incorporated into the Document. The workgroup provided information only, it made no decisions, and arrived at no consensus. In the process of helping the authors respond to comments on the Draft, workgroups consisting of special interests, such as OHV groups, oil and gas industry representatives, etc. were formed. None of these groups were given the authority identified under the Federal Advisory Council Act, and therefore are not subject to that act.

75. Comment: Minerals. **When the production of oil shale becomes economically feasible, Mobil Mining and Minerals Company may wish to obtain leases from the BLM for oil shale development. Mobil Mining and Minerals Company has invested and will continue to invest much time and money in oil shale production projects and facilities. With reliance upon foreign oil increasing, viable alternatives to oil importation, such as oil shale development, must not be restricted. Mobil Mining and Minerals Company opposes the RMP/EIS surface stipulations which would prohibit or limit oil shale development on BLM lands.**

Response: Tens of thousands of acres of lands containing oil shale resources have been transferred from federal ownership to private ownership through the patenting process contained in the 1872 mining law. Six prototype oil shale lease tracts were offered on federal lands in the mid 1970s, four were leased, two of which remain as valid leases today. This document will allow for the issuance of research and development leases that can be used to test various extraction and processing technologies. With this as a backdrop, it is unclear how this document would restrict oil shale development.

Stipulations and conditions of approval for any future oil shale leases would be developed in the NEPA documents prepared for both the leasing program and the site specific mine plan and carried forward with other stipulations in the required detailed development plan.

76. Comment: Minerals. **Such restrictions upon us would adversely affect Mobil Mining and Minerals Company by substantially limiting the land available for oil shale production. Those limitations will decrease the value of Mobil Mining and Minerals Company's property and production facilities.**

Response: These restrictions would only be imposed during limited time intervals depending upon the presence of a resource to be protected and the potential for detrimental impacts to the resources. It is a fact of life, that future oil shale development will undergo additional site specific environmental analysis. Project specific stipulations will likely result from that analysis.

77. Comment: Vehicle Travel. **But even in these micro areas, access and travel should only be restricted if a very real environmental impact has been recorded. Restrictions should only apply when it is absolutely essential to protect the environment. To apply restrictions in areas that don't require protection is a violation of my right to public lands.**

Response: Restrictions are only applied when the threat of environmental damage is possible. However, it is too late for restrictions when an environmental impact has been recorded.

78. Comment: Minerals. **AGNC is fearful that BLM could utilize the "no surface occupancy" designation to block all development in the designated areas. AGNC is also concerned that the "no surface occupancy" designation could be used in the future to supersede the oil shale leasing and sodium bicarbonate leasing provisions of the Piceance Basin RMP.**

Response: No surface occupancy designation would block all development in a designated area. However, NSO designation could not be used to block oil shale leasing and sodium bicarbonate leasing unless a sensitive or potentially threatened resource is in danger of adverse impact. The only NSO areas underlain by sodium and oil shale are designed to protect T/E species.

79. Comment: Minerals. **The "no surface occupancy" designation could also adversely affect the oil and gas industry in our region. This industry and its jobs are primary sources to our on-going economy. Local governments in the region are also dependent on the oil and gas industry as sources of tax revenue, especially considering the large amount of federally-owned tax exempt land.**

Response: The "No Surface Occupancy" designation could adversely affect the oil and gas industry. However, areas with this designation could be leased with the idea that parts of them would be available for exploration. Most of the NSO areas identified are outside those areas being intensely developed for oil and gas.

80. Comment: Minerals. **One of the major issues in the RMP/EIS, which is of great concern, is the proposed increase in severe leases restrictions. We are concerned that Alternative D of the RMP/EIS increases no surface occupancy ("NSO") stipulations by almost 800%; controlled surface use ("CSU") stipulations by almost 50%, and timing limitations ("TL") stipulations by 62%. The four existing plans employ a policy of protecting resources with the least restrictive stipulations available. The RMP/EIS does not contain data supporting or justifying any need for increases or changes in protecting resources since the original plans in this area were implemented. Broad use of NSO, CSU and TL restrictions could effectively preclude all oil and gas exploration in specific effected areas which is counter to the BLMs obligation of multiple use management. Such severe additional restrictions must be justified by identifying specific reasons why oil and gas activities could have any negative impact on the RMP. It is MEPUS' position that these constraints should be modified because they are not necessary and justifiable.**

Response: Justification for the identified lease stipulations are contained in the Affected Environment and Environmental Consequences sections of the Draft RMP/EIS. Many of the No Surface Occupancy stipulations are based on provisions required in congressionally passed laws. These types of stipulations could be handled with the use of Lease Notices, however, it was felt that it would bring the restriction to the attention of prospective lessees if they were identified as stipulations.

81. Comment: Minerals **Coal Management: (2-13) The continued Stability of Rangely due to the Deserado Mine needs careful consideration. You must allow them to grow. Again surface stipulations would have to favor this growth.**

Response: The Deserado Mine operates under an approved mine plan administered by the State of Colorado. That mine is an underground operation and most of the surface stipulations developed in this document would not affect that operation.

82. Comment: Minerals. **BLMs Preferred Alternative (D) is highly restrictive on oil and gas activities. For example, Alternative D would increase the use of no surface occupancy (NSO) stipulations by nearly 800%, timing limitations (TL) by 61% and controlled surface use (CSU) stipulations by 50%. These increased restrictions are based on the need to protect potential habitat for candidate and listed threatened and endangered (T&E) species and for potential cultural and paleontological sites. Potential resources should not require the same level of protection as identified resources. Nor has BLM analyzed and applied the least restrictive measure adequate to protect these resources. In most cases CSU stipulations should provide adequate protection.**

Response: The problem with replacing a No Surface Occupancy (NSO) stipulation with a Controlled Surface Use (CSU) stipulation relates to the difference of degree between the two. A CSU stipulation indicates that some portion of the area can be occupied, while the NSO means that without an exception, modification, or waiver, the surface cannot be disturbed. As stated in other responses, many of the NSO stipulations are the result of congressionally passed laws, such as the Endangered Species Act. In other words, there is no guarantee that an NSO will or can be excepted, modified, or waived. This fact will likely lead to less of a bonus being bid on the tract or possibly that the given lease tract will not be leased until adjacent tracts become developed.

The planning process is used to identify areas of potential habitat as well as those known locations of populations or occurrences of sensitive resources that need protection. Many of the resources in question are dynamic in that their location can change over a given period of time. That is the reason potential habitat is included is included in the stipulation. The presence of T/E species and their habitats, and other species that are protected by some law, do not need to be protected with the use of stipulations, they are protected by law. However, we feel that it is important to alert potential bidders of a specific parcel that there are potential environmental concerns present that may affect their use of the lease.

83. Comment: Minerals. **Meridian would like to stress the importance of public participation for a project that encompasses 2,675,300 acres of federal, state, and private lands, and impacts a wide array of public land interests as well as private surface owners. We appreciate the public meetings that you have provided as of January 1995 but feel that the draft document would be much more accurate had the oil and gas industry, state agencies, along with other interests, been contacted for data and other input relating to their respective areas of expertise. The Colorado Oil and Gas Conservation Commission possess valuable information such as current cumulative production data and geologic data for the draft RMP and EIS area. Table 3-9 on page 3-8 contains cumulative oil and gas production as of January 1, 1990. This information is outdated and depicts an inaccurate picture of oil and gas activity in this area. For example, there is now a heightened interest in gas development, whereas five years ago the focus was on oil.**

Response: Authors of the document utilized all the references sited, including contact with all oil and gas operators active within the Resource Area. The reason 1990 data was incorporated in the document is that the RMP effort began in 1990. That type of data has been updated along with a review of the numbers contained in the RFD. The review utilized industry representatives as well as BLM experts.

84. Comment: Wildlife. **Chapter 3; Affected Environment: Throughout this chapter the BLM has not provided a justification for the increase in access restrictions and stipulations. BLM has lengthened the timing restrictions for eagles and other raptor, grouse, big game winter range, etc., but has given no background information as to why these increased restrictions are necessary. If there are examples of how the current management is not working, they should be shared with the public in the DRMP/ EIS.**

Response: The basis for increasing stipulations by resource specialists is the expected increased demand for resources by a variety of users, not only oil and gas. Impact analysis determines these increased stipulations.

85. Comment: Minerals. **Oil and Gas, page 3-8: This section states that gas production from the Piceance Creek Basin is generally from small sub parallel northwest-trending folds. This may have been the case in past years, however, some of the more recent production comes from wells being drilled in areas away from fold and fault trends. In addition, this section makes no mention of production from hydrodynamic traps that is another current play in the area.**

Response: The commentor is referred to the revised Reasonable Foreseeable Development Scenario in Appendix D of the Proposed Resource Management Plan and Final Environmental Impact Statement. The revised RFD identifies the change in development emphasis in the Piceance Basin from structural targets to stratigraphically controlled, more or less continuous, natural gas and coal bed methane reservoirs.

86. Comment: Minerals. **Appendix A: Best Management Practices (BMP); Oil and Gas Drilling, pages A-4 through A-7; BMP #8: "Any sediment control structures, or disposal pit, will be designed to contain a 100-year flood..." This BMP should be removed as it does not apply to operations in the WRRA. BMP #10: "Within the wild horse range, the reserve pit fence shall be 84 inches high." Seven feet is an excessive height requirement and certainly not necessary. BMP #20: "Within 30 days of release of the drilling rig, the operator must furnish to BLM a list of all drilling and completion fluids and additives used for this well..." This BMP should be removed as SARA Title II currently handles these requirements. BMP #21: "The concentration of hazardous substances in the reserve pit at the time of pit backfilling must not exceed the standards set forth in CERCLA." Oil and gas are exempt under CERCLA. This BMP is confusing, unnecessary, and should be removed. This issue is handled by CERCLA regulations. BMP #22: "All aquifers encountered during drilling that have potential for development as a water well would be evaluated for use by BLM prior to plugging the well. Suitable wells would need to meet Colorado water well completion standards and have applicable permits filed with the state." This BMP needs clarification. It should be up to the BLM not the operator to file the applicable permits with the state.**

Response: The Condition of Approval No. 8 that deals with sediment control structures and disposal pits for oil and gas drilling does apply to the White River Resource Area. Past 100 year storm events have been documented as occurring in this area by the National Weather Service. Consequently, any structures built within or near floodplains on BLM lands will be required to withstand those events.

Condition of Approval No. 10 for oil and gas drilling that deals with fencing oil and gas reserve pits within the wild horse range is in error. Reference to an 84 inch high fence will be deleted from the document. Condition of Approval No. 20 for oil and gas drilling concerning hazardous materials will be deleted from the document. Condition of Approval No. 22 for oil and gas drilling will be changed to delete language for well completions and filing permits with the state.

87. Comment: Minerals. **Appendix A is intended to identify the best management practices (BMPs) for reduction and prevention of environmental impacts. The DEIS suggests that BMPs will be used to develop conditions of approval that will be used as part of the APD process. BMPs have historically been used as examples of operator practices that perhaps go beyond minimum requirements. These practices have generally been voluntary. However, the Appendix implies that these BMPs would be required within the WRRA. Many of these BMPs are excessive and could be very costly. We hope BLMs intention is to retain the idea of voluntary mitigation. Operators should be rewarded, not penalized, for mitigation efforts that exceed minimum standards. This needs clarification.**

Response: The proposed management plan has changed the term BMP to COA. The COA or Best Management Practices are intended to be guidelines for proponents of activities on BLM lands. If proponents do not include the appropriate practice in their proposed action, then BLM will likely include conditions of approval. The conditions of approval have been incorporated, as needed, into the approval process for a number of years. Some were identified by applicants in their proposed actions and others were developed from National Environmental Policy Act documentation. If applicants identify mitigation measures in their surface use plans that are different than the Conditions of Approval listed in the Final, but accomplish the same goal, then there is no need to add a condition of approval. Voluntary mitigation on the part of the applicant is the ideal goal that BLM and industry should be striving to achieve.

88. Comment: Roads. **Road Improvement, Item No. 11, Page A-2. This item requires surfacing inadequately surfaced roads that are to be left open to traffic during wet weather. As with Item No. 4, Page A-5, the term "wet weather" should be substituted with the term "saturated conditions" when the real concern would exist.**

Response: Item No. 11, page A-2 will be deleted from the RMP. Item No. 4, page A-2 will be deleted from the RMP. Wording of a condition will be changed to: Roads are not required to be surfaced. If deterioration occurs due to travel during wet weather, the responsible party will be required to repair the road.

89. Comment: Minerals. **Oil and Gas Drilling, Item No. 3, Page A-8. This item requires pipelines to be buried in all cases. It is recommended that a provision for above ground lines be allowed. This would be needed in extremely rocky areas or in areas where concerns with a subsurface resource would be better served with an above ground pipeline. Consequently, it is suggested that a sentence be added that reads: "Above ground surface pipelines will be considered by the authorized officer when site conditions or resource concerns warrant their use."**

Response: Above ground surface pipelines will be considered by the authorized officer when site conditions or resource concerns warrant their use (this will be added to #3, page A-8).

90. Comment: Minerals. **Item No. 8, Page A-5, states that any sediment control structures, or disposal pits, will be designed to contain 100 year six hour storm events. Storage of volumes within these structures will have a design life of 25 years. It appears that sediment control structures and disposal pits are being used interchangeably. We do not refer to these are the same thing. However, if for some reason, the BLM has decided to do so, the concern is how the terminology of a disposal pit will be interpreted. Is the term "disposal pit" referring to an evaporation pond for produced water? Or is this referring to any type of pit used in association with drilling and/or operations including a reserve pit?**

Response: The Draft will be rewritten to say "Water disposal pits shall be designed to contain a 100-year, 6-hour storm event". Although such a storm event has only a 1% chance of happening, they do occur in the WRRA and must be planned for.

91. Comment: Minerals. **Item 15, Page A-5. This requirement states that reserve pits shall be filled and recontoured within 15 months after the well is drilled. This time frame is too restrictive and provides no flexibility for exceptions. For example, if an operator completed drilling operations during November of a given year, this requirement would force him to reclaim the location 15 months later during February. Reclamation during February is not conducive to achieving success and in some cases, is not logistically possible. This requirement should be reworded to read as follows: "The pit shall be filled and recontoured within 15 months after the reserve pit is empty. An additional period of time can be granted by the authorized officer of the BLM when conditions warrant."**

Response: Item 15 of the oil and gas drilling Conditions of Approval will be rewritten to clarify that the reserve pit must be dry and reclaimed within one year after the well has been completed as a producer, or within one year after the well has been plugged. This is a condition of approval and not a stipulation so there can be extenuating circumstances that will allow delays of this requirement, depending on the circumstances. However, approval must be granted for any extension of time.

92. Comment: Minerals. **Under the Reclamation Section of Best Management Practices, (Appendix A, page A-14), Item 1 indicates that disturbed sites will be promptly reclaimed. However, the Oil and Gas drilling section (Appendix A, page A-4), notes at Item 15 that reserve pits can remain open for evaporation for one year, with an additional 3 months to back-fill and reclaim the pit area. We recommend that the Final RMP be revised to direct that pits in the park viewsheds be closed and reclaimed immediately after drilling operations have ceased. Access roads and the rest of the pad should also be reclaimed immediately.**

Response: The Best Management Practices are actually conditions of approval taken from past approvals of various applications submitted to the BLM. The term has been changed to Conditions of Approval in the final document. Because they represent past conditions they are

intended as guidelines for future applicants to use in their applications. Site specific circumstances can require modifications or new conditions depending on the action and location. Reserve pits can have a requirement that the pit contents be hauled to an approved disposal facility and the area reclaimed as soon after plugging as possible. Weather conditions can preclude the immediate reclamation effort. Again this is a determination made on a site specific basis.

93. Comment: Minerals. **We are extremely disturbed with the very limited opportunities for obtaining waivers, exceptions or modifications (WEM) to lease stipulations offered in the DEIS/ RMP. WEMs, allowable under current law and regulation, constitute important elements of the leasing and land management planning programs. They provide the BLM with needed management flexibility to acknowledge the viability of mitigation techniques. They also provide industry with the incentive to develop new technology to deal with sensitive resource values. It is our understanding the BLM policy requires the development of conditions for granting WEMs as part of the planning process. Therefore, we strongly urge BLM to revise its proposal to include WEMs for lease stipulations.**

Response: Under the Preferred Alternative surface disturbing stipulations, all but two of the 32 stipulations have at least one of the exception, modification, or waiver provisions. The two that do not have the provisions are designed to protect actual populations of T/E species and their habitat.

94. Comment: Minerals. **Under Alternative A of the Draft Resource Plan, 19,000 acres would be subject to no surface occupancy. Under Alternative C, 1,125,000 or 42% of the resource area could not effectively be utilized for oil and gas exploration. Surface occupancy restrictions greatly devalue oil and gas leases, and in many cases eliminate any exploration value. As stated above, an alternative to an blanket no surface occupancy policy is to issue leases with qualifications and site specific stipulations. Site specific references to any conflicting values associated with a given lease can be identified in the lease, and allowance made for mitigation, as required.**

Response: Alternative D, the Preferred Alternative identified the NSO acreage at 148,450 acres. Under the Proposed Management Plan, the NSO acreage has been reduced to 143,083 acres. Much of the NSO is related to T/E species, or to some other regulation, and protection is required under law. A decision was made in the RMP to continue to identify the acreage of resources protected by law as stipulations in order to alert potential bidders that there may be environmental problems. In most cases, if site specific inventories indicate that development can occur without harming the resource then the stipulation would be exempted.

The exception, modification, and waiver language for the individual stipulations contain sideboards, within which the Area Manager would consider in making their decision. The interest of potentially affected parties would be taken into consideration at the time a given action/ proposal were to be approved.

95. Comment: Minerals. **Among the most critical of issues are the problems with some of the BMPs and the lack of flexibility for obtaining exemptions, modifications or waivers for many of the stipulations. In doing so, a balance can exist among the various resources that does not compromise economic viability or environmental integrity within the White River Resource Area.**

Response: The only stipulations identified for Alternative D and the Proposed Management Plan that do not have at least one of the exception, modification, or waiver language built into the stipulation are those that deal with T/E species or National Register Historic Sites.

96. Comment: Minerals. **The BLM is required by the Mineral Leasing Act and its own regulations 43 CFR 3160 to "ensure that oil and gas activities result in the maximum ultimate recovery of oil and gas with minimum waste." The RMP/EIS will force the BLM to violate this requirement.**

Response: The commentor correctly quotes a small part of the requirements of the Mineral Leasing Act and 43 CFR 3160 regulations. Those same citations, plus a myriad of other laws and regulations that the BLM is required to enforce, also require that measures are in place that protect or prevent degradation of the environment. This can be accomplished in many ways, including the application of lease stipulations that have exception, modification, or waiver language.

97. Comment: Minerals. **IPAMS views public lands access as one of the most important issues facing the domestic oil and gas industry. The White River Resource Area RMP/EIS represents a critical segment of national energy policy. The draft RMP/EIS greatly diminishes the ability to access the land. In short, the RMP/EIS determines whether or not the gas supply in the greater Piceance Basin will be developed.**

Response: Access to the Piceance Basin in terms of oil and gas development has been limited on only those areas containing T/E species. In reality populations of T/E species do not need stipulations in order to be provided protection, they are protected by law. The stipulations were added as a means to alert prospective lessees to the fact that this particular area contains T/E species. The actual limited areas are relatively small and development can take place on lands adjacent to the populations.

98. Comment: Minerals. **IPAMS believes that the BLM achieves its goals of protecting the environment and facilitating the prudent development of the oil and gas resource with a less stringent EIS. IPAMS advocates utilizing the EA to achieve environmental protection at the site-specific level. In addition, IPAMS reminds the BLM that the net acreage which oil and gas operations disturb is virtually insignificant.**

Response: If one were to fly over the gas field developments occurring from Rangely, south to the Douglas Pass area, or had the opportunity to drive the roads used to access the wells in that area, I'm not sure the disturbance observed would be considered "virtually insignificant". The BLM does use the environmental assessment process to analyze the site specific impacts of individual Applications for Permit to Drill a well, construct a road, or build a pipeline. However, the EIS process is necessary to address the cumulative effects of development, that can and has occurred in the Douglas Arch area. The stipulations and conditions of approval that are developed in the EIS are designed to reduce this cumulative impact to acceptable levels.

99. Comment: Minerals. **MEC also opposes the proposed requirement to remove reserve pit wastes instead of allowing the acceptable industry practice of dewatering and burying reserve pits. In addition to imposing unnecessary expense on the operator (our cost to dispose of pit waste off site could exceed $15,000 per well), the requirement to remove reserve pit wastes will create a**

greater environmental disturbance than on site burial. The only way to remove reserve pit waste is by truck, and MEC believes that the additional truck traffic such a requirement would impose would cancel any imagined environmental benefit from prohibiting conventional drilling mud waste management.

Response: The requirement to remove waste from reserve pits pertains only to oil contamination. Once the pit has been de-watered and dried up, pits can be reclaimed if they contain drilling mud waste. Hydrocarbons cannot be buried in reclaimed reserve pits.

100. Comment: Minerals. **MEC questions the basis for a 10% activity threshold, and recommends that BLM more clearly delineate for further comment limitations that can be evaluated. As well, MEC recommends that any threshold for development activity be applied to active drilling operations only. Drilling locations, with their 24-hour operations, may create a significant disturbance, albeit a temporary one. However, continuous production operations, with their low activity level, should not be part of a development threshold: remote, generally unmanned, production facilities do not interfere significantly with wildlife and the acreage they occupy should not be included in the assessment of development intensity.**

Response: The intent of a 10% activity threshold is to mitigate impacts caused by disturbance of 10% of a GMU after drilling. The 10% disturbance is based upon roads, well pads and a buffer zone along or around each. It does not have anything to do with drilling activity per se although obviously this activity is a short term disturbance. Obvious mitigation to reduce the 10% figure would include installation of gates to reduce traffic on access roads, etc.

101. Comment: Minerals. **MEC recommends that the acreage in the proposed Oil Spring Mountain ACEC be available for oil and gas leasing and development subject to controls currently applicable in the District under Alternative A. MEC endorses extremely limited application of NSO stipulations for identified plants as long as the Craig District BLM office continues to have its current flexibility to work with lessees to identify and approve drilling and operations locations. As well, MEC recommends that the on-the-ground survey for protected plants and other protected resources required by CSU-08 be conducted by BLM instead of placing that burden on the operator. If CSU or TL stipulations are imposed in this area, MEC requests that such stipulations accommodate development on a 320-acre spacing pattern.**

Response: All of the vegetative NSOs have provisions to exempt the stipulation if individual populations of plant will not be affected by the action. Approval of the spacing of wells is a function of the Colorado Oil and Gas Commission. It is highly unlikely that the Congress will appropriate the funds necessary for the BLM to conduct these required inventories. Leasing within the Oil Spring Mountain WSA has been precluded by Congress until such time that they consider a Colorado Wilderness Bill.

102. Comment: Minerals. **MEC strongly opposes adoption of Alternative D because it would unnecessarily restrict access to oil and gas resources and impose significant costs on operations that do not threaten the resources proposed Alternative D purports to protect. Finally, MEC endorses the comments and recommendations of RMOGA on the draft RMP/EIS.**

Response: The amount of acreage unavailable for oil and gas leasing is the same in all alternatives, including the Proposed Management Plan identified in the final document. All the identified stipulations except those that protect actual populations of threatened and endangered species have wording attached that will allow an exception to be made to the stipulation, if the identified resource is found to be absent from a given stipulated area.

103. Comment: Minerals. **I believe the BLMs proposed stipulation should be changed to the following: 1. Every time a road or pipeline crosses a wash, an erosion control dam should be built. 2. For every new road, location or pipeline, a holding pond for water should be built. 3. Stop building uphill side bar ditches and slope the road gently down hill so the water can immediately escape. 4. For every acre of road and location built, a clear cutting in the trees should be done in an equal or greater amount. 5. In the right places, road impacts can be minimized by the pipeline being built beside the road rather than in the road. 6. Whenever possible roads should not be built in the bottom of drainage. I have provided an appendix with photos of what has been done, both correctly and incorrectly, on Rabbit Mountain. I believe if the BLM had been doing these six things in the past, there would not be a worry about loss of AUMs, habitat, and increased erosion due to oil and mineral related activities.**

Response: Each of these suggestions require that a significant increase in surface disturbance take place. This is not acceptable. Wherever possible, pipelines are placed in the road right-of-way to reduce disturbance. Where possible, roads are not constructed in the bottom of drainages.

104. Comment: Minerals. **Minerals should be managed under Alternative A (current management) until Congress is willing to act on current law.**

Response: Congress often proposes new laws or proposes to change old laws. Land management agencies as well as many other entities, whose operations revolve around implementing numerous laws, would be unable to conduct business if they were required to stop action on a proposal or proposed management decision simply because someone had introduced or even talked about introducing a new law.

105. Comment: Minerals. **As such, RMOGA is strongly opposed to Preferred Alternative D because it would dramatically and arbitrarily increase restrictions on oil and gas exploration and development activities as well as their cost.**

Response: The cost of complying with the increase in acreage covered by stipulations is addressed in the Revised Socio-economic analysis contained in Chapter IV of the Proposed Management Plan.

106. Comment: Minerals. **It is BLM policy to show the need for constraints in planning documents. It must also be shown that less restrictive measures were considered but found insufficient to protect the resources identified. A statement that there are conflicting resource values or uses does not justify applying restrictions. Discussion of the specific requirements of a resource to be safeguarded, along with a discussion of the perceived conflicts between it and oil and gas activities, must be given. In addition, an examination of less restrictive measures must be a fundamental element of a balanced analysis.**

Response: The analysis contained in Chapter IV, Environmental Consequences, addresses the impacts to a given resource from the range of alternatives. Limitations on document size will often force the authors to limit their discussions of a particular resource or problem and refer the reader to the selected references identified in the References Section at the end of the document. The identified stipulations are intended to mitigate those impacts where possible. The problem with using less restrictive mitigation, such a Controlled Surface Use versus No Surface Occupancy, is that the CSU implies that there are areas on the lease in which disturbance can occur and cause little impact. However, it may not be known if there are areas within an NSO stipulations where disturbance can occur until an inventory is completed. Large areas covered by NSO stipulations are needed for BLM to be able to comply with the Endangered Species Act, to protect both potential and known habitats until these areas are inventoried for either presence or absence, of the protected species. BLM feels that the Draft document and changes to the Draft that have been incorporated into the Proposed Management Plan adequately present a balanced analysis.

107. Comment: Motorized Travel. **Non T/E raptors. Motorize recreation has not been found to cause any negative impacts upon raptors. NSO and TL stipulations should not be placed against trail bike or ATV recreation until and unless this is shown to be crucial through empirical study. Similar work with raptor species in the Pacific Northwest forests have found no connection.**

Response: NSO and TL stipulations, as developed in this RMP, would normally be applied to those land uses requiring a BLM permit or authorization. Only in extraordinary circumstances would these limitations ever be applied to casual recreational uses that occur on Public Land (e.g. hikers, OHV use, hunters). Please refer to the second paragraph of response to comment number 606 in reference to motorized recreation's influence on breeding raptors. We are unfamiliar with, but would be interested in acquiring information pertaining to OHV use and its influence on breeding raptors in the Pacific Northwest.

108. Comment: Minerals. **BLM states BMPs "must be ecologically site-specific while reflecting political, social, economic, and feasibility considerations". In our experience, BMPs have typically been developed as voluntary measures companies can elect to employ as a means of reducing potential effects of a project on other resource values. As such, it is irrelevant to attempt to include political or social considerations in an equation which should be based upon scientific factors. Conditions of approval (COAs), on the other hand, are operational requirements or restrictions the BLM imposes at the time an APD is filed. BLM needs to clarify whether the measures described in Appendix A are to be used as BMPs or COAs.**

Response: As stated in the Draft RMP introductory paragraph for Appendix A, Best Management Practices, the list of practices will be used to design BLM initiated projects and to develop conditions of approval for proponent initiated projects. The comment is correct in that the statement on political, and social considerations should not be included. However, we believe economic factors should be considered. Therefore, the reference to political and social considerations will be deleted in the Final document.

109. Comment: Minerals. **Clearly, the DEIS/RMP is fatally flawed for many reasons, not the least of which is the lack of justification for increased restrictions on oil and gas leasing and operations. Consequently, we urge BLM to issue a redrafted DEIS/RMP which more fully analyzes the socioeconomic effects of all alternatives and which analyzes, through a cost/benefit analysis, whether additional restrictive stipulations and conditions are warranted, particularly in an area such as the WRRA which has proven compatibility with oil and gas operations.**

Response: Refer to Chapter III, and IV of the Draft document for a description of the justification for leasing stipulations. Other justification is contained in references sited that were used as rational for developing the stipulations. A Socio-economic analysis was completed using industry input, and is incorporated into the final document in Chapter IV, Environmental Consequences of the Proposed Management Plan.

110. Comment: Motorized Travel. **Surface-Disturbance Stipulations. Under the preferred alternative, all "surface disturbing" activities would be subject to the same stipulations as oil and gas leasing. Insofar as this would affect motorized recreation, the restriction is not appropriate. The alternative A surface stipulation recommendation should be followed at least insofar as motorized recreation is concerned.**

Response: The stipulations and appropriate Conditions of Approval will apply to all permitted uses including BLM initiated projects. Most recreational activities are not permitted uses unless the activity is associated with a licensed guide and outfitter.

111. Comment: Minerals. **The RMPs lack of recognition and documentation of the tremendous value of the oil and gas resources contained within the resource area defies common sense. The value of oil and gas resources, measured in trillions of cubic feet of natural gas and corresponding to billions of dollars is so large when compared to other resources and values, that to make the development of oil and gas resources subservient to other resources, as the plan does, is not reasonable.**

Response: It is the mission of the BLM to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations. We do this by providing for a wide variety of public land uses without compromising the long term health and diversity of the land and without sacrificing significant natural, cultural, and historical values. No resource in this area is considered to be subservient to another. Development of natural resources, regardless of what they are, are encouraged if planned in a safe and environmentally acceptable manner.

112. Comment: Minerals. **Since the plan will impact existing oil and gas leases, which have implied covenants to allow development, through such things as road density requirements and restrictions and requirements for pipelines, all owners of existing oil and gas interests within the area will have the value of their leases affected. Ethical business practices and common sense dictates that all individuals and companies with leasehold interests in the resource area should have been individually notified of the plan and provided a copy for their review. This was not done. It is unfair to unilaterally change the terms and conditions of an agreement without notice and negotiation.**

Response: Existing oil and gas leases are not affected by the lease stipulations carried foreword in the Proposed Management Plan. The new stipulations would be attached only to new leases. On the other hand, the Conditions of Approval (Best Management Practices) are

applied the same in each of the four alternatives in the Draft document, and are carried foreword to the Proposed Management Plan. Any road density limitations that are developed in the Travel Management Plan (development of which will follow completion of this plan) will not apply to permitted uses such as oil and gas development. None of the alternatives, in the Draft or Final documents, change the terms and conditions of existing leases.

113. Comment: Minerals. **Only one and one third pages (3-8, 3-9) of the 47 page Affected Environment Section discuss oil and gas. No reference are cited. By comparison, the discussion of cultural and paleontological resources is a comparable length and contains 11 citations. This is not a reasonable treatment of the subject, and in my judgement it is so inadequate as to call into question the entire document. The existing oil and gas infrastructure of roads and pipe lines and wells were not documented in the plan. As written the plan mentions requiring some infrastructure to be moved (page 2-39, "...and relocate impacting existing facilities outside high and medium priority riparian habitats"). How much and where? What will it cost?**

Response: References and a more detailed analysis of oil and gas development are contained in the Reasonable Foreseeable Development (RFD) Scenario. However, that particular document was inadvertently omitted from the Draft RMP document. The Proposed Management Plan and Final Environmental Impact Statement has a revised RFD included as Appendix D. Table 2-27 will be clarified to identify that existing facilities and structures will not be moved from riparian areas unless the proponent volunteers to move them or proposes a major modification to the existing authorized operation. There are few if any existing facilities that fall into this category. All BLM initiated or owned facilities will be moved if they are located within these areas.

114. Comment: Minerals. **The non-surface occupancy, timing limitations and controlled surface use stipulations will drive-up costs, with undetermined benefits. In fact, the current location of oil and gas wells and infrastructure in these areas was not considered or mapped. Some form of cost benefit analysis is reasonable.**

Response: An economic analysis of the stipulation's affect on the oil and gas industry and local economies was completed with input from industry representatives. That analysis is incorporated in Chapter IV, Environmental Consequences of the Proposed Management Plan. A cost benefit analysis was not completed.

115. Comment: Economics **There is no acknowledgment of the importance of markets in driving various activities such as oil and gas or sodium development or recreation. Prices and markets determine activity.**

Response: Expected market conditions were taken into consideration in the preparation of the RFDs for mineral resources. The RFDs are included in the final document as Appendix D.

116. Comment: Minerals. **There is no consideration of what is unknown at the time the plan was prepared. When will oil shale rise again? How have relative values changed in the past, and how might they change in the future?**

Response: The Draft document was prepared basing many assumptions on Reasonable Foreseeable Development Scenarios (RFD) for mineral resources. No one knows when oil shale will rise again. Our best guess is that it won't be during the life of this document. If and when it does, new planning documents and EISs will be completed to address the issues at that time.

117. Comment: Minerals. **In its analyses of environmental consequences the BLM fails to seriously consider mitigation resulting from compliance with stipulations or "Best Management Practices" described in Appendix A of the DEIS. Therefore, the analyses is predisposed toward identifying adverse impacts which are unlikely to occur. This analyses is fundamentally flawed and should be redone.**

Response: The environmental consequences section relies on the COAs and lease stipulations as mitigation measures to reduce the level of environmental impacts from the management decisions in all four alternatives. It is highly unlikely that proposed actions would be approved on BLM lands in any of the alternatives without incorporating the appropriate COA or reasonable alternative that would accomplish the same goal. We disagree that impacts have been identified that are unlikely to occur.

118. Comment: Roads. **Items 4 and 11 on Page A-2 discuss the need for surfacing roads subject to traffic during wet weather. Wet weather is a broad term. What happens if it rains for an hour one day in a year? Does that mean it is a "wet" road? The intention is probably to cover roads that become saturated. We suggest replacing the word "wet" with "saturated conditions."**

Response: Periods of wet weather are those times of the year when we have historically had most of our precipitation. At any time during this period, soils have a high probability for becoming saturated. Surfacing a road which is subject to use during these periods of time, prior to the soil becoming saturated, is necessary in order to prevent resource damage.

119. Comment: Minerals. **Application of no surface occupancy stipulations to sensitive wildlife habitats, fragile soils, raptor nest sites, etc. From our standpoint, covering these types of issues with stipulations is preferable to "conditions of approval" (COAs), which have no legal basis for BLM to enforce.**

Response: Conditions of Approval are indeed enforceable. A permit application to utilize public lands for a specific purpose becomes a contract with the BLM when the permit is approved. Violations of the terms of the contract (stipulations and Conditions of Approval) can result in monetary assessments for damages, and possible permit or lease cancellation.

120. Comment: Minerals. **The draft plan does not give a clear picture of what is and is not leased, where most activity is currently occurring, reasonable foreseeable development, etc. Some recognition of this type of information is necessary for planning and predicting future problems with other resources. It's not enough to say 10 acres of land will be disturbed for each well; the location of these 10 acres in relation to important wildlife habitats will make a huge difference on the potential wildlife impacts.**

Response: A Reasonable Foreseeable Development (RFD) Scenario was developed for the Resource Area. The RFD identifies the known locations of oil and gas fields, well spacing projections within those fields, and an estimate of the number of wells expected to be drilled over the life of this planning document. Resource specialists used

this scenario in their impact analysis. The RFD was not included in the Draft RMP/EIS in order to help reduce the size of the document. The RFD has been included in the final document as Appendix D.

121. Comment: Reclamation. **We have several concerns here. Except in extraordinary circumstances, native plant species should be used for reclamation. Reclamation efforts should begin immediately following disturbance in those areas not subject to ongoing disturbance during production (e.g., road margins, drill pad edges, exploration and development areas). How is reclamation tied in to the application/compliance/bonding process? In our experience in other areas, the amount of bond seems quite small in relation to the number of wells drilled. Bonding should be related to sites or wells, or a specific field, rather than just a set amount per operator despite where or how many wells are being developed. In this way, sufficient bond for a particular area will be available for reclamation if a permit holder does not comply with reclamation standards and requirements.**

Response: Reclamation standards are tied to the application as either committed mitigation (Applicant proposed) or Conditions of Approval (BLM required). For operations occurring on an oil and gas lease, these conditions are covered by a personal well bond of $10,000, a statewide bond of $25,000, or a nationwide bond of $150,000. The BLM has a study underway that is addressing whether or not these amounts are adequate. The BLM has the authority to increase the amount of these bonds depending on past compliance history or the amount of liability attached to the bond amount. Bonding for non-oil and gas related disturbances are handled on a site specific basis, depending on acreage disturbed, reclamation potential of the disturbance, and regulations under which the activity is authorized. Oil and gas related projects are given one year from the completion or abandonment of a well to begin reclamation activities. For producing wells, this will require reclamation of that part of the well pad not needed for production operations. For plugged wells, this will require reclamation of the well pad, and that part of the access road not needed to access other facilities or locations. Special circumstances can cause a delay of these requirements of up to six months. Native seed mixes are utilized wherever possible, however, many natives are sometimes slow to establish. In areas having steep slopes or other potential erosion problems, we will utilize quick growing, introduced species in an effort to stabilize the disturbance as soon as possible. The area between Highway 40 and the Dinosaur National Monument has been identified as an area where only native species will be used for reclamation purposes.

122. Comment: Minerals. **BLM should not allow gravel mining on its properties along the White River. An exception could be made through an exchange that would protect higher quality riparian areas of equal of larger size on nearby private lands. Such high quality areas should be considered for their potential use by sandhill cranes and yellow-billed cuckoo, among other riparian species.**

Response: Maintaining the health, sustainability and integrity of riparian ecosystems occurring on BLM land is a top priority. Most all disturbing activities will be excluded from these areas, including mineral material sales.

123. Comment: Minerals. **Oil and gas development, mineral materials disposal and mineral entries for locatable minerals on areas near or adjacent to Dinosaur National Monument would have potentially significant adverse impacts to the high public values associated with Dinosaur National Monument. In light of the forgoing, we believe it is incumbent on BLM to revise the Final RMP to provide protection for resources and resource values in Dinosaur National Monument. We recommend that the areas adjacent to the monument, e.g. at least from the monument boundary to Moffat County Road 16 either (a) be withdrawn from oil and gas leasing, mineral materials disposal and mineral entry or (b) subject to a "no surface occupancy" stipulation.**

Response: Creating a buffer zone for lands managed by other entities, whether federal, state, or private is not the policy of the BLM. It is the policy of the BLM to manage the public lands in a manner that sustains the health, diversity, and productivity of the lands for the use and enjoyment of present and future generations. It is our assessment that the lands between the monument boundary and Moffat County road 16 can be adequately protected through the use of the stipulations and conditions of approval identified in the document, and that a withdrawal of the minerals within that area is not warranted.

124. Comment: Minerals. **We recommend that the discussion of impacts on visual resources from visual resource management, p. 4-130, be expanded in the Final RMP to clearly address the impacts of imposing or not imposing NSO stipulations on VRM Class II areas. As with comment above, we recommend that no leasing or NSO stipulations be afforded to VRM Class II lands, particularly in the Blue Mountain GRA, for the protection of sensitive BLM and NPS resources and resource values.**

Response: Oil and gas activity can be compatible with visual Class II areas. The most visually sensitive component of oil and gas development is temporary in nature and consists of the drill rig and associated support facilities. After the rig is removed, however, production facilities can easily be hidden from view, and road networks can be located and constructed to fit in with the natural landscape. Therefore, with the proper conditions of approval, impacts can be mitigated and there is no need to impose a No Surface Occupancy Stipulation.

125. Comment: Minerals. **Also under the Oil and Gas Drilling section (Appendix A, page A-4), Item 10 doesn't require netting of reserve pits during drilling operations, although Item 14 requires netting after drilling. U.S. Fish and Wildlife Service experience in West Texas suggest that there was appreciable bird mortality in pits during drilling. We recommend that the Final RMP be amended to require that operators net pits the entire time they contain fluids.**

Response: Resource Area. The BLM is aware of problems that have developed in the southern Great Plains and feel that much of the disparity may be explained in circumstances attending the resources being recovered and production practices (oil versus natural gas, reinjection and collection practices, and the nature and residency time of pit fluids).

First, we do not feel that reserve pits that remain open during drilling operations pose a substantial threat to surrounding wildlife. Reserve pits (narrow linear 0.05 to 0.2 acre impoundments) are located adjacent to the derrick and are subject to concentrated human activity and noise on an around-the-clock basis, and at levels which would be expected to deter most, if not all, wildlife use of reserve pits. BLM personnel in the Carlsbad Resource Area, New Mexico (integral with west Texas oil and gas fields) are unaware of bird mortality problems associated with reserve pits which remain open during drilling, citing the same reasons as those above (pers. comm., John Sherman, BLM Resource Area wildlife biologist).

Approximately 90 percent of all wells drilled in this resource area within the last 5 years are shallow gas wells. In shallow drilling operations, air is usually the only drilling medium and reserve pits are used to capture and dispose of drill cuttings, any encountered ground water and precipitation intercepted by the pad. For deeper, mud-drilling operations, the pits temporarily store recirculated water and drilling mud (a bentonite clay and water-based slurry used to lubricate and cool the drill stem, remove drill cuttings from the bore, and control down hole pressure). In either case, hydrocarbon or other potentially toxic residues are not a normal or expected constituent of reserve pit fluids. In the event hydrocarbons appear in the reserve pit during drilling operations, the operator is required to separate and dispose of such products within 24 hours. Any non-petroleum fluids remaining in reserve pits after drilling are allowed to evaporate or are physically removed. The pits are then backfilled and recontoured within 1 year of drilling.

It is our understanding that pit-related wildlife mortality is more commonly associated with operations that target oil production and those that use oil-based drilling muds, particularly when pits retain petroleum products (crude oil or oil-based mud) for variable periods after the drilling of a well. To date, twenty-nine percent of the federal wells drilled in the Resource Area (578) are oil wells concentrated (99%) in the long-developed Rangely and Wilson Creek Oil Fields. The remaining wells are service (e.g. water reinjection) or natural gas wells.

In both these oil fields, open, earthen pits are not a normal feature of production facilities on individual pads, since produced fluids and gas are piped to collection stations where they are separated, treated, and either reinjected back into the formation or transported off-site. Servicing approximately 700 oil wells, the Rangely Field hosts 27 emergency pits (average 85'x 45' or 0.1 acre) at collection stations, the Wilson Creek Field has none. Chevron, on its own initiative, has netted all fee and federal emergency pits with synthetic 1" mesh netting, and plans on netting 3 additional pits used to store brine water solutions at their water plants by June 15, 1996.

Contrary to the Resource Area's oil wells, nearly all gas well pads feature a small disposal pit (8'x8' open earthen pit or a vertically buried, top-grated culvert) used to dispose of produced water and condensate through well life. These facilities consistently hold small quantities of water, but only infrequently (a facility maintenance problem) show evidence of light, volatile petroleum fractions (i.e. condensate).

Pits remaining after the drilling period (i.e. production, emergency, or disposal pits) which store, or are expected to store, fluid production in excess of 5 barrels of produced water per day are required to be wired over (item 14, page A-5 of DRMP) to deter entry by larger birds and mammals that may be attracted to water (e.g. waterfowl, migratory and larger resident waterbirds, raptors, deer). The requirement is not specifically designed nor intended to prevent entry by small birds or mammals. Additionally, since the bulk of fluids present is water, pit fluids are generally unavailable as a source of wildlife water from November through March (frozen and snow covered),

In the event bird or small mammal mortality surfaces as an isolated problem in this Resource Area, BLM is fully capable of requiring the netting of pits as a Condition of Approval. Based on the level of recent, and often conflicting information and public concern expressed on this matter, we intend to look more closely at wildlife use of open pits in this Resource Area.

For instance, a recent paper presented at an oil and gas symposium by USFWS personnel contends that in South Dakota, even well-maintained netting "..provides only minimal protection at excluding wildlife.", and related of instances where netting exacerbated bird mortality compared to flagging (D.E. Fries and T.R. Chapman. 1995. Migratory bird mortalities associated with oil production sites in western South Dakota. Proceedings of the 1995 Rocky Mountain Symposium on Environmental Issues in Oil and Gas Operations. Colorado School of Mines, Golden. 383 pp.). On the other hand, Mr. Rob Lee (USFWS Special Agent, Lubbock, TX), who has been intimately involved with these issues over a number of years, believes netting is a very effective remedy for oil-induced wildlife mortality in Texas.

In summary, we believe that the infrequent and abbreviated presence of petroleum residues in pits occurring in this resource area may operate to significantly limit potential exposure of migratory or breeding bird populations to petroleum products, especially crude oil, such that the incidence of mortality remains extremely small.

126. Comment: Minerals. **On p. B-44, the stipulation code description for CSU-18 notes that the BLM will consult with the NPS "prior to issuing permits for surface for surface-disturbing activities within the scenic easement." This implies that the scenic easement is open to leasing. On page 2-8, under the heading Availability of Lands for Oil and Gas Leasing, the 2,530 acres making up the Harper's Corner Road scenic easement are described as closed to leasing by Secretarial Order. The Final RMP should be revised to reflect that the scenic easement prohibits virtually any disturbance within the easement except for certain activities associated with ranching operations.**

Response: Wording in the Draft RMP/EIS is in error in reference to the National Park Service's Harpers Corner Road and Scenic Easement. The correct withdrawal acreage includes 634.73 acres along a route 26.39 miles long and 200 feet wide. An additional 400 feet on either side of the road was also reserved for a scenic easement. The 800 feet included in the Easement totals 2,527 acres. Therefore, a total width of 1,000 feet along the road has been reserved from all forms of appropriation under the public land laws, including the mining and mineral leasing laws. The Final document will reflect that 3,161.73 acres defined as the Harpers Corner road will not be available for oil and gas leasing. Controlled Surface Use stipulation, CSU-18 will be deleted. The appropriate text references and tables throughout the document will reflect this change.

127. Comment: Minerals. **Our Mining and Minerals Branch staff closely reviewed all the stipulations described in Appendix B and C, but other than CSU-18, there is no mention of the park. From the maps, we can only ascertain that there is no leasing or NSO in the proposed Blue Mountain Wilderness Study Area adjacent to a small portion of the scenic easement (Maps 2-2 and 2-30), and that some CSU or TL stipulations apply to the rest of the acreage along the road or south of the park. The Final RMP should clarify specifically which stipulations apply to which parcels of land. Additionally, unless the stipulations for an area were common to all four of the RMPs alternatives, only the preferred alternative stipulations were shown. We cannot offer recommendations from other alternatives because they are not given.**

Response: Surface stipulations are contained in Appendix B. Whether the stipulations are applicable to Alternatives A, B, C, or D are so indicated in the tables in Appendix B. Bull Canyon, Willow Creek,

and Skull Creek Wilderness Study Areas are identified as non-discretionary no lease areas. The Right-of-Way withdrawal for the Harpers Corner Road and scenic easement has withdrawn the leasable minerals from appropriation. The GIS maps containing the various stipulations will be converted to a data base that will have the legal descriptions for each stipulation upon completion of the RMP.

128. Comment: General. **I would like to be put on a mailing list to receive the final EIS so it can be added into our library collection.**

Response: All those who requested to be put on our mailing list will receive a copy of the RMP once it is completed.

129. Comment: Minerals. **"Agencies such as the EPA and the Colorado Department of Health regularly enforce regulations that affect operations and plans of the oil shale industry. Any entity leasing property from BLM becomes directly liable to the regulatory agencies for compliance with their respective regulations. BLM does not share in this liability. There is no need for BLM to presume to enforce such regulations on behalf of other agencies through the leasing program. The RMP carrying capacity proposal essentially adds an additional layer of bureaucracy on the industry in terms of regulatory compliance which is an unnecessary burden to both the BLM and the industry."**

Response: The BLM, other federal agencies such as EPA, several state agencies, as well as the county government, all have their own regulatory responsibility for dealing with mining operations occurring on BLM lands. All the different agencies involved work together during the approval process but none can transfer jurisdiction of their laws/ regulations to another entity. Consequently, if a lease is issued on BLM land, the BLM will be intimately involved in any approval of the mine plan. The BLM is also required to complete or supervise the completion of the National Environmental Policy Act (NEPA) document that would allow the project to proceed. The commentor is in error when making the statement that the BLM does not share in the liability of other regulatory agencies. The carrying capacity identified in the oil shale section was developed by a committee made up of federal, state, and local representatives. Should oil shale development ever become a reality, a similar committee would likely be formed to revisit the carrying capacity concept as well as addressing other socio-economic concerns.

130. Comment: Minerals. **Specific reference is made to Appendix I, pages 23, 24, and 25. While we are pleased to see the new preamble wording of the BLM Fee Exchange Policy for Leasable and Salable Minerals, the "softened" language has been entirely compromised by the closing statement in this Appendix that, in essence creates a new policy statement: "However, if proposals cannot affirmatively respond to elements 1, 4, 6, 8 and 10 or it the proposal would be large enough to enable the formation of a non-federal LMU, then the proposal would be found not to be in the public's best interest at this time." It appears from this closing policy statement that the BLM has already pre-judged all rational exchange proposals.**

Response: The BLM has not pre-judged future oil shale exchange proposals. What the RMP does do is identify the areas of concern, from the public interest stand point, that future proponents of exchanges need to address. The last sentence in Appendix I that identifies the five policy elements that would have to be met for an exchange to be in the public interest will be deleted from the document.

131. Comment: Minerals. **Policy element #1 goes to the heart of the land exchange argument: What is a Logical Mining Unit for oil shale? Simply because the Federal land consists of mostly one large block does not necessarily mean the BLM has any LMUs. If, as the BLM analysis suggests, the private property along the water courses are underlain by heavily fractured oil shale then large zones along the side of the property will have to be left in place to protect them from mining and processing operations and leave adequate recharge areas for the flow of precipitation into their water resources. This is but one example that indicates there has been no LMU planning for the Piceance Basin based on any level of technical detail incorporated into the BLMs analysis to justify the statement that "An exchange proposal could not comply with this element."**

Response: The only work completed on the creation of Federal Oil Shale Logical Mining Units (LMU) was in association with the Federal Prototype Oil Shale Leasing Program initiated in 1973. Under that program, industry was solicited for interest in leasing, tracts or LMUs were delineated, and competitive sales held. A total of six tracts were offered, four were bid on and leased, and only two remain leased today and are located in this Resource Area. As part of the governments commitment to industry, two additional lease tracts were delineated in the Area but the oil shale industry collapsed before they were ever offered for lease. Based on that past activity, it would certainly appear to us that the Piceance Basin currently has plenty of federal land that would be suitable for the creation of LMUs.

132. Comment: Minerals. **It is inappropriate to consider policy element #6 as an automatic failure criteria. It is also inappropriate to consider the "and" in this element as a dual criteria requiring both checkerboard lands and isolated tracts.**

Response: Even by excluding the "checkerboard" criteria, the fact still remains that there are still very few isolated tracts of BLM land that occur in the Piceance basin. It therefore, would be very difficult to show that an exchange was in the public's best interest based on that criteria.

133. Comment: Minerals. **Element #10. If any exchange (regardless of tract size) allowed development of multi-mineral technology, the value and leasability of all federal land in the depocenter of the Piceance Basin would be enhanced. Similarly, development of technology for thick oil shale would enhance all Federal lands at the expense of private lands. Any exchange which resulted in the successful development of appropriate technology and infrastructure would undoubtedly enhance competitive bidding for the Federal oil shale creating an industry where now none exists. In summary, we understand that the Federal Land Management Policy Act of 1976 contains a strong mandate for the retention of public land, however the BLM is hereby encouraged to examine its policy requirements per our comments above.**

Response: We concur with the statement. However, the future development of new extraction technologies, processing or infrastructure associated with the oil shale industry is not dependent on some entity securing a logical mining unit in the center of the Piceance Basin. Especially when there currently exists thousands of acres of private oil shale within which that technology can currently be developed. This RMP does provide for the leasing of smaller, research and development scale tracts to help develop multiple mineral extraction technology.

134. Comment: Minerals. **SFOGI would like to recommend the following language as a means to qualify and clarify research tract leasing in the multi-mineral zone: "Research tracts will be considered by the Secretary of Interior on the merits of the technology proposed by the applicant. The Secretary of Interior may also propose research tract development to promote the goals of the Federal oil shale program. Consideration of such research tracts will include a determination of appropriateness of the oil shale resource for the technology testing that is proposed and whether the lease is in the public interest. While no definitive limits on the size of research tracts are being set forth at this time, it is anticipated that research leases will not exceed 2,000 acres. Research tracts will be permitted in the multi-mineral zone. No commercial-scale operations will be permitted on a research lease. However, the Secretary of Interior has the discretion to issue a research lease that grants the research tract lessee the right to expand the lease acreage up to the statutory limitation and convert the research lease to a lease allowing commercial production if the research tract lessee is successful in demonstrating an improved multi-mineral resource recovery technology."**

Response: Your recommended wording change for clarification is adopted. The final document will be changed accordingly.

135. Comment: Minerals. **Page S-4 - SFOGI does not support Alternative D because it will increase oil shale industry costs via additional surface stipulations.**

Response: The surface stipulations and appropriate Conditions of Approval (Best Management Practices) would be combined with other mitigating measures developed in the Environmental Impact Statement that would be completed on all mine plan proposals. The surface stipulations identified in Alternative D are general in nature. Mitigation developed for mine plans would be site specific and likely much more numerous then those presented in the RMP.

136. Comment: Minerals. **We would like to inquire why Table 1-4 on page 1-7 does not include oil shale as a planning issue.**

Response: If completed properly, the useful life of a planning document is approximately 20 years. Realizing that conditions and situations change is the reason the BLM planning regulations provide the opportunity to amend these plans. The reason oil shale was not considered an issue in Table 1-4, page 1-7, is that it was not identified as an issue during the public scoping that was completed at the start of this planning exercise, and it is not felt that an oil shale industry will resurrect itself within the life of this plan. If we are wrong in this assumption, an amendment to the plan can be completed if the issues are significantly different than was addressed in the 1987 Piceance Basin RMP.

137. Comment: Minerals. **Please refer to page 4-22 and page 4-23, Impacts From Oil Shale and Sodium Management. The first paragraphs of both items seem to directly contradict each other since commercial sodium leases have been granted in the multimineral zone.**

Response: The two paragraphs in question are identical. The reason the multimineral zone was identified for multimineral leasing only was a conservation measure to assure that one or more of the three minerals present would not be squandered in the process of recovering one mineral.

There are eight existing sodium leases that occur within the multimineral zone. These leases originated in 1964 when their Prospecting Permit Applications were approved. In 1964, federal minerals were administered by an agency other than the BLM. In addition, BLM's planning documents were dramatically different back then. Under the sodium regulations, if a prospecting permit is issued and the permit holder proves that there are economically minable deposits occurring within the limits of the permit, then the permittee is entitled to receive a Non-Competitive Sodium Lease. The permit holders met the requirements of the regulations and were issued leases. The BLM no longer issues prospecting permits for sodium within the Piceance Basin. Future leasing will follow the requirements developed for competitive leasing. Only one of the eight leases has been developed for sodium. That particular operation is currently in a pilot phase to develop extraction technology that will allow the lessee to comply with lease stipulations that protect the future minability of the commingled oil shale resource. To date the BLM is convinced that the operation is in compliance with that stipulation.

138. Comment: Minerals. **The following maps are incorrect in regards to restrictions placed on SFOGI's Ertl - Mahogany property: Map 2-3, 2-4, 2-5, 2-6, 2-11 and 2-26. Maps 2-18, 2-21 and 2-24 correctly depicts the Mahogany property.**

Response: Please refer to Table 1-1 or page 1-3, first paragraph of the Draft RMP, for an explanation of split estate lands.

139. Comment: Minerals. **We would like to encourage the BLM to study Table I-7 for accuracy. It appears that certain oil shale withdrawals describe private lands, i.e. 1 and 2 South, Range 100 West.**

Response: The paragraph right before Table I-7. reads: Table I-7 lists the lands withdrawn for oil shale under Executive Order 5327, dated April 15, 1930 (only those lands owned by the United States that lie within the following described lands are withdrawn).

140. Comment: Minerals. **The greatest demand for natural gas occurs during the peak heating season - usually November through March of any given year. Across-the-board seasonal restrictions could have a severe impact on the cost of gas on a national level, and impact on the local socioeconomic component. Natural gas has an extremely inelastic supply demand relationship, i.e., a small supply disruption can cause a significant upward price change. It is important to operate natural gas wells in the winter to maximize benefit to the consumer and to minimize costs associated with interrupted operations. Seasonal restrictions also reduce the need for oil and gas contractors and supplies on a year round basis, necessitating the larger use of seasonal workers.**

Response: Seasonal timing restrictions will only affect operations related to exploration, construction and drilling. Producing wells will not be affected by timing limitations.

141. Comment: General. **The plan does not contain a sufficient range of meaningful alternatives to satisfy the requirements of the National Environmental Policy Act (NEPA), 42 USC -4332 (C) (iii), and Council on Environmental Quality (CEQ) NEPA regulations, 40 CFR - 1508.8. For example the plan allocates the same total acreage to fluid minerals leasing in three of four alternatives, and the leasing set out in the fourth or "Enhanced Natural Values" alternative (C), varies by less than 1% from the other three in total acreage to be leased. Plan at 2-9. Similarly,**

for livestock grazing, all alternatives allocate the same number of animal unit months of grazing, and the same number of acres would be manipulated under each alternative. See plan at 2-52, 2-53. The same is true for oil shale; BLM recommends that 223,000 acres be leased for oil shale in each alternative, Plan at p. 2-10, despite its own conclusion that the water used up in oil shale development would "result in the permanent loss or severe deterioration or nearly 50% of BLM fisheries." Plan at 4-104, 105. These uses are the dominant uses BLM has chosen for the WRRA. Yet, no hard look has been given to the effects of allocating differing acreages to these uses. This violates the NEPA based requirement that BLM "must take a hard look at alternatives which not only emphasize differing factors but lead to differing results." Citizens for Environmental Quality v. United States, 731 F. Supp. 970, 989 (D. Colo. 1989). We request that the plan be rewritten to analyze the effects of different levels of livestock forage and mineral leasing and development on the WRRA.

Response: The reason for what appears to be an insufficient range of alternatives for some resources relates back to the purpose of this RMP. As stated on page 1-1, "The purpose of this RMP and EIS is to update and integrate BLM land use planning documents for the White River Resource Area into one comprehensive land use plan...Many of the decisions made in these earlier documents are still valid today and have been incorporated into the RMP." Then on pages 1-9 and 1-10, the relationship to these other documents and decisions is described. For the examples cited, oil and gas, livestock grazing, and oil shale leasing acreage, these were analyzed in earlier documents. Information obtained during scoping did not indicate a need to reanalyze these decisions.

142. Comment: Minerals. **I found no discussion of the acreage currently leased in the WRRA. This is important to know when analyzing the effects of new leasing. I have been told by BLM that about 95% of the resource area is already leased. This is important information, and I request it be displayed. Also, the plan does not set forth one of the most important figures--the acreage to be leased without stipulations. See Table 2-7 at p. 2-9. According to planning team leader Joann Graham, it is 267,915 acres. The correct figure should be included in the plan. Oil and gas industry representatives testified at the January 10 hearing on the plan that the projected development section at p. 2-10 "grossly underestimate the potential for development in the WRRA." BLM should analyze differing and realistic levels of potential development. We remain concerned that BLM is not listening to Colorado Division of Wildlife expert research, which recommends that development be excluded within 1/4 mile of raptor nest; BLM only protects 1/4 as much territory. See Colorado DOW, Raptor Database Buffer Designation, December 1990.**

Response: Figures identifying acreage currently under lease will be incorporated into the final document. Acreage figures for land available for leasing without specific stipulations will also be incorporated into the final. The Reasonable Foreseeable Development Scenario was reevaluated based upon comments received on the Draft. A group made up of personnel from BLM, Colorado Oil and Gas Conservation Division, and Industry performed the review and determined that the figures identified in the Draft were reasonable.

We are aware of CDOW's recommended buffer zones and seasonal restrictions for raptor nesting. We have adjusted the dimensions of our NSO and TL buffer for listed and candidate species consistent with these recommendations.

Although we recognize and acknowledge CDOW's expertise in wildlife matters, they are aware of our management intentions and applications and have not identified our raptor-related NSO and TL stipulations as an issue of concern. BLM has operated (Alternative A) for 20 or more years with 5- to 10-acre NSOs and 0.25 mile TL buffers. With considerable experience in witnessing the influence of buffer efficacy, we have concluded that the TL dimensions for those species not listed or candidate under the Endangered Species Act are sized appropriately to prevent adverse harassment of nesting birds (i.e. nesting attempts successful and subsequent occupancy of site). In the very few extraordinary cases we have dealt with (e.g. individual pairs extremely intolerant of, or sensitized to disturbance beyond 0.25 mile), we have normally been successful in negotiating with the project proponent and applying supplemental provisions as Conditions of Approval.

To the contrary, we have not felt the NSOs have been sufficient, in many cases, to prevent adverse harassment of current nesting activities nor maintain nest site character conducive to continued occupation of the site (see page 4-77 and 4-79 of DRMP). We have found it often necessary to supplement established NSOs with moves of up to 200 meters (allowed under BLM's oil and gas stipulation guidelines). In response to this shortcoming, we have proposed increasing NSO dimensions in Alternatives B, C, and D to 1/8 mile--a degree of separation we have found to be effective in protecting ongoing nesting activities and maintaining site utility in the vast majority of cases.

143. Comment: Watershed. **Stinking Water Wash as a proposed Fragile Watershed. The acreage in the plan is over 40,000 acres, a great deal of which is in the oil field. We have some concerns on how we could work with you to make that work.**

Response: Stinking Waters' designation as a fragile watershed is for planning purposes only. When an Integrated Activity Plan is started in the area, priorities and methods for improving the drainage will be addressed with all interested parties.

144. Comment: Wilderness. **Study Pinyon Ridge for Wilderness potential.**

Response: In 1978 BLM conducted an accelerated initial wilderness inventory of Pinyon Ridge and identified a unit of 17,068 acres. Additional intensive field inventory in 1979 determined that the northern half of the unit was significantly impacted by oil and gas and grazing activity, leaving a unit of 8,778 acres. The field inventory of this unit revealed that the area did not meet the wilderness criteria of naturalness or outstanding opportunities for solitude or primitive and unconfined recreation. The imprints of man in the Pinyon Ridge area included past and present oil and gas and grazing activity, as well as a cumulative affect of ways reservoirs, fences and seismic trails that made it difficult to escape evidence of man's activities. Because the imprints were distributed throughout the unit, man's work was substantially noticeable. BLM determined that rehabilitation of the existing ways and seismic trails would require a major effort. It was determined that while there were opportunities to experience solitude within the area, these opportunities were not considered to be outstanding. The rugged terrain of Pinyon Ridge in effect dives the unit into two relatively small areas. The steep topography of the western face of Pinyon Ridge, the numerous ways throughout the unit and the relatively small area available to experience solitude would increase the opportunities for encountering others while in the area. These factors taken cumulatively would restrict the opportunities for being alone or remote from others. In addition, the unit did not offer

outstanding opportunities for primitive recreation. Hunting is the primary recreation opportunity due to the wildlife populations in the region. When considered in a regional context, the hunting opportunities are not unique or outstanding. The steep western face of Pinyon Ridge and the numerous ways throughout the unit would confine movement within the unit. The steep topography also limits the area available for recreation activities. Because of the limited range of recreation activities and the confining topography, the unit did not offer outstanding opportunities for primitive and unconfined recreation. There were no outstanding, supplemental, unique or important resource values identified that would warrant special protective management of the Pinyon Ridge area. Therefore, the area was not recommended as a wilderness study area in the 1980 Final Intensive Wilderness Inventory.

As a result of public comments on the Draft White River RMP, a further evaluation of the Pinyon Ridge area was completed in the summer of 1995 to determine if the area truly possessed wilderness qualities as a result of the imprints of man returning to a natural state. Conservation organizations have identified and endorsed a 20,100 acre area that is claimed to have wilderness values and is suitable for wilderness designation. The northeastern portion of the conservationists wilderness proposal is within the Little Snake Resource Area and is included in the area evaluated. The evaluation consisted of a fixed wing aircraft over flight and 2 field trips. In addition, an evaluation of 1993 aerial photographs was conducted to determine if the Pinyon Ridge area was roadless and if it possessed any wilderness characteristics 15 years after the original wilderness inventory. The evaluation of this 20,100 acre unit determined that it contains: 1. a BLM road in the southern portion of the unit that has not been maintained for regular and continuous use. 2. numerous ways most of which are overgrown with vegetation; 3. remnants of past seismic activity in the form of bladed seismic lines which are slowly returning to a natural state; 4. numerous fence lines, some of which were originally cleared of vegetation and many in disrepair; 5. small, overgrown stock ponds. 6. Grazing use continues throughout much the area; 7. an abandoned oil and gas pad that has been reclaimed and 8. most of the area is under oil and gas leases. All of the imprints of man were constructed or occurred many years ago and as a result of infrequent use are returning to a natural condition. Some of the ways in the area receive enough vehicle use during hunting season to keep them open to this use. It appears that no regular maintenance of the BLM road, ways, fences, and stock ponds has occurred. While some imprints of man such as the cleared fence lines, seismic lines, the BLM road and ways are returning to a natural state, they are still substantially noticeable within portions of the area. BLM is planning to maintain road access into the middle of the area through existing easements on a state land section in the near future. The numerous imprints of man are scattered throughout much of the Pinyon Ridge area and are substantially noticeable in portions of the area. Therefore, the 20,100 acre unit identified on Pinyon Ridge does not meet the criteria of naturalness.

The unit does possess opportunities for solitude. These opportunities are considered to be outstanding because of the low use in the area and because of the rugged terrain. The expansive views from the top of Pinyon Ridge enhance the feeling of being alone and remote from others. The vegetative and topographic screening of Pinyon Ridge provides opportunities for being alone and remote from others within the unit. The Pinyon Ridge area itself is isolated and remote from any major developments or settlements and access is difficult, thus keeping use in the area low. Therefore, the Pinyon Ridge unit is considered to possess outstanding opportunities for solitude. This is a change from the original wilderness inventory.

While the area does possess opportunities for primitive and unconfined recreation, they are not considered to be outstanding. This element has not changed since the original wilderness inventory in 1978-79. In addition, BLM has not identified any special, unique, or other outstanding features within the Pinyon Ridge area that would warrant any kind of special management.

Since the 20,100 acre Pinyon Ridge unit contains a BLM road in the southeastern part of the area and the imprints of man, which are considered to be substantially noticeable and widely scattered throughout much of the unit, the area does not possess the mandatory wilderness characteristics of naturalness. Therefore, the unit has not been identified for further study as potential wilderness and will be dropped from consideration as wilderness with the signing of the final RMP Decision of Record.

145. Comment: Wild and Scenic Rivers. **Protect White River from headwaters to confluence with Green River under Federal Wild & Scenic Act.**

Response: Wild and scenic rivers. While BLM recognizes that a portion of the White River (i.e. Taylor Draw Dam to the Utah border, Segments B and C) is eligible for inclusion into the National Wild and Scenic Rivers System (NWSRS), this portion of the river was found not suitable for designation because: 1. Extensive private lands along the corridor, 2. developments along the river, 3. existing oil and gas leases, 4. lack of local support for administration of a designated river, 5. high cost of acquiring lands needed for management, and 6. inability of BLM to manage the river due to scatted public land patterns (less than 30% public lands). The north and south forks of the White River are deferred to the U.S. Forest Service as BLM manages little land in this area. In addition, eligibility of the 75 mile segment from the confluence of the north and south forks to Kenney Reservoir (segment A) is deferred to private land owners because BLM administers only 16% of the land in widely scattered parcels along this segment. Private landowner support and involvement would be required for a study of this segment of the White River.

BLM does recognize the outstandingly remarkable values: endangered fish and wildlife; recreation opportunities; and candidate plant species. The endangered species will be protected and managed under the Endangered Species Act. ACEC designation and management proposed in this RMP will further provide protective management of resource values found on public lands in the river corridor. The White River corridor within Utah is outside the scope of this plan and is managed by the Utah BLM Vernal District.

146. Comment: ACECs. **Leasing and motor vehicles must be disallowed in ACECs, ACECs must be managed by not allowing mining, oil drilling, logging, etc.**

Response: The boundaries of the ACECs are administratively determined to include sufficient public land to encompass the important values of an ACEC, whether rare plants, paleontological resources or important wildlife habitat. The ACEC flags the area to provide priority management for those important values as the principle land use within the ACEC. Designation of an ACEC does not need to preclude management of other compatible land uses. In several cases, the important values of the ACEC do not occupy all the area within the ACEC, but rather, encompasses several occurrences of the important value. In many cases, mineral development would be possible on areas within an ACEC that do not contain the important values. Many of the designated and proposed ACECs have had most of the public land within

leased for oil and gas development. Some ACECs have existing leases for other minerals, such as sodium. Current leases provide the lessee a valid existing right to develop the leased minerals. Under these leases, BLM can require the lessee move any proposed surface disturbance or facilities up to 200 meters. In most cases, a 200 meter offset is sufficient to protect a majority of the important values of the ACEC. In those cases where offsetting would not avoid those values, BLM can stipulate operating procedures and reclamation standards that would minimize impact to or disturbance of important values. Existing leases are subject to requirements of the Endangered Species Act and Antiquities Act which would provide protection of important values or several designated and proposed ACECs. In many of the designated and proposed ACECs, mineral leases within a developed oil and gas unit do not expire and are held as long as wells are capable of production. Those leases would continue as valid existing rights subject to the stipulations noted above.

Those leases not held by production periodically expire and are again offered for lease with any new restrictions that would apply at that time. Management proposed for ACECs in the Draft RMP would apply NSO stipulations on the important values of the ACEC. New leases issued would be subject to those NSO stipulations which would require the lessee to demonstrate the important value was not present or would not be impacted before the NSO stipulation could be relaxed (refer to Appendix B, Controlled Surface Use Stipulation #CSU-04 and No Surface Stipulation #NSO-19). Most of the designated and proposed ACECs contain sufficient area not occupied by important values that would allow development of mineral resources without impacting the important values.

Motorized vehicle use would be restricted to designated roads and trails within all ACECs. Many of the ACECs are narrow and lenticular and cross numerous roads important to the transportation network of the Resource Area. It would not be feasible or practical to eliminate all roads from all ACECs. Based upon analysis of important values in the ACECs, most existing roads are not impacting or would not further impact the important values of the ACECs. Most of these roads would remain and be designated for motorized use within the ACECs.

Harvesting forest products (timber and firewood) would not be allowed within any ACEC. However, there maybe occasions where forest product harvest techniques maybe used to replicate ecological processes such as, natural disturbance regimes or regeneration or aging, decadent stands of aspen which have escaped natural disturbances because of man's influence. The primary objective of any forest product harvesting within an ACEC would be enhancement of ecological processes important to the values of the ACEC.

147. Comment: Riparian. **I support a shift in perspective to ecosystem management. Riparian areas have suffered much degradation in the RA, as in most places in the west, and need to be given special consideration because of their outstanding importance as wildlife habitat and watershed structure. I recommend a proactive management policy aimed at protection and restoration of riparian areas, including exclusion of mineral leasing, fencing to control and manage grazing impacts, and control of roads and ORV use.**

Response: The riparian management proposed on pages 2-32 through 2-41, Draft RMP/EIS, provides sufficient protection and emphasis on improving riparian habitat conditions to meet Bureau goals. Mineral leasing and grazing would continue to occur within riparian/ACEC areas but only under the criteria outlined in the RMP which are designed to protect and improve those habitat conditions.

148. Comment: Ecosystem. **Protection of natural landscapes and biological diversity is a very high value. The excessive extractive uses in the Resource Area will work directly against such protection and should be reduced significantly.**

Response: All of these comments addressed ecosystem management and/or biological diversity in general terms with no specific comment directed to the Draft RMP/EIS. Most of these comments centered around one or more of three main themes: 1) ecosystem management approach or lack of such; 2) protection of biological diversity through protection of bioreserves and corridors; and 3) reduction of land available for development.

The RMP is intended to make resource allocations on public lands through evaluation of alternative levels of allocation and the impacts of those allocations. As noted on pages 4-150 and 4-151, the Draft RMP does consider the affects or impacts on ecosystems and biological diversity of each alternative. Many of the land use allocations chosen in Alternative D (the preferred alternative) were based upon management proposals which would be beneficial to ecosystem integrity and maintenance of biological diversity. Integrated activity plans (page 1-5) would be prepared on a landscape or watershed level that address specific ecosystem issues in partnership with all landowners and public land users.

Several comments addressed the need for bioreserves or large undeveloped areas with connecting corridors for protection of biological diversity. A majority of the public lands in the Resource Area would remain undeveloped and continue to function as bioreserves, even though most of the area has potential for development. Past development has occurred in about five locations in the Resource Area and has disturbed about 15,000 acres (Chapter III) or 1% of all public lands in the Area. Projected development would likely disturb another 15,000 acres primarily within those same areas of intense development. Some development would likely occur outside these intensely developed areas. The surface stipulations in Appendix B would be applied to all development and are intended to protect biological diversity on the developed lands.

149. Comment: Motorized Travel. **Why weren't on and off road enthusiasts consulted through the proper channels as to what your agency is up to? You only gave us two meetings in a twenty three (23) day period (of which there was very little notice given for) to voice our opinion. This is not fair as your people get paid to go to meetings and work on this problem on a full time basis - we don't!**

Response: Public scoping meetings were held in Meeker, Rangely, and Grand Junction in June of 1990. News releases in local news papers and in the Federal Register also identified that the BLM was soliciting participation in the planning process and help in defining the issues to be addressed in the RMP. The Draft document was released for comment on November 11, 1994. The comment period was extended from February 10, 1995 to April 28, 1995 (168 days total). Four public hearings and three public informational were held, along with numerous meetings with special interest groups such as OHV and oil and gas operators. Two meetings were held in which members of the western slope congressional staff were in attendance. Many of the meetings were held after hours and on weekends to accommodate public concern of not being able to attend meetings during the week. It is hard to determine how much time is adequate, to allow for public input into a document like this, however, it is our belief that most of the interested public in northwestern Colorado had an opportunity to express their concerns and work with the BLM specialists to make the document an acceptable plan for the future management of the public lands.

150. Comment: Economics. **I think they should also make a social and economic impact study for the people of these counties as well. I am concerned about the oil company's and gas company's future and the possibility of running them out of business because of strict and overwhelming regulations. I'm also concerned about the small business -- businesses of the counties because of the hunters that will be discouraged to come here and hunt because they can't use their off-road vehicles. I am also concerned about future businesses being discouraged from wanting to come here and possible revenue and jobs lost.**

Response: The Social and Economic Affected Environment section and the impact section have been revised and included in Chapter 4 of the Final Document. The revised sections take industry and citizen concerns into account, and provides an analysis of the economic impacts of implementing the decisions of the Proposed Management Plan.

151. Comment: Roads. **The document does not include any reference to transportation or any discussion of impacts on the public roadways and highways caused by the various resource area alternatives and traffic generating activities. We feel transportation and transportation safety on roadways serving the White River Resource Area is a significant issue which should be included and addressed in the Environmental Impact Statement. This is especially important because of impacts caused by ever increasing numbers of resource area users in both recreational and commercial activities.**

Response: Decisions developed in this RMP would not, in general, cause significant impacts on public roadways and highways, above that currently taking place. Future major developments, authorized as a result of the decisions in this document, would require supplemental EISs in which actual transportation impacts would be addressed. The Colorado Department of Highway will be invited to participate in preparation of IAPs after the document becomes final.

152. Comment: Riparian. **The fact that the majority of the riparian areas is in pretty rough shape now would indicate that deserves a lot of attention, and certainly to go under Alternative B makes lot of sense.**

Response: The Proposed Management Plan will provide greater emphasis on improving riparian conditions on a greater number of streams than does Alternative B.

153. Comment: Wild and Scenic River. **I don't necessarily favor White River being a wild and scenic issue. Nevertheless, it's getting a lot more use these days than it ever did before. If my figures are correct, some 1,200 people went down the river last spring, and when I first came to Rangely quite a long time ago it would be a wonder if half a dozen did. So, it's time something has got to be worked out to protect the areas along the river, both on the private properties and the BLM properties.**

Response: BLM management emphasis on the White River will be required to ensure impacts do not occur to public land resources. A management plan for the White River ACEC will be completed and will consider the protection and management of riparian areas and other resources on BLM public lands in the river corridor. Another consideration will be recreation use and the possibility of identifying and/or designating public use areas (i.e. camping, fishing, put-in and take-out locations). River management and related recreation use issues as well as other resource values will be considered in the ACEC management plan to be developed for the White River ACEC. Development of a local partnership and the use of volunteers would help ensure that impacts to this valuable resource do not occur.

154. Comment: Roads. **I have actually contacted the BLM in Meeker, Colorado concerning a road closure before, and nothing has ever been done about it. I was told something about expenses. If we can't open one road because a landowner closed it, how are we going to close all of these roads and bring it back to the natural state that, you know, this folder calls for?**

Response: Without knowing the specifics of perceived closures, it is difficult to respond appropriately. We receive many access complaints, particularly during hunting season, and quite often find that the roads in question are on private property lines, and the closures are quite legal. Funding only enters into it where the closure is legal, and an easement must be purchased. Closures can be made more readily since we are not negotiating over private property rights.

155. Comment: Wilderness. **I find it difficult to understand why only three of the six Wilderness Study Areas were recommended by the BLM for protection. Furthermore I do not understand why the remaining three are to be opened to mineral leasing and the consequent disruption or destruction of natural habitat.**

Response: The Bull Canyon, Willow Creek and Skull Creek WSAs meet all of the wilderness criteria and were recommended for wilderness designation because of the outstanding scenery and opportunities for solitude and primitive and unconfined recreation as well as the presence of special features. The Black Mountain and Windy Gulch WSAs were not recommended for wilderness designation because BLM determined that the wilderness values contained within the areas were not of an overall significance to warrant inclusion into the National Wilderness Preservation System. BLM also found no conflicts with wilderness management of the area. BLM's energy and mineral resource evaluation concluded that both of these areas have minimal to no producible mineral resources. Therefore, any mineral development within these areas is unlikely. BLM also did not find any significant resource values or reasons to provide special protective management for these 2 areas if they are released by Congress.

While BLM recognizes the uniqueness and outstanding character of the Oil Spring Mountain WSA, it was not recommended because of the presence of pre-FLPMA oil and gas leases that carry a valid existing right for development and leases held valid under a unit development agreement. Therefore, management of the area as wilderness would be difficult or impossible if the lease holders decide to continue development within the WSA. However, since the area does possess biologically diverse plant communities, the area is proposed as an Area of Critical Environmental Concern and would be managed to provide as much protection as possible while still allowing reasonable development of resources.

156. Comment: Motorized Travel. **I find laudable the efforts you have made to restrict vehicular traffic to designated roads and trails. Having lived in northwest Colorado for some 28 years, I have witnessed the proliferation of roads many of which, though seldom used now, are scars on the landscape which tend to lead to environmental degradation. Why can we not make an effort to deny use of some of these roads and, at the same time, establish some roadless areas?**

Response: OHV use is a legitimate use of public lands. The intent of BLM is to begin management of motorized vehicle use in the Resource Area. The OHV regulations are primarily protective in nature and also consider conflicting uses such as motorized vs non-motorized uses. There are many existing roads throughout the Resource Area that duplicate access, that are not necessary for management or use of the land, that are causing soil erosion and landslides, or damaging or adversely impacting other resources. The proposed transportation plan, to be written after the RMP is completed, will involve the public to determine the proper designation of routes as well as what roads if any will be abandoned. Since most of the roadless areas within the White River Resource Area have long since vanished, there is an adverse impact to those people who wish to engage in more "primitive" types of "non-motorized" recreation such as: hiking, hunting, backpacking, horseback riding, backcountry camping, etc. There are no areas left in the entire White River Resource Area that can be classified in the "primitive" setting on the Recreation Opportunity Spectrum (ROS) (See appendix G, ROS Settings). This will be an issue when the transportation plan is written. The existing six Wilderness Study Areas, are the only areas currently protected from new road construction.

157. Comment: Air Quality. **Chapter #4 of the referenced document states that the BLM would request the State of Colorado to analyze visibility impairment impacts for all projects proposed near Dinosaur National Monument (page 4-1). Dinosaur National Monument is located in Utah and Colorado, so the statement in the document should apply only to sources that are located in Colorado. Sources that locate in Utah which may impact the visibility in Dinosaur National Monument, a Federal Class II Prevention of Significant Deterioration (PSD) area, will be evaluated by the Utah Division of Air Quality. Utah Air Conservation Rules (UACR) require that major new sources and major modifications evaluate visibility impacts in accordance with PSD rules. Our concern is that proposed new minor sources locating in Utah would be required by this document to demonstrate to the State of Colorado that no impairment of visibility is expected which is beyond the scope of the current Utah regulations (UACR).**

Response: The decisions developed in this document apply only to BLM administered lands within the White River Resource Area.

158. Comment: Roads. **I myself feel that closing down the roads is not the best in any of our interests, because right now there is already thousands and even millions of acres already locked up because the private landowner owns just a short strip of access to that land. They should be working on opening those roads up instead of closing more roads.**

Response: The RMP identifies areas where we feel access needs to be enhanced (Map 2-25). This may mean, among other things, a lack of adequate physical access, or a lack of adequate legal access. These are areas where access to public lands could be improved through the exchange of land, purchase of easements, development of trails, road maintenance or renovation, identification/posting of property lines, etc. Identification of these areas is a tool to aid us in prioritizing where and how limited funds for such activities can best be utilized.

159. Comment: General. **There are a number points I would like to make regarding the RMP. First of all, a copy was not sent directly to us. As a business so heavily affected, we were wondering why that was. And a poll of operators, as well as other petroleum industry organizations, we did not find that they had received copies. Only one organization that we are aware of said they did, and that was the Rocky Mountain Oil and Gas Association. So we're concerned about that, since there's ample public records available to designate us.**

Response: The historic nature of the oil and gas industry is such that properties and leases can change ownership a number of times through the life of a lease or well. Companies such as the commentor's can often get left out of the loop when they have entered into the area in the middle of a process such as the development of an RMP. However, an August 22, 1994, letter that was sent to all public land users asking if they wanted copies of the Draft RMP, was returned from two companies, addressed in care of the commentor's company, requesting that they be placed on the mailing list and that they receive a copy of the Draft. The Draft RMP was mailed to both addresses in November 1994. The Draft RMP was sent to over 65 oil and gas companies that were active operators in the WRRA.

160. Comment: Minerals. **So we would like to encourage that rather than a no-growth plan, that the White River Resource Area encourage companies to develop their resources in here, to give them breaks, to encourage the BLM to reduce royalty rates and try to not remove 43,000 acres from being leased with no surface occupancy, and increase the acreage from 20,000 to 148,000 no surface occupancy acreage, increase the 390,000 to a 1,200,000 of controlled surface use, increase 360,000 acres in time limitation use.**

Response: We do not consider the RMP to be a "no-growth" plan. In fact most of he analysis is based on a "best guess" estimate of the growth that is anticipated to occur over the next twenty years. In order to provide for the orderly development of natural resources over that time frame, it is important that the resources impacted as a result of development be mitigated or protected. Existing laws require us to protect and policy dictates mitigation. The stipulations identified are designed to allow for development, while at the same time maintain or enhance the health of surrounding ecosystem. Regulations are currently in place that allow mineral lessees to apply for a reduction in royalty rates. That process is not based on management decisions developed in the RMP.

161. Comment: Motorized Travel. **Alternative B would restrict travel to existing roads and trails. It is not possible for me to evaluate this as a viable alternative until the BLM can provide the information I would expect them to have, if they are managing the public land properly. Not knowing the existing condition tells me that the need to consider this action has not been properly evaluated. This plan should be postponed until that information is available for the public to use in their decision making process in giving recommendations on how to manage their land.**

Response: The various alternatives depict a range of actions, based on the fact that resource impacts related to vehicular use are occurring throughout the Resource Area. This can be documented through the use of photographs, aerial photos, and personal knowledge of the Resource Area on the part of the staff. The inventory process is ongoing, simply because it is virtually impossible to have a totally complete picture of a changing environment, particularly when new roads and trails are being created all the time. Since under existing conditions, the inventory will never be complete, the maps will always be in need of updating. The maps provided at the public meeting, which were bound alphabetically, were U.S.G.S. 7½ minute quadrangles

covering the entire Resource Area. They showed all travel routes mapped through that time. For Alternative B, these routes, regardless of their label, would be "existing" roads or trails. For C and D, the labels indicated potential designations, as a basis for discussion. Formal designations were to be made following the RMP, through preparation of a travel management plan, which was to be developed with public input. We concur that there were few motorcycle trails depicted on these maps. This is because when the mapping has taken place, "travel routes" were depicted, and no distinction between road and trail was generally made at the time.

OHV limitations have been changed from the Draft. Most of the Resource Area will be limited to existing roads and trails from October 1, through May 1, when wet conditions prevail, and open for the remainder of the year. In those areas having known sensitive resource values, travel will be limited to existing roads and trails year-round. Travel will be limited to designated roads and trails in ACECs, and permitted uses over designated roads and trails on Moosehead and Oil Spring Mountain. The Wilderness Study Areas will be closed. Please see Chapter 3, Proposed Management Plan.

162. Comment: Motorized Travel. **The National Environmental Policy Act requires that the people uses be taken into consideration before a major action is taken on public land. This is a major action. Travel management controls every human use of the land. The rancher is limited by travel decisions in managing his livestock, the people who extract non-renewable resources have more trouble getting permits to build roads in restricted areas, and the public's ability to enjoy their land is controlled by how they can go where and when. Without information on the current travel system and real information on what that system will look like if the preferred alternative is selected, I do not believe that the NEPA requirements have been met.**

Response: Chapter 3 and 4 of the Draft document and Chapter 4 of the Final EIS analyze the different alternative management decisions as required by the National Environmental Policy Act. The travel management plan to be prepared following completion of this document as well as the Off Highway Vehicle limitations that are included in the Proposed Management Plan, pertain to all activities. Permitted activities, such as mineral development, will receive specific exceptions to the OHV limitations. The Travel Management Plan will protect sensitive resources required by law, policy, and regulation by either closing areas such as Wilderness Study Areas, limiting areas to designated roads and trails such as in Areas of Critical Environmental Concern. Travel on the rest of the area will be determined based on recommendations provided by workgroups or partnerships that will be formed to address travel issues. All of the guidelines and procedures required by the National Environmental Policy Act have been adhered to in the development of this document. At no time, either during the public scoping meetings initiating this project, or the public hearings and numerous special public informational meetings that were held during the Draft document comment period, did any person, or representative of a person or group, identify to the BLM that they were incapable of written communication, and consequently could not comment on the document.

163. Comment: Roads. **The BLM is to coordinate management with adjacent districts and other agencies. I assume that includes counties and state plans, there is no evidence that Plan 2015 has been considered. This needs to be done to see if this plan compliments the future access and travel plans for the counties and State of Colorado.**

Response: Preparation of this RMP has been coordinated with adjacent Bureau Resource Areas, the U.S. Forest Service, National Park Service, the State of Colorado, and Rio Blanco, Moffat, and Garfield Counties. Plan 2015 is a general concept document. The only specific actions are related to State and County highways and facilities. The OHV designations will not conflict with these projects, nor will they conflict with the general concepts in this plan. This factor notwithstanding, future travel management plans will be fully coordinated with adjacent district, agencies, and the general public.

164. Comment: Roads. **Club 20 just received a grant to inventory and map the trails and back roads that connect the communities in western Colorado. This grant, over $35,000 will help show the viability of this system and the places that need connectors to make the system complete. The grant, from Great Outdoors Colorado, is designed to supply this important information to areas exactly like this. You cannot manage such a large portion of land in a vacuum. The effort to coordinate must be made to gather all available information before making the decision you want to make. The process of "blind trust, philosophical, non-resource based" management proposed in this document is not wise.**

Response: Trails and back roads which connect the communities in western Colorado are extremely limited when compared to the miles of dead-end jeep trails, game trails, livestock trails, and other travel routes which crisscross the Resource Area. The work sponsored by Club 20 will be an important addition to our knowledge of the kinds of routes to be studied, and will be utilized in the preparation of future travel management plans. The limitations in the RMP have been changed, however, and will not adversely effect the status of any such trail.

165. Comment: Motorized Travel. **Such violations can only lead to a flawed process. Knowingly proceeding with a flawed process is a waste of my tax dollars. Please stop this proposal until the agency can provide correct information to the public so the public can make an informed decision about what they want done with their public land. Deceiving the public to attain an agenda called the preferred alternative probably violates every law that governs land management.**

Response: The Off Highway Vehicle sections in Chapter II of the Draft document have been rewritten to better explain the process of developing a Travel Management Plan upon completion of the Final RMP. Roads and trails have been inventoried based on 1993 aerial photographs and are depicted on Map 3-7. The total miles of these roads and trails, occurring on public land, is approximately 5,799 miles.

166. Comment: Noxious Weeds. **How about putting together a plant identification flyer or class that our pumpers, myself as a manager, and the general public could use to report back to you where noxious weeds are cited so they can be dealt with as soon as possible? A high school program might help also to educate our kids. To control the spread of weed in the weed free zones, more control must be placed on off road vehicle travel. An educational program needs to be given to hikers, hunters and horseback riders on the control of the spread of particularly hound's-tongue and bluebur stick seed.**

Response: This is a good idea and it emphasizes that prevention through education is an essential element of any effective noxious weed management program. Colorado Weed Management Association

has printed a second edition of "Colorado's Most Troublesome Noxious Weeds". Colorado State University Cooperative Extension Service has available "Northwestern Colorado Poisonous Plant and Noxious Weed Handbook". Also available is "Montana Weed Handbook Series 1-30 " available from the Wyoming Weed and Pest Council. These are just three of the many educational publications available on noxious weeds in the intermountain west. If you need assistance in obtaining copies, we would be glad to help you.

167. Comment: Surface Water. **I realize that the BLM is attempting to do some things about Douglas Creek, Strawberry Creek, virtually any other creek in the entire Resource Management Area, but every time that nothing has been done or those years wherein nothing has been done, more dirt is transported through the White River system out of the state.**

Response: Erosional processes may occur in a relatively short amount of time or may take years to develop. There have been numerous watershed stabilization projects implemented to date for sediment retention. These projects occur throughout the Resource Area but are mainly concentrated in the Wolf Creek, Baking Powder, Red Wash, Missouri and White Face Butte drainages. Because of budget constraints and public demand, many projects are not implemented immediately.

168. Comment: Livestock Grazing **I recognize the historic use of public lands for cattle grazing, but feel that permittees could improve their allotments by moving cattle around to rest impacted areas.**

Response: Prescribed rest periods are a management tool currently in use on many grazing allotments. Minimum periods of rest from grazing have been proposed for each allotment (Appendix D, Table D-1, Draft RMP/EIS) and defined on page 2-53.

169. Comment: Wilderness. **As we move into a time when BLM lands will be looked at for their wilderness potential it is my hope that the Bureau will take a position that tends to favor the conservation of the many low elevation areas that are administered by the BLM. Areas around the Wilderness Study Areas should be expanded to have few if any roads.**

Response: The Federal Land Policy and Management Act (FLPMA) provides a congressional mandate for BLM to manage the public lands for multiple uses and at the same time to protect the resources from undue degradation. There are many laws, regulations and administrative tools available to BLM that help guide the management and protection of resources on the public lands. Wilderness is one of the multiple uses of public lands. As a mandate of FLPMA all BLM public lands were inventoried and those areas meeting the criteria for wilderness were studied to determine if they were suitable for wilderness designation. Areas that did not meet the criteria have also been considered for other types of management such as ACEC or some other special designation where unique resources are in need of special protection. This Resource Management Plan outlines the proposed management of all such areas within the Resource Area. In addition, areas targeted for development must also be protected from undue degradation of resources and careful planning and design of all projects on public lands is required. Wilderness areas do not have "buffer zones". However, it is reasonable to identify the need and if warranted to limit development and roads in critical habitat areas, or other areas where resources require protective management. BLM will consider the adequacy of access and roads adjacent to the WSAs as part of the transportation plan to be completed after the Final RMP is completed.

170. Comment: Wild Horses. **We feel that in general, looking through the RMP, that wild horses have been allotted a considerable lower AUM than either wildlife or livestock in most instances, and we feel that there is some more room for that to allow for viable herds.**

Response: The allocation of AUMs for wildlife, livestock, and wild horses are not strictly comparable primarily because of the disparity in acreages on which these species are managed. Wild horses will be managed on 190,130 acres whereas livestock and wildlife are managed on 1,455,900 acres. Please note that the fact that our wild horse herd is reproducing at near maximum potential is some testament to its viability.

171. Comment: Wild Horses. **We are also very concerned about the plan in Alternative C to turn un-adoptable older animals back into the West Douglas herd area and into the proposed Texas-Craggier management area. We feel that these older, non-reproducing animals would take away from the allotted AUMs for viable herd members, that they would - very soon their numbers would increase, they are animals that would soon die out, and that would result in a zero population in that area. They would use up AUMs that could be used by younger reproducing animals, and those animals, then, would not be foaling, we would not have foals, and once the older animals died out, there would not be a herd in the area.**

Response: All un-adoptable horses would not necessarily not reproduce. We would expect that the collective recruitment rate of the "un-adoptables" would be less than 5%.

172. Comment: Wild Horses. **We have the Naturita Herd Area, which currently is managed for 0 wild horses, where these older, un-adoptable horses could live out their lives. If the BLM follows it's own strategic plan to remove only horses five years and younger from the range; older, un-adoptable horses should be few. A BLM employee stated at the last Colorado Wild Horse and Burro Coalition meeting (Sept. 94) that there should be only about a dozen of these horses to be maintained. Naturita would be more than adequate for this purpose.**

Response: The scope of this RMP is to make land use planning decisions for the White River Resource Area. As the Naturita Herd Area is not within this area, we cannot make any decision with reference to it. In reference to your theory on a declining number of un-adoptable horses in the future, probably just the opposite would be true. From 1991-1994, in WRRA BLM gathered a total of 278 horses; 99 or 36% of these horses were returned to the range. Roughly 25% or 70 horses were older, un-adoptable horses. The remainder were young horses which were released to insure a balanced age structure in the HMA herd.

173. Comment: Roads. **A complete inventory of roads and trails needs to be done, no alternative other than alternative "A" should be implemented without a complete inventory.**

Response: Travel route information, consisting of maps, aerial photos, and GIS data, is available in the White River Resource Area Office. While this information has been updated, and is relatively complete, the inventory process is ongoing, because it is virtually impossible to have a totally complete picture of a changing environment, particularly when new roads and trails are being created all the time. Under existing conditions, the inventory will never be totally complete, given

unrestricted expansion of travel route systems. Public roads and rights-of-way which were validly appropriated under RS 2477 will not be affected by the RMP. A Travel Management Plan utilizing full public participation will be completed after finalization of the RMP.

174. Comment: Motorized Travel. **Under Alternative D the BLM will later designate which roads and trails will be closed and which ones will remain open. This will be a in-house BLM administrative decision. This is telling the public "Trust Me" and we'll make these decisions for you. I am disturbed by the fact that the BLM did not get all user groups involved. A complete failure to consider public input on this draft and a preference for in-house administrative land use controls.**

Response: The BLM made an attempt to involve all user groups. In June of 1990, public scoping meetings, which were advertised in local newspapers, were held regarding the preparation of this RMP. At these meetings, an open invitation was made to anyone interested in being a part of an RMP workgroup. A representative of COHVCO and the Little Snake Motorcycle Club was in attendance at the June 20th meeting in Meeker. Apparently this individual chose not to be a part of the process.

Travel management plans will be prepared sometime following completion of the RMP. Designations will be made in the plans, utilizing a coordinated resource management approach. The best inventory information available, from maps, aerial photos, field exams, and public input, and due consideration of resource values, will be utilized to designate lands as open, limited, or closed, and to specify what limitations (e.g. seasons of use, types and sizes of vehicles, etc.) may apply.

175. Comment: Motorized Travel. **The White River Resource Area is used by OHV Recreation, Hunting, Livestock and Energy development and other interest groups. Item #13: BLM must maintain control of Off Road use to lessen the threat of noxious weed spread and negative impact to the overall resource. Resource damage must be the ultimate reason to justify a change in current management structure. We need wildlife but we also need a balance of the multiple-use concept. The Alternative D type of land management opens the agency to public criticism and negative scrutiny. Remember that we the people pay the bills of those lands.**

Response: The Proposed Management Plan represents a balanced approach to multiple use management. Multiple use does not imply that activities should occur that cause irreparable harm to the environment. In fact the BLM must comply with laws that prohibit that from occurring. The decisions and associated stipulations and conditions of use identified in the Final document allow for the public to utilize the public lands for recreation or profit while at the same time maintaining or enhancing the health of the land.

176. Comment: Roads. **It states on page 4-14 of the White River Draft that reducing road density in the resource area would reduce the amount of damage that is presently occurring from off-road travel. The Little Snake Motorcycle Club is interested in obtaining the information of the damage that the Draft talks about.**

Response: Resource impacts related to OHV use are known to occur throughout the Resource Area. They can be documented through use of photographs, aerial photos, and personal knowledge of the area on the part of staff members. The photographs and aerial photos are available for review in the White River Resource Area Office. However, while sample photographs and aerial photos were available at public meetings, few people actually reviewed them.

177. Comment: Motorized Travel. **I really have a problem with designating Coal Oil Basin the only spot in the resource area for Open motorized vehicle travel. These are my concerns. 1). The draft states that this area is one of the harshest environments in the resource area. I personally enjoy the desert but also like the more mountainous areas. 2). It also states concerns over the fragile soils.**

Response: The BLM agrees, Coal Oil Basin will be dropped in Alternative D as an open area.

178. Comment: Motorized Travel. **In closing when I look at the Preferred Alternative D it is hardly an alternative but a closing down of a Resource Area. This draft badly neglects the motorized and OHV recreational uses. This draft is also incomplete and often apparently deliberately misleading with the lack of necessary data to make intelligent decisions.**

Response: It is not the intent of BLM to "close down" the Resource Area to motorized vehicle use or deny access. The intent is to begin to manage motorized vehicle use in the Resource Area. OHV use is a legitimate use of the public lands. BLM is required to designate all public land areas as either open, limited or closed to OHV use. The OHV regulations are primarily protective in nature and allow for conflicts to be resolved such as motorized vs non-motorized uses. There are many existing roads throughout the Resource Area that duplicate access, that are not necessary for management or use of the land, that are causing soil erosion and landslides, or damaging or adversely impacting other resources. Impacts from OHV use are known to occur in some areas and other areas are known to contain sensitive species, fragile resources or are subject to severe erosion. Restrictions on motorized vehicle travel will be applied to these areas through the RMP. If these areas are left in the open designation, impacts to resources will continue and BLM could not meet the requirements of FLPMA to prevent unnecessary or undue degradation of the resources.

As a result of public comments and the numerous public meetings, the Preferred Alternative has been modified to better accommodate and begin to manage motorized use in the Resource Area. The RMP is written with the best data available at the time. All existing roads and trails have been mapped using aerial photographs from 1993. The Preferred Alternative has been modified as a result of public comments. Alternative A, Current Management, does not meet the requirements of FLPMA. Most of the older plans were written before the passage of FLPMA. The transportation plan to be completed after the RMP will incorporate public and OHV users comments and concerns as well as use current data.

179. Comment: Motorized Travel. **Also there was a hand out given to Keith Rholl titled the White River Resource Area, Resource Area, Resource Management Plan Off Road Vehicle Use. In this three page hand it makes reference to Executive Order No. 11,989 of 1977, are there any rules that the Department of Interior has established or set in place to implement the present order at a national level?**

Response: Yes. As a direct result of Executive Orders 11644 (Use of Off-Road Vehicles on the Public Lands - 1972) and amendments in Executive Order 11989 (Off-Road Vehicles on Public Lands-1977),

the federal land managing agencies have developed regulations that require the agencies to designate areas where OHVs may be used and to manage the use of OHVs on public lands through the Resource Management Planning Process. This includes closing areas to OHV use. The planning process allows for public participation. The regulations also require the agencies to monitor the use of OHVs, identify any adverse effects of their use, and take appropriate steps to counteract such effects.

The BLM regulations are found in the Code of Federal Regulations, 43 CFR, PART 8340 Off-Road Vehicles. These regulations establish rules and conditions for use, designation of areas and trails, vehicle operations, and permit requirements.

180. Comment: Motorized Travel. **The hand out also stated "we have resource damage and conflicts" I would also like to obtain proof of damage and conflicts. We are unaware of any damage to the plant community from off-road travel. We avoid trees, shrubs, and sagebrush entirely. The grass is not disturbed by a vehicle passing over it. Your conclusion is therefore totally unsupported and biases.**

Response: Travel management plans will be prepared sometime following completion of the RMP. Designations will be made in the plans, utilizing a coordinated resource management approach. The best inventory information available, from maps, aerial photos, field exams, and public input, and due consideration of resource values, will be utilized to designate lands as open, limited, or closed, and to specify what limitations (e.g. seasons of use, types and sizes of vehicles, etc.) may apply. Closures would occur only in WSAs, known sensitive areas would be limited to designated roads and trails, or existing roads and trails year-round, while the major portion of the Resource Area would be open May 2 through September 30, and limited to existing roads and trails the remainder of the year.

The damage created by off road motorized travel is fairly evident upon some landscapes in the White River Resource Area. The Resource Area has numerous locations of documented OHV damage, not included in this document because of space limitations. These documented occurrences have become more numerous in just the past 4 or 5 years and are impacting vegetation, including shrubs. There are occasions when one pass or even several passes of a motorized vehicle, including the popular 4-wheel ATVs, does not damage vegetation, provided soil conditions are dry. However, wet soils and those subject to compaction can be impacted by even a single pass of an ATV, and likewise, the vegetation on those soils can be impacted by the physical changes in the soil properties. Species of plants which have their growing points (meristem) above the soil surface in terminal and lateral buds can be impacted by an OHV crushing the plant to the ground. Many forbs, wildflowers and half shrubs fall into this category. Impacts to individual plants could range from death of the plant to reduced vigor of the plant, decreasing its tolerance to insect damage, diseases and droughty periods which occur every year in the arid locals of the Resource Area.

181. Comment: Economics, Roads. **There is a lack of information in the Draft on the Socioeconomic, the reintroduction of the Black-Footed Ferret and insufficient mapping regarding accesses and inventory of existing roads and trails within the resource area. If the public and the land manager are to make reasonable decisions about the plan and its consequences this information must be obtained.**

Response: The Socio-economic section has been revised and included at the end of Chapter 4 in the Final document. Before Black-footed ferrets are introduced a detailed site specific plan will be prepared with public input. The inventory of existing roads and trails has been completed based on 1993 aerial photos. New roads and trails are continuously being developed and so this process will be ongoing. The most up to date info available will be utilized in the development of the Travel Management Plan including field trips with interested public.

182. Comment: Wild Horses. **Overall, I find that the document addresses the management of Wild Horses within the White River Resource Area in terms of a nuisance factor rather than a "...legacy of our American heritage...(to be) recognized and maintained as a part of the natural ecosystem and valued for their biological, social, and cultural attributes." (Mission Statement of the Strategic Plan for Management of Wild Horses and Burros on Public Lands, U.S. Dept. of Interior, 1992) What 'management' objectives are listed in any or all of the proposed alternatives involve only relocating or removal of Wild Horses, without mention of any of the proposed range improvement goals outlined by the Strategic Plan for the Management of Wild Horses and Burros in Colorado, 1993.**

Response: The goals and objectives of both the Colorado and National Strategic Plans for the Management of Wild Horses are implicit in the management objectives of this RMP. Alternative D, Chapter II, Description of the Alternatives, p. 2-55, of the Draft RMP most closely reflects the goals and objectives outlined in the aforementioned plans. Implementation, under the same heading, outlines revision of the existing Piceance- East Douglas HMAP, at which time site specific range improvement goals would be proposed.

183. Comment: Grazing Management. **In Chapter 4, Environmental Consequences, such range/habitat improvement objectives are repeatedly referenced for both livestock and wildlife management, and it is the benefits from these projects that are cited as "Impacts". Whatever damaging impacts to riparian areas, surface water, raptor nesting sites, fisheries, or grouse habitat from trampling, forage consumption or surface disruption by livestock or wildlife (deer and elk) that certainly occur, are not addressed. In contrast, the environmental impacts attributed to a far fewer number of Wild Horses, are uniformly negative.**

Response: Pertinent portions of the Environmental Consequences (Chapter 4) text explicitly recognizes and refers to the contribution of big game forage use on reduced herbaceous ground cover and shrub vigor and conformation that may adversely influence raptor, grouse and fisheries habitat components. Refer to the first one or two paragraphs of each alternative's "Impacts from Big Game Management" section in the DRMP's raptor (pages 4-86 and 87), grouse (pages 4-98 and 99) and fisheries (pages 4-108 and 109) sections. Big game habitat improvement and use guidelines, and the general reductions in long term big game population objectives (established by the State), are specifically intended to reduce big game forage use intensity and its consequent influence on long-term habitat conditions for big game and other associated wildlife.

184. Comment: Cultural Resources, Grazing Management. **This approach is even carried to the extent that livestock grazing is conspicuously absent in the section on Cultural Resources, yet Wild Horses are held responsible for trampling horizontal surfaces and rubbing on standing features. One might be led to believe that livestock, deer, and elk do not engage in such heinous acts.**

Response: Livestock are known to trample horizontal surfaces and rub on standing features also, and thus do impact cultural resources just as do horses. Deer and Elk have slightly different habits than do horses and livestock and while some trampling does indeed occur deer and elk have been prey species for humans for many millennium. Some research even indicates that concentration areas and game trails may have been used by prehistoric hunters as ambush/kill sites for wild game. It is also important to remember that until Europeans brought horses and other livestock with them, such as cows, sheep, goats and swine, there hadn't been any horses in the western hemisphere for some eight to ten thousand years, thus these species had no impact on the culture of the inhabitants or the cultural resources that were left behind by them.

185. Comment: Grazing Management. **The Bureau of Land Management is specifically charged with the management of Wild Horses in order to maintain an ecological BALANCE and multiple use relationship, yet the priorities established in this document place the management concerns for these animals below both livestock and wildlife to the extent of stating, "Public funding for rangeland improvements would be limited to riparian and wildlife habitat improvements on these (White River Resource grazing) allotments." (ppg 1, page 2-53) AUMs available for livestock grazing total 126,490; those available for wildlife (deer & elk) total 82,120; and those available for Wild Horses under the most generous of the alternatives, total only 4,800. Both Wildlife and Livestock are to benefit from habitat improvement, range augmentation, vegetation enhancement, adjustment for physiological and behavioral requirements, and restricted land use during sensitive periods. Proposed alternatives do not mention any of these management objectives for the Wild Horses. The concept of 'balanced, multiple use' appears to have been ignored.**

Response: Wild Horses, as yearlong users of the range benefit from virtually every implemented range improvement. They benefit most from water developments and any practice which enhances the quality and quantity of forage produced on their range. The impact of the above is described in Chapter IV, Impacts on Wild Horse Management: Implementation of improved livestock management systems and practices would benefit wild horses through enhanced rangeland productivity. Completion of physical range improvements such as water developments and vegetation manipulations would benefit wild horses by substantially increasing forage quality and quantity; and, by providing dependable water sources on a yearlong basis.

186. Comment: Grazing Management **Also in Chapter 4, under Impacts on Grazing Management, the discussed impacts from Wild Horses is as 'forage lost to livestock grazing' in all alternatives. Impacts from Big Game Management are listed as "a potential for overuse," and requiring "adjustment based upon monitoring with specific conflict areas." Logically, any increased utilization of forage by Wild Horses should affect BOTH livestock and big game to some degree, yet this is not addressed. Such statements are noticeably biased.**

Response: The commentor is referred to Chapter II, Description of the Alternatives, page 2-28, third paragraph which ends with "Increased forage needs for wild horses under Alternatives B and C would come from current livestock forage allocations within affected herd areas." The previous sentence addresses forage allocation for other Alternatives. In addition, the reader is referred to Impacts From Wild Horse Management on Plant Communities Management, pp. 4-33 and 4-34.

187. Comment: Wild Horses. **The Wild Horse and Burro Act of 1971 stipulates that management activities shall be carried out in order to protect the natural ecological balance of ALL wildlife species which inhabit such lands, without establishing a preference for deer and elk populations. This document clearly accepts the premise that deer and elk numbers are to be acknowledged without population control, with significant effort and funding devoted to their well-being, while ignoring the management responsibilities established by both the Department of Interior and the State of Colorado for Wild Horses and Burros on Public Lands.**

Response: The Wild and Free-Roaming Horse and Burro Act of 1971 does not consider horses as native, indigenous animals and does give priority to native, indigenous wildlife species in determining management levels for horses. It is evident in the Act that in those situations of competition for habitat, native, indigenous wildlife species are provided a priority in allocating forage and habitat. The State of Colorado, in consultation with interested parties, is responsible for determining population levels for all wildlife species indigenous to Colorado. BLM is responsible for providing habitat for the desired wildlife populations. In those situations where competition or conflict occurs between horses and wildlife, BLM is required to give preference to native wildlife in allocating habitat.

It is difficult to understand the notion that big game populations are subject to no intentional population control. Sport hunting of big game continues to be a conspicuous, effective and consistently applied form of annual population regulation that is developed and implemented by the State of Colorado. During the 1994 big game hunting season this resource area alone hosted approximately 16,000 hunters who killed an estimated 3500 mule deer and 1550 elk.

188. Comment: Wild Horses. **Without commenting on specific alternatives, although I favor increased emphasis on the enhancement of natural values on public lands, I am concerned that the issue of Wild Horse management has not been given adequate or objective consideration in this Draft Plan and Environmental Impact Statement.**

Response: Alternatives presented in the Draft provide an array of management levels and constraints that are both consistent with the 1971 Act and BLM's supplemental program guidance for land use planning. The fact that no alternative maximizes wild horse management to the exclusion of other resource(s) is consistent with two key elements of the Federal Land Policy and Management Act (1976). The first is that management decisions will be based on land use planning. All Alternatives carry forward parts of past land use planning decisions and these decisions recognized a diversity of both renewable and non-renewable resource uses. Secondly, FLPMA mandated that the public lands were to be managed under the principles of multiple use and sustained yield. The RMP Alternatives reflect this management and Alternative D, the Preferred Alternative is proposed as the one which best balances the variety of uses within WRRA.

189. Comment: Wild Horses. **Additionally, based on my interpretation of Public Law 92-195 and 43 CFR Ch. 11 Part 4700, I find no authorization for the total removal of Wild Horses or Burros from designated Herd Areas. If such exists, I would appreciate a copy of the applicable amendment, as well as answers to the following questions: 1) What is the disposition of a Herd Area from which all Wild Horses and Burros have been removed? 2) Does such an area retain its Herd Area status under the 1971 Act, or does it lose that status.**

Response: Herd Areas from which horses have been removed would retain their status as herd areas, assuring a record of potential wild horse distribution and allowing for future reestablishment of herds, should the present resource conflicts be eliminated (BLM Wild Free-Roaming Horse and Burro Program Guidance, 1/83).

190. Comment: Riparian Also, **the White River itself, the major riparian system in the area is wholly unprotected from further development, and the plan - the proposed plan must provide some level of protection for that riparian system, particularly for the more remote stretch below– downstream from Rangely.**

Response: Very little of the White River occurs on public land. Public land (950 acres) within a quarter-mile of the White River are within the White River ACEC (Table 2-53, page 2-81, Draft RMP/EIS). Protection of the riparian habitat within the White River corridor would be a principal objective to be considered in future management plans and development proposals.

191. Comment: Wild Horses. **It appears that the alternatives A, B, C and D were developed without a lot of regard from input from various wild horse advocacy groups. We were first invited to come to the RMP committee meetings in June of '94, after these had been developed.**

Response: Alternative C was developed primarily based on both the input and interest of the Colorado Wild Horse Coalition. This input was solicited and received at Colorado Wild Horse Coalition meetings of May 15, 1992, and September 10, 1993. At the May 15, 1992 meeting, considerable discussion occurred on the RMP, and this discussion centered on a handout summary of both the previous land use planning decisions concerning wild horse management and development of the WRRA as it specifically related to wild horse management.

192. Comment: Land Tenure Adjustments **I am writing in regards to a parcel of land listed for disposal in your October, 1994 area management plan. It is described in table I-1 as follows: Township 1 S., Range 94 W., sec 31, lots 3,4, 73.68 acres, applicable alternative A,B,C,D. I am the current permittee of this land, and in the event it is put up for disposal I would like to be given the opportunity to purchase it. It is a very important part of my own range management program, and I have invested much in fencing and water development on this piece of land.**

Response: Although exchanges are our preferred method of disposal, these lands meet the requirement for sale, and may be available for this type of disposal upon completion of the RMP. In the event of a land sale program, we will identify specific actions (e.g. direct sale versus open public bidding) through development of a sale plan. This will include soliciting public comments from adjacent land owners, current users, local government, and the general public. Consideration will be given to equities involving current use.

193. Comment: Wild Horses. **Some of the other things we have problems with would be historical and cultural significance of wild horses to our history here in the west have not been fully addressed or even noted in the RMP.**

Response: Please refer to Chapter III, page 3-22 of the Draft RMP for an accounting of the historical significance of the wild horses in this area.

194. Comment: Visual Resource Management. **There's no one here that specializes in or is an expert in visual resource management, so some of these things we feel are going to be up to the person individually that may not be an expert in the field of setting these stipulations in place for no surface occupancy or limited surface use, and they really don't have the qualifications to do these - to make these stipulations.**

Response: While there is no landscape architect in the White River Resource Area, there is expertise in VRM available in the office as well as available through other BLM consultation on an as needed basis. It is the policy of BLM that visual resource concerns in relation to a specific project, is the responsibility of the resource program that proposes or permits the project. A training program is available to all resource specialists who deal with on-the-ground projects and focuses on visual design techniques and how to soften impacts to the landscape through various methods. Stipulations are also the responsibility of the resource program that is proposing a project or projects with potential impacts to the visual landscape.

195. Comment: Motorized Travel. **We also feel that if the White River District is having some problem areas like with OHV use or during the hunting season with the weed control, we would prefer that they would start a CRM process to look at those problem areas so that instead of putting a blanket limitation over the whole area, you will address specific areas so that we can kind of keep those workable and we can use multiple use and multiple users to take care of those problems.**

Response: The Travel Management Plan to be completed after the RMP will incorporate public and OHV users comments and concerns. The plan will be a public process and incorporate a work group similar to a CRM process.

196. Comment: T/E Species. **The Piceance has a wealth of rare plants. Please protect these and other rare, threatened and endangered species, as well as non-game wildlife!**

Response: Chapter II of the Draft RMP/EIS identified alternative management levels to protect rare and T & E species. Chapter IV identified the impacts of each management level. The Preferred Alternative (Alternative D) provides the highest level of protection for these species while at the same time providing opportunities for development on use of resources without impacting these species.

197. Comment: Motorized Travel. **If we have private funding for legal fees, what would be the BLMs stand be on a new court case concerning the special privileges granted to Keystone Ranch? The special travel granted to them seems to set a double standard, which is contrary to the belief that all Americans are equal, at least concerning use of our public land. This is suppose to be public land and we are fed up with going fishing, hunting or dirt biking and turning a corner to find a locked iron gate bought with our tax dollars.**

Response: The Bureau is not in a position to take this action. The owners of Keystone Ranch are only allowed to use vehicles on public lands for bona fide ranch related operations. BLM has 2 locked gates in the Keystone area of the White River Resource Area mandated by the courts. The other locked gates are on private property.

198. Comment: Riparian. **In addition, some attempt must be made to repair the damage that has already occurred to riparian**

environments. One practical measure might be to foster the beneficial work of beavers. However, in many cases, the landscape damage has exceeded the ability of beavers to restore; and man-made check dams must be constructed to catch the sediment and replenish the water table, so native trees may grow again. I suggest that BLM require some of this work as a condition of their grazing contracts.

Response: The use of beavers and man-made check dams to restore riparian habitats are management decisions that would be best addressed in a site specific analysis through an Integrated Activity Plan. Not every stream system is capable of supporting beavers nor has use of man-made structures proven successful. It would not be wise to recommend both for every riparian area in the Resource Area.

199. Comment: Roads. **Roads represent another major threat to streamside habitat. I support the rehabilitation of unnecessary streamside roads, and I think it should be a matter of policy to prohibit any new road construction alongside streams that have so far avoided this fate (assuming there still are any).**

Response: Under the Proposed Management Plan, riparian habitats would be protected from disturbances such as road construction.

200. Comment: Right-of-Way Corridors. **In Alternate D, the BLM has proposed the outright elimination of approximately one-half of the designated major rights-of-way corridors in the Resource Area. Conoco believes that it may be premature to eliminate any of the corridors until such time as the hydrocarbon resources of the area have been completely defined. It is possible that future gas reserves may be identified in the area which will be undevelopable due to lack of marketing outlet. In the interim period, Conoco recommends that the BLM eliminate only those corridors which would adversely impact threatened and endangered species.**

Response: Designation of corridors is a tool used to identify where the siting of future facilities is preferred, enhancing efficiency in processing applications. Most corridors currently designated are not for roads, and eliminating some corridors will not effect traffic levels or safety. Right-of-way corridors are intended to be preferred routes through the Resource Area for major linear rights-of-way. This generally includes large transmission lines (powerlines and pipelines) which enter the Resource Area in one location, pass through the Resource Area, and leave in another location, but may also include similar facilities which start in the Area. Over the past ten years, and with minimal exceptions, the major transmission facilities constructed in this area have utilized the corridors identified in Alternative D. These corridors lead from the Resource Area to known and anticipated destinations, and are expected to be sufficient for future needs throughout the life of the plan. Electric distribution lines, oil/gas gathering lines, and routine access roads are not normally included in an analysis of planned corridors. These rights-of-way are sited in a manner that is dependent on the location of the facility which they serve. Planning formal, designated corridors for all possible scenarios would be futile. The categorization of land as open, avoidance, or exclusion areas will govern the placement of such rights-of-way in the Resource Area. The Draft RMP identifies 64% of the Area as open. Only 13% is identified as avoidance areas (where rights-of-way are not precluded), and 7% is identified for exclusion (where facilities which need to be serviced by rights-of-way are themselves excluded). No change has been made from the Draft.

201. Comment: Minerals. **The RMPs merits should not be discussed with industry in just 4 short hearings. The committee or team that constructs the RMP should include contracted experienced and recognized petroleum industry consulting petroleum engineers, landsmen, geophysicists, geologists, planners, and field supervisors to work with the existing environmental specialists that were used. The scoping statement was not sent to AA or its predecessors.**

Response: At the beginning of the scoping process, all active oil and gas lessees and operators conducting operations in the Resource Area were sent scoping news letters identifying that the process was beginning and requested comments on scoping issues. Representatives of the oil and gas industry were part of a workgroup initiated to help the BLM develop a range of alternatives for the Draft document. Numerous meetings were held with oil and gas industry representatives to gather data on the Reasonable Foreseeable Development Scenario and economic analysis contained in the Final document.

202. Comment: Minerals. **Under "Special Management Areas", the RMP lists the steps that would define an Area of Critical Environmental Concern (ACEC) designation under Alternative D. This designation is "bad news" for any oil and gas company and if AA attempted to increase leasehold in the RMP area, AA would be subject to these. An ACEC for the Soldier and Trail Canyon Area has been RMP recommended that includes almost all AA leasehold. The ACEC designation would significantly reduce the value of this producing property. The federal government should have to compensate AA for any loss of value (50% est.).**

Response: The Soldier Creek and Trail Canyon areas possess steep slopes and fragile soils. The cost of construction and reclamation in these areas would be higher than in areas without these problems. Therefore, the addition of an ACEC designation for this area will not significantly increase the cost above what would occur without an ACEC designation.

203. Comment: Land Tenure Adjustment. **Under "Land Ownership Adjustment" (pg. 3-42) there is a discussion how land is going to be traded with the private sector to increase the density of either private or federal land ownership. This would effect our White River Dome production area.**

Response: Land exchanges are opportunities that are difficult to accomplish. They are generally used sparingly to acquire parcels which will provide important resource values. On an overall basis, the resource values to be acquired must outweigh those to be disposed of. Where important mineral values are known to exist, the exchange may be denied. In some instances, where resource values warrant, the mineral estate can be reserved, and the surface estate conveyed subject to the rights of prior lessees to continue to use the surface without compensation to the patentee. At any rate, it is the Bureau's policy to provide all known users, including mineral lessees, with an opportunity to comment on exchange proposals.

204. Comment: General. **The management concerns in Table 1-5 were not fully discussed or analyzed with respect to each RMP alternative nor any cost/benefit studies conducted.**

Response: BLM Manual 1612 Social and Economic Guidance for Resource Management Planning does not require a formal benefit cost analysis. In general some of the benefits from the plan are non-

market type benefits and are difficult to measure while some benefits are exchanged in the market place and can be measure by observing the market.

205. Comment: Surface Water. **Table 2-4, pg. 2-5 under "Perennial Streams Not Meeting State Water Quality Standards" states the White River below Meeker to Utah does not meet official standards. It can be demonstrated, however, the river suffers natural pollution from huge area exposure to drainage from the saline Mancos Shale Formation outcrop. This area is mostly unvegetated.**

Response: The comment is stated in the affected environment, on page 3-6, top line. When a streams water quality can not be improved because of natural conditions beyond BLM's control, it is BLM's intent to protect the stream from further development caused degradation.

206. Comment: Minerals. **Map 2-1 shows the Trail-Soldier Canyon area falls in a "fragile water shed." (Probably why this area is considered for an ACEC.) Map 2-3 shows AA's White River Dome and Soldier-Trail Canyon producing areas to be considerably impacted by Alternative D, NSO lands. We vigorously protest. AA will have to drill expensive deviated wells to produce the gas under these lands. Map 2-5 shows the same two producing areas where the lands are designated CSU stipulation. These lands cover a tremendous area and would likely increase under any new RMP. Map 2-6 shows the areas that have high oil and gas potential on BLM lands. Nearly all of AA's two producing areas are included. Additional development drilling may be halted altogether.**

Response: The designation of drainages as "fragile watersheds" are merely a planning tool for the soil, water and air program and in no way attaches additional stipulations to oil and gas leases, Table 2-53 of the ACEC Proposals, states reasons for Soldier Creek designation as being habitat for sensitive plants, remnant vegetation and Colorado cutthroat trout.

207. Comment: Minerals. **Map 2-11 shows a number of areas in our White River Dome development area having "special status plants". Map 2-17 documents the eligible segments for Wild and Scenic Rivers. It includes portions of Cathedral Creek and East Douglas Creek lying in AA's Soldier-Trail Canyon Area. Again, these designations would potentially devalue our Trail-Soldier Canyon property area, because it would involve increased regulation. Map 2-19 shows the Soldier-Trail Canyon area designated ACEC.**

Response: Designation of an ACEC to protect and to place more management emphasis on rare species does not preclude development within those areas. There may be occasions where new developments may require relocation or modification to avoid impacts to these important rare species. These designations are likely to have no affect on existing developments. An economic analysis of increased regulations will be included in the Final EIS.

208. Comment: Minerals. **The BLM states on page 4-10 that "oil and gas development would result in the following impacts on water quality and quantity...Contamination from produced water which may contain high concentrations of salts, heavy metals, and aromatic hydrocarbons." This statement is false. RCRA regulates disposal of non-hazardous oil and gas produced water. These produced waters are not a threat to the environment. Produced water which contains hazardous substances is regulated by CERCLA. Oil and gas operator must dispose of hazardous wastes in compliance with several statutes and EPA regulations which guarantee that contamination of surface waters will not occur. This statement by the BLM misleads the public and demonstrates an unfamiliarity with oil and gas operations.**

Response: The summary of impacts listed on page 4-10 of the Draft RMP are impacts that could happen as a result of oil and gas development and certainly does not mean that they will occur. The text will be changed from "Oil and gas development would" to "Oil and gas development could result in the following ..." to reflect that.

209. Comment: Minerals. **The RMP states on page 4-49 that continuing to develop oil and gas at the projected rate would reduce the amount of woodlands harvested by 60% in the Douglas Arch and 16% in the Piceance Basin. It does not say how these estimates were arrived at and merely states these estimates as fact.**

Response: Obviously any interpretation on impacts is an estimate. Impacts to woodlands were projected/estimated by overlaying actual oil and gas development programs with the USFWS surface vegetation cover classification using a Geographic Information System. This gives a very accurate analysis of impacts. This information was considered as a sample of expected impacts within areas of similar vegetation, topography and development potential. We then used the reasonable and foreseeable projections for oil and gas development to estimate the impacts to woodlands by each alternative. Text has been changed to show impacts as estimates.

210. Comment: Minerals. **Page 4-134 discusses the impacts of oil and gas on increasing the number of roads available for recreational opportunities. Oil and gas roads are generally excluded from recreational use. Ironically the BLM tries to get these roads opened for recreational use. But the RMP implies oil and gas development creates a "multiplier effect" by causing increased recreation.**

Response: Many old and new oil and gas roads are open to public use and generally are not closed to the public. These roads provide increased vehicle access into many areas of public land. There is no implication that increasing the number of roads actually increases recreation use. These new roads merely provide increased vehicle access for a variety of recreation opportunities. The dramatic increase in roads also has the impact of reducing and in some cases eliminating certain recreation opportunities and resulting experiences on the primitive end of the recreation opportunity spectrum. Recreation experiences associated with activities such as: backcountry backpacking, hiking, camping, horseback riding, etc. are adversely impacted with the loss of recreation settings toward the primitive end of the recreation opportunity spectrum.

211. Comment: Economics. **Clearly any significant regulatory increases to these practices would create considerable additional overhead costs. The RMP is not clear what specific additional best practices are included for Alternative D.**

Response: All of Appendix A (excluding changes resulting from comments) will be carried forward in the final RMP. However, the conditions of approval will be utilized on a case by case basis. Only those conditions that are identified through analysis as necessary to reduce impacts, will be attached to a given proposal.

212. Comment: Motorized Travel. **We are against these Alternatives because of "designated road and trail" language and designations made without public input.**

Response: The sections dealing with travel management in Alternative 2, have been changed. Please refer to the Motorized Vehicle Management section of Chapter III in this document.

213. Comment: Motorized Travel. **Even an "existing road and trail" clause would be a major step backwards in maintaining our present rights and freedoms. Any problems can be addressed on a case by case basis, with public input.**

Response: Alternative D has been revised, and the limitations have been altered. Closures would occur only in WSAs, Moosehead Mountain, and Oak Ridge. Known sensitive areas would have limitations to confine travel to designated roads and trails, or existing roads and trails year-round. The major portion of the Resource Area would be open from May 1 through September 30, and limited to existing roads and trails from October 1 through April 30. These are interim designations and will be in effect until completion of an area Travel Management Plan. That plan will completed using public input.

214. Comment: Riparian. **Alternative A with 50-75% of riparian habitats in non-functioning condition is absolutely unacceptable. The other alternatives, with only 25% non functioning, are an obvious improvement, although that is still a substantial number. If there were less leasing, these areas would be improved even more.**

Response: As noted in Table 3-14 (page 3-16, Draft RMP/EIS), only 15% of the Resource Area's riparian habitats are non-functional, not 50-75% as suggested by commentor. The management objectives listed in Table 2-27 (page 2-39, Draft RMP/EIS) provide sufficient guidance to protect riparian habitats and still provide opportunities for leasing.

215. Comment: Grazing Management. **Regardless of the number of AUMs, it is imperative that range health be maintained and overgrazing be strictly controlled. Administrative procedures to determine range health should be pursued vigorously.**

Response: Criteria to evaluate rangeland health is listed in Table 2-17, page 2-20, Draft RMP/EIS.

216. Comment: Cultural Resources. **In order to protect valuable paleontological, historical, spiritual and cultural resources, we recommend the adoption of Alternative C which has a larger acreage with no surface occupancy stipulations. Any other administrative restrictions at the agency's disposal should also be applied to identify and protect these resources.**

Response: Historic preservation laws were never intended to totally prevent utilization of this country's lands and resources. They were merely intended to ensure that the resources are given full consideration before development takes place. If development is to take place fine, but there is a price that must be paid, in time and dollars to record, to the maximum extent that technology permits, to gather as much information as possible about the past, be it fossils, paleoenvironmental conditions or prehistoric peoples. Under the American Indian Religious Freedom Act and the Native American Grave Protection and Repatriation Act federal agencies have a method of protecting certain sites; but they must be identified by the appropriate Native Americans first, it is not intended that these laws be used to "lock up" vast tracks of lands because something might be out there. Alternative C may seem desirable from an overall environmental perspective, including historical, spiritual and cultural resources but, it will not provide absolute protection for these resources. The RMP addresses all laws, regulations, and policies applying to identification, protection, and appropriate use of paleontological resources on BLM public lands.

217. Comment: Motorized Travel. **At the public comment meeting in Meeker at the BLM office there was some discussion of the drafts plans A, B, C and D. It was stated that D would be an in-house decision as to which trails and roads would remain open and all others would be closed. With no other recommendations from hunters, ranchers, oil and gas, OHV, etcetera as to what was known to exist and be used by them or others.**

Response: Except for wilderness study areas and emergency situations, formal road closures will be determined through preparation of a travel management plan after completion of the RMP. A coordinated resource management approach will be utilized, which will provide for public input on road designations.

218. Comment: Motorized Travel. **Travel signage within an open area (Alternative A) would be an effective way to address problem areas. The usage in the area could be directed. Furthermore funding is available currently from a number of sources for those who promote the multiple use concept. Funding can be obtained for parking lots, signage, maps, trail construction and repair, rest rooms, etc. It seems more likely to get funds that are available by showing the need and desire to promote the multiple use concepts, then "as the money becomes available" approach you have suggested.**

Response: Signing areas is only a part of travel management. Without a formal designation, we have no justification for posting. There are too many individuals who know areas are "technically" open, and so they ignore the signs, or destroy them. We appreciate the fact that there are funds available for signing, and for OHV related facilities. However, we would disagree with the implication that not leaving the entire area open to unlimited use by OHVs is inconsistent with the principles of multiple use management.

219. Comment: Reclamation Seed Mix. **The assumptions made regarding the use of non-native plants for reclamation (4-30) require careful consideration. The statement the "non-native plants do not pose any significant threat of expanding onto and replacing native species in untreated areas" can not be accepted without supporting evidence. In fact, research has shown that non-natives can and do replace natives (Holecheck et al., 1981). In addition, the claimed benefits of non-natives are not valid in light of recent research.**

Response: Except for smooth brome and yellow sweet clover on some soil types, the statement concerning non-native, naturalized reclamation species listed in Table A-1 is accurate for past treatments in the Resource Area. Other species that potentially could present problems are alfalfa and orchard grass. However, used on arid sites, both species have been relatively short-lived due to increased palatability for livestock and big game animals. As noted on page 4-37, past management practices have used the non-native, naturalized species listed in Table A-1, Appendix A, on over 40,000 acres of public land. Familiarity and observations made on many of these past treatments, does support the statement of no significant threat to

untreated native plant communities from use on non-native reclamation species on adjacent sites. This does not say that these species would not invade onto untreated sites, which some do. It just states there is decreased danger from proposed non-native species on adjacent untreated sites. In fact, observations of old treatment sites, many approaching 30 years old, are showing evidence of native species increasing in dominance and non-native species disappearing from the treatment area.

The acreages of reclamation utilizing non-native reclamation species is a worst case estimate. A considerable amount of the proposed use of non-native species would be on sites currently invaded by exotic annual species as identified by commentor. Non-native species to be used in reclamation are perennial species possessing abilities to compete with exotic annuals as noted on page 4-30, Draft RMP/EIS. Increased emphasis is placed on use of native plant species within the Resource Area through this document. As noted on page 2-23, only native species would be used in the Blue Mountain/Moosehead GRA and encouraged on all rangelands and grazable woodlands not threatened by establishment of exotic or noxious plant species. A site specific analysis required for any disturbing action would be completed following completion of the RMP and would evaluate the use of non-native, naturalized species in reclamation actions. The objectives outlined in the RMP for soil management are to minimize loss of soil and loss of soil productivity (page 2-3 and Appendix A). Use of non-native species is one tool for accomplishing these objectives under specific guidelines noted on page 2-23.

220. Comment: Grazing Management, **Treatments to vegetation are very expensive, and are not always beneficial. I would ask that if AUM permits change hands (Base properties sold etc.), that each of these be looked at to benefit wildlife also. This may include changing AUM numbers.**

Response: Ownership changes in base properties provide a preference to the new property owner in re-issuance of a grazing permit. BLM cannot withhold issuance of a grazing permit or re-allocate livestock forage to another use just because ownership of a base property occurred. As noted on page 2-57 of the Draft RMP, sufficient forage has been allocated for big game wildlife to sustain existing populations. There are a few areas where wildlife forage quality and quantity can be increased by treatments to provide improved seasonal nutrition or increased forage on localized wildlife concentration areas. Most treatments proposed are habitat quality improvements as opposed to treatments designed to increase forage availability to support inflated wildlife populations.

221. Comment: General. **I have tried to read and understand the Draft Resource Management Plan dated October 1994 and have had very little luck in doing so. It is the most confusing and misorganized piece of trash I have ever read. I feel that the Department of Interior is on the wrong road in representing the concerns of the American Citizens and are catering to a very few radical environmentalist.**

Response: We have endeavored to make the Final document more concise and more easily understood. The BLM is not catering to radical environmentalist any more than it is catering to radical developers. Decisions arrived at in the Final document are based on professional judgement, credible science, and input from all segments of the public.

222. Comment: General. **I would like to see a paragraph in the beginning of the book stating that this RMP will not in any way effect or be considered mandatory on any private property, and that it will not infringe on any preexisting rights, including but not limited to the Taylor Grazing Act).**

Response: The first paragraph on page 1-3 of the Draft document states "The decisions arrived at in the RMP will apply only to those lands and minerals administered by the BLM and to the Navel Oil Shale Reserve Lands if the U.S. Congress passes a pending bill to transfer administration of Navel Oil Shale Reserve 1 to BLM." Those valid existing rights that exist on the public lands will not be affected by the decisions of this document. However, that does not mean that those valid rights may not be affected by future laws and regulations passed by Congress and administered by the current or future administrations.

223. Comment: General. **I do support the multiple use concept and feel it needs to be continued. Wildlife, recreation, wild horses, and the endangered species seems to be your main concern, and it seems that all of your alternatives are to their benefit at the expense of the existing permitted uses.**

Response: Wildlife, wild horses and endangered species have been given increased emphasis in this planning document as compared to past land use plans. However, not at the expense of permitted uses as suggested by commentor. These animal and plant species have co-existed with existing livestock uses for over a century and will do so in the future. Existing livestock grazing levels would remain the same under each alternative considered (page 2-51 through 2-54, Draft RMP/EIS). The increased emphasis placed on wildlife, wild horses, and endangered species is to ensure they continue to co-exist with existing uses.

224. Comment: Grazing Management. **I prefer alternative D as A, B, and C are not acceptable in their present form. The first paragraph under livestock grazing management on page 2-53 should be changed to reflect, that all permits regardless of allotment categories should have access to public funding to be used for improvements. The Public Funds should not be limited to riparian or wildlife habitat improvements.**

Response: Allotment categorization is used to place allotments in a management needs priority, including rangeland improvements needed to enhance livestock management. Custodial category allotments are lowest priority and probably would not receive any of the limited funding available for livestock improvements, but are not exempted from receiving such funding. A change will be made in the final RMP which will identify custodial category allotments as lowest priority for public funding for livestock management enhancing rangeland improvements.

225. Comment: Water Rights. **The BLM should continue to file for water rights under current "Colorado Water Laws" if they are 100% owners of the improvements, if they are not, the water right should be tied to the permit with the permittee owning the percent in which he invested.**

Response: The White River Resource Area must follow nationwide BLM policy on water rights. This policy directs field offices to acquire water rights on BLM sources which support livestock uses, and insure that this water is available for multiple use purposes. The reason for this policy is that livestock water sources often serve other uses which are not a part of the grazing permit, such as wildlife watering, wildlife habitat, and recreation. Just as with other range improvements, permittee investments in water developments are recorded for reimbursement should the permit ever change hands.

226. Comment: Water Rights. **Page 3-7 Water rights; the second paragraph should be deleted.**

Response: This paragraph has not been deleted because it explains the origin of BLM's reserved water rights on springs.

227. Comment: Water Rights. **Page 2-6 Water rights management. Delete the last sentence in regards to obtaining senior water rights for in stream flows. The water rights do more for the ecosystem being in the private sector.**

Response: Colorado water law expressly provides for the donation, lease, or acquisition of senior water rights by the Colorado Water Conservation Board for the purpose of improving the seniority of instream flows. The White River Resource Area has observed that the junior priority of many instream flow rights are not capable of providing even the most basic ecosystem protection for streams. Therefore, BLM may lease water rights acquired from willing sellers or donors to the Water Conservation Board. This approach allows water rights owners to manage their private lands as they see fit, which includes the option of using the water right for instream flows.

228. Comment: Motorized Travel. **Off road vehicles use should be restricted to lessen the threat of the spread of noxious weeds and the erosion of fragile soils, but it should not limit access by managers of the resource, they must have this access to control the weeds and to manage the resource.**

Response: Off highway vehicle limitations would provide for authorized uses including that necessary for noxious weed management.

229. Comment: General. **Repetitively, including at the public meeting of February 4, 1995 individuals and citizens have expressed their concerns verbally and have been told by employees of the BLM that they must submit their comments in writing. The meeting of February 4, 1995 was an official meeting advertised by the enclosed invitation and also advertised in the Saturday Northwest paper. At the meeting of February 4 Joanne Graham, the BLM team leader stated at that meeting that the meeting was not a "Official" meeting. It is inconceivable that a meeting called by the agency as a "Invitation to attend a second round of public meeting" could be deemed unofficial.**

Response: The BLM planning regulations require that a public meeting be held to receive comments on draft resource management plans or plan amendments. The public hearing forum, in which a recorder is present to take verbatim testimony, is not a requirement, but was chosen in this case to provide an option to the public for providing comments. Public hearing meetings were held in Meeker, Denver, Grand Junction, and Rangely. Because of comments received at the hearings in Meeker and Rangely, additional public meetings were held in Meeker, Rangely, and Craig. Separate meetings were also held with OHV and oil and gas interests to help clarify both the BLM position and the wording contained in the Draft plan decisions. A public meeting is just that, a meeting open to the public. Whether or not a meeting is "official" really has no bearing on any of the meetings that have taken place in regard to this RMP.

230. Comment: General. **A recent brief overview of the Draft RMP/ EIS indicates that several Electric Utilities were not included in the contact/distribution list under Consultation and Coordination. The following is a list of utilities that have facilities within the scope of the RMP that could be affected; White River Electric, Moon Lake Electric, Yampa Valley Electric, Tri-State Generation and Transmission.**

Response: These companies have been added to the distribution list.

231. Comment: Motorized Travel. **The BLM says in the Draft that we OHVers are tearing up the land. Obviously you have never seen how much damage is done by putting a chain between two bulldozers just trying to get rid of the sagebrush? There is so much natural erosion that happens with just wind and rain. I don't believe it is fair for you to say that OHVers are causing the damage without proof.**

Response: While it is true that erosion occurs naturally, surface disturbing activities tend to accelerate erosion. There are, indeed, many ways to create surface disturbance, and OHV use is definitely one of them. The presence of 4 to 6 inch tire tracks on a muddy hillside, or through a pond or riparian area are strong indicators that OHV use has occurred. Examples can be found throughout the White River Resource Area.

232. Comment: Roads. **You say that there is excessive roads in some areas, these areas being around oil fields. Which you the BLM has allowed this to happen not the OHVer.**

Response: Many roads are created around oil fields. These roads are normally planned, and permitted. The approvals for these roads contain stipulations requiring maintenance, and reclamation upon termination of the project. Several roads are, however, created by off-road OHV use, particularly during hunting seasons. This use is not planned, and is not subject to any requirements for maintenance or reclamation. Planned and permitted roads can be routed to avoid sensitive resources, unplanned roads and trails cannot.

233. Comment: Noxious Weeds. **We are concerned about having to wash rigs, pickups, and equipment (backhoe, dozer, and motorgrader) every time they move from our yard in Rangely to our locations in Cathedral Creek, etc. While none of our equipment is permitted by BLM at this time, I am concerned about the future. I don't have a problem with washing our equipment to construct pipelines on right of way as long as I can just do it rather than wait and have it witnessed by BLM personnel.**

Response: If your yard in Rangely was noxious weed-free then there would be no need for you to clean your equipment every time it left the yard. Our primary concern is the transport of noxious weed seed from existing infestations which are primarily outside of Rio Blanco County. BLM personnel need not be present when you clean your equipment. The Cathedral Creek Area is not included in our proposed weed free zones. However, Rio Blanco County has this requirement for permitted activities throughout the county.

234. Comment: Noxious Weeds. **I request that BLM allow us to use chemical sprays that you can buy over the counter. We can use weed killer in our house or yard so why not? The present requirement that only "certified" people can kill weeds is a bit extreme. This ties into planting these well pads and lease roads with grass. I think this makes some sense in light of the forage deficit in the Cathedral Creek area. Especially since the regulation to not be able to spray weeds ourselves forces us to motorgrade more than we would like and is very expensive. This leaves these roads and well pads without any vegetative cover for feed or soil stabilization.**

Response: Your point is well taken that it would be beneficial to revegetate as much of a disturbed area as possible, thereby avoiding the need for excess motor grading. Individuals applying herbicides on Public Lands do not all need to be certified, but they do need to be under the supervision of an EPA certified applicator.

235. Comment: Use Authorizations. **BLM also needs to implement revised guidelines that would allow companies to secure rights-of-ways and easements in a timely manner. In our opinion, the Preferred Alternative calls for more oversight and regulation on resource users, when the BLM should consider management alternatives that would reduce oversight and regulation.**

Response: Over the past few years, we have streamlined the process of issuing rights-of-way. Our current goal is to process rights-of-way to completion within 30 days, and while manpower constraints may sometimes keep us from meeting this goal, we usually do.

236. Comment: Minerals. **Congress has already set aside acreage deemed significant on a national basis to preserve unique resources found in Northwestern Colorado and BLM has had an opportunity to declare Wilderness Study Areas under FLPMA. The attempt by BLM to informally "withdraw" lands from resource users by increasing no surface occupancy stipulations on oil and gas leases from 19,750 acres to 148,450 acres under Preferred Alternative is objected to and is not necessary. The RMP should limit access to sensitive areas by special stipulations, not complete exclusion of areas using the NSO stipulations.**

Response: NSO stipulations do not "withdraw" lands nor require the "complete exclusion" from areas. Most of the NSO areas are the result of congressionally passed laws, designed to protect a specific resource. As long as activities can occur without impacting those resources, the activity may proceed. That is the reason the stipulation has the exception, modification, and waiver language.

237. Comment: Motorized Travel. **The first and foremost problem I have with this alternative, is that the people in Rio Blanco Co. that use BLM land for off road vehicle use were not consulted at all when the alternative was being considered.**

Response: BLM solicited public comments and conducted public scoping meetings at the beginning of the planning process in June 1990. The public was invited to participate in a RMP work group at that time. The Draft RMP presented another opportunity for public input and as a result of public comments, the Preferred Alternative as it relates to motorized use has been modified. There will be additional opportunities for public involvement as specific activity plans, such as the travel management plan, are completed after the final RMP. The BLM planning system is dynamic and the RMP is only the beginning of the public input process.

238. Comment: Wild Horses. **I've always been aware of a hostility towards the Wild Horses coming from the Meeker BLM, and this hostility should not be allowed to enter into the RMP. The Wild Horses were there in 1971 and should be allowed to continue occupying these areas. I'm against any Herd Areas being zeroed out to accommodate forage for other uses. There needs to be a balance created which includes the Wild Horses. You wouldn't consider eliminating livestock or wildlife, so why should horses be eliminated. All HMAs and Has should be managed to include Wild Horses. Further, I object to any HMA as a refuge for "older predominately male un-adoptable horses." These geldings do in fact disrupt band integrity and may introduce disease which could be acquired in circuitous route from capture to adoption pens to the correction industry, etc. Additionally there is no legal precedent or mandate for eliminating ("zeroing out") horses in a herd area, although BLM has seen this accomplished in three areas within the last two decades. In the Craig district horses were entirely removed by 1980 from Douglas Mountain (Little Snake Resource Area). Wild horses between Highway 40 and Highway 64 along the old Staley Coal Mine Road (Hatch Flats - Redwash and Scullion Gulch) remained until 1978. The Naturita area also represents an area where horses have been totally eliminated within the last decade.**

Response: In reference to "I'm against Herd Areas being zeroed out to accommodate forage for other uses", we assume that you are referring to Wild Horse Management, Alternatives A, B and D, which indicate removal of horses from the North Piceance and West Douglas Herd Areas. In Alternative D, the Greasewood portion of the North Piceance Herd Area would be added to the existing Piceance- E. Douglas Herd Management Area. So that there is no misunderstanding, wild horses are not proposed to be removed from these two areas to accommodate forage for other uses, but rather because of management conflicts that have occurred and continue to exist. In the case of the North Piceance Herd Area, the rationale for removal of wild horses is that our management is constrained by the fact that all perennial water sources are located on private lands. Past planning decisions, the 1980 WRRA MFP, the 1981 WRRA EIS on Grazing Management, and the 1985 Piceance RMP all used this manageability criterion as the basis for determining the Preferred Alternative. The present Draft RMP cites the same rationale and does so particularly because the 1971 Wild and Free-Roaming Horse and Burro Act, Section 4, provides that owners of private lands can request removal of wild horses using their lands and BLM is obligated to take action to correct the situation immediately. We do not feel it is prudent to recommend this area for wild horse management over the long term. In the case of the West Douglas Herd Area, the basis for past planning decisions and the Preferred Alternative of this RMP that calls for removal of horses from this area is again, based on the issue of manageability. Lacking physical barriers on the south and west boundaries of the Herd Area which would prevent their movement, wild horses have dispersed to areas which they did not inhabit at the passage of the 1971 Act. The location of horses outside the Herd Area contradicts Section 10 of the Act and BLM Manual Planning guidance which states, "Herd management must be implemented with the objective of limiting animal distribution to areas inhabited in 1971". The primary cause of this movement in the past and at the present is the intense oil and gas exploration and development that is occurring throughout the Herd Area. The "balance" prescribed by the 1971 Act and FLPMA is the basis for emphasis on management of wild horses in the Piceance- E. Douglas Herd Management Area as described in Alternative D of this plan.

239. Comment: Motorized Travel. **We would like to add that unmaintained trails should be off-limits to all vehicular traffic except for lease maintenance, and should be restricted to dry weather use whenever possible.**

Response: Closures and limitations will be made based on several factors. The reason for the road having been constructed, and our ability to maintain the road are two of the considerations, but will not necessarily be controlling. Some development-related, or unmaintained roads may form key links in accessing areas that were previously inaccessible. These factors will be reviewed as a part of preparing travel management plans with public input.

240. Comment: Access. **In areas where private land owners have cut off access to public lands, please make it a policy to take the initiative and close the roads leading out the back gate of their land. They do have the right to control access across their land. Likewise the public has the right to control access across its land and you represent the public.**

Response: We cannot make such a policy. Road closures need to stand on their own, based on resource-related, and land management justifications. We would point out that private land owners are members of the public too.

241. Comment: Roads. **The biggest single impact of oil and gas development is less the drill pads themselves than the roads servicing them and the soil erosion, the access to the landscape for abusive activities, and fragmentation of wildlife habitat and migration routes that they represent. We are not aware of any areas where such roads have been effectively closed, since they must be built to fairly high standards to accommodate heavy equipment and cannot be rusticated easily or cheaply. The question of what future liabilities oil and gas development poses for BLMs road maintenance/closure budget is not addressed in the management plan, to our knowledge.**

Response: Roads related to oil and gas activities can be effectively closed and reclaimed. Through conditioning approval of such activities on maintenance and successful reclamation, the Bureau's budget for these activities should not be affected by oil and gas developments.

242. Comment: Air Quality. **The Sierra Club therefore supports, as far as it goes, the proposal in alternative D to put 13 potential air pollution sources on BLM land near the Dinosaur National Monument into the State of Colorado's visibility program. However, we also believe that views from the top of the Douglas Creek Arch, e.g. from Oil Spring Mountain, are a significant scenic resource and should be monitored for decrements in visibility.**

Response: The Bureau would consider adding additional scenic vistas to the list for State of Colorado permitting analysis, provided the commentor supplies the vista's location and visual significance as described in Table 2-1.

243. Comment: Visual Resource Management. **Similarly, we protest the Oil Spring Mountain WSA Class IV designation. Despite historic oil and gas development and visible drilling pad scars, the landscape is still not visually dominated by such human impacts and should not be allowed to become so, as some sort of "visual resource sacrifice area".**

Response: The entire Oil Spring Mountain WSA is classified as VRM Class II. It is difficult to see this on the small map in the RMP document. The boundary of the VRM Class IV area borders the northern boundary of the Oil Spring Mountain WSA. Oil and Gas development activities can and will be allowed to dominate the landscape in the VRM Class IV area between Rangely and Oil Spring Mountain.

244. Comment: Soils. **Given the obvious erodible soils problem in most areas of the WRRA, and the difficulty of restoring vegetation on them, the only responsible action is to keep soil disturbing development off them. Therefore, we are obligated to support alternative C as a de minimis attempt at proper surface use restrictions.**

Response: BLM's role as a land management agency is clearly multiple use oriented under the Federal Land Policy and Management Act (FLPMA). It is BLM's responsibility to provide for public uses in demand (recreational, mineral extraction, and agricultural), therefore, Alternative D best balances the renewable and nonrenewable resources uses, avoiding serious and/or permanent impairment of the land's productivity or environmental quality.

245. Comment: Watershed. **We specifically support adding WAPs for all the watersheds and acreages proposed in alternatives A, B, and C. We are specifically familiar with the condition of the Stinking Water Creek, Evacuation Creek, Bull Canyon, Willow Creek, and Douglas Creek watersheds because they are located in or near wilderness study areas. Unfortunately, the best management practices that are supposed to apply to these fragile watersheds in Appendix A do not appear to include those for livestock grazing, by far the most important human use in many of these watersheds. Watershed activity plans MUST address this use in the most serious possible way if any progress is to be made.**

Response: The livestock grazing BMPs occur on page A-11 of Appendix A in the Draft RMP. Watershed activity plans will be incorporated into the Integrated Activity Plans (IAPs) that will commence upon approval of the Final. All USGS, including livestock grazing, will be included in the IAP process.

246. Comment: General. **We also support the BLMs proposed formation of an "...association of public lands users..." to give the agency advice on such plans. It is not clear how this advisory apparatus would be constituted, and what its purview would be, but we hope that the deliberations of such a body would not be used as an excuse by the agency to delay obvious remedial actions.**

Response: Details on how this association would function have not been developed at the time.

247. Comment: Ground Water. **Regarding ground water protection, the one issue that does not appear to be addressed in the four similar alternatives is the protection of ground water resources from the kinds of problems with oil and gas drilling that have occurred on leased Federal lands in the Four-Corners area.**

Response: BLM has regulations and requirements for the proper methods to use during well completion and at the time the well is plugged and abandoned. These requirements are adequate to protect shallow aquifer systems if the procedures are diligently followed. The BLM inspects all plugging and some completion procedures in this area to insure the requirements are followed. It is not known if wells on private or state owned minerals on adjacent lands are inspected.

248. Comment: Noxious Weeds. **However, we do not support the careless and broadcast application of herbicides to deal with the problem, but rather a more holistic and integrated approach. For example, improvements in grazing management will be necessary to prevent the reduction in seral stage that allows weeds to gain a foothold to begin with. The BLM currently has too much acreage in "custodial" allotments or in allotments of unknown condition, and these lands are the most likely to suffer future infestations.**

Response: This is one of the first BLM land use plans that specifically addresses noxious weeds and their comprehensive impact. The use of herbicides is but one aspect of a program that utilizes a complete variety of strategies for effective noxious weed management. We also

recognize that competition is the single most important factor in any noxious weed problem; therefore, management for proper grazing use must be an essential part of a multifactorial approach to any noxious weed problem. We do not believe that there is necessarily any correlation between livestock grazing allotments in the custodial category and the potential for noxious weed infestation.

249. Comment: Noxious Weeds. **Requiring the use of weed-free feeds as proposed is also important, but probably hard to enforce; in any case it seems to us that livestock transported from one pasture to another can bring in viable weed seeds in their gut contents. In some environments, the BLM should consider carefully timed and managed livestock use as a way to reduce weed populations and the need for herbicides. Since weed seeds can also be brought in on vehicles, and since the BLM does not have, in our view, a good record of enforcing vehicle restrictions of any sort, outright road closures and NSO leasing stipulations in weed-infested areas is the most prudent course.**

Response: An essential aspect of the IPM approach to noxious weed management is the use of livestock, particularly sheep and goats, as cultural agents in dealing with a given noxious weed problem. The BLM will utilize livestock, particularly to manage leafy spurge, wherever possible. Because noxious weed propagules can be transported by vehicle is not sufficient justification to completely exclude vehicle use from large acreages of the Public Lands. Rather, a more sensible approach is to make authorized users be responsible for noxious weeds that result from their activities.

250. Comment: Vegetation Management. **There are also overly small differences between alternatives on distribution of vegetation in seral stages.**

Response: The future seral stages of vegetation are an estimate that would occur among the different management proposals considered in each alternative. Actions proposed under each alternative are similar in their influences on species composition in the different plant communities, thus, similar changes in seral stages are expected.

251. Comment: Riparian. **The description for Douglas Creek also ignores the historically documented baseline condition of the channel. Yes, within the innermost channel of the gully system, some riparian vegetation is growing back, but the 60-80 foot deep gully system as a whole is expanding, swallowing pipelines, roads, and future possibilities of actually growing things besides sagebrush and cheatgrass on a sub-irrigated alluvial valley floor. Please keep in mind that a gully on a perennial stream represents water storage and use for productive purposes (whether natural or human) foregone. To ignore such features of the Resource Area is tantamount to flushing money down a toilet (to Utah)!**

Response: It is probably true that Douglas Creek has eroded considerably below the historic or pre-European settlement flood plain. It is also true there is no amount of management or management scheme that is likely to return Douglas Creek to its historic flood plain. The classification system used by BLM rates the functioning condition of the existing riparian habitat and the potential flood plain based upon the definitions on page 2-33 of the Draft RMP. The historic flood plain of Douglas Creek has no potential of ever recovering and is no longer considered the potential flood plain. Based upon the functioning condition classification, Douglas Creek is functioning and at risk of further degradation due to the limited amount of riparian vegetation protecting the stream.

The objectives, at this level of land use planning, are to identify those riparian systems that are functioning and those that are not, and to prioritize management attention to the priority systems that are not functioning or functioning at risk. Primary emphasis, at this stage, is to maintain management prescriptions on functioning systems and to reverse degradation on those not functioning. The amount of improvement or desired riparian community (seral stage) will be evaluated in Integrated Activity Plans (IAP) following inventories to determine the existing and the potential riparian community. Specific resource needs would be determined in an IAP along with the riparian community desired to meet those needs. The management prescriptions to achieve the desired community would be developed in Integrated Activity Plans following the RMP.

252. Comment: Riparian. **Improvements in riparian health are dependent on understanding the seriousness and extent of the disease. BLM employees who supplied judgements of condition in the draft plan must be "visually challenged"! For example, they described Bull Canyon and Willow Creek as "late seral/ stable", a description which makes mockery of the common meaning of English words to anyone who has actually hiked up or down those stream channels. In Bull Canyon, the stream channel starts at a spring surrounded by an impressive, pocket riparian woodland. Below this point, the channel plunges into a sediment-choked gully 60 feet deep eroded into the soft soils of what was once the original flood plain. Remnants of that flood plain can still be seen as terraces up on the canyon walls. At some point in the past, some native American stood on the floodplain and constructed a petroglyph on what has now become a sheer, inaccessible rock face. The rampant erosion in this channel is carving ever farther up the channel and by now has probably sculpted out that lovely riparian woodland. So much for "stability". On Willow Creek, the channel is also incised. When I was there last, a five-foot high headcut was merrily reaming its way up channel in the more level and open portions of the WSA. The only healthy part of Willow Creek lies within the rocks of the Skull Creek uplift where the surrounding rock walls make a narrower defile; there the stream is not at all incised and is supplied with lush vegetation, making a delightful place to hike. Apparently, our bovine friends have not found their way into that section! I'm afraid the major portion of Willow Creek is still at a very low seral stage.**

Response: Commentor is equating the stable trend in the late seral riparian communities on Bull Canyon and Willow Creek to the stability of the stream channel. A stable trend relates to the stability of the plant species composition for a late seral riparian community. A stable trend indicates the plant species composition is stable and in equilibrium with conditions affecting species composition. The descriptions offered by commentor of "an impressive, pocket riparian woodland" on Bull Canyon and "supplied with lush vegetation" on Willow Creek are descriptive of a late seral riparian community. Table 2-24 (page 2-34, Draft RMP/EIS) shows that less than 3 acres of riparian habitat on each stream is a late seral riparian community with a stable trend in species composition.

The proper functioning condition rating for both streams as noted in Table 2-24 are functioning at risk and susceptible to degradation. Based upon commentor's descriptions, degradation is taking place. Currently, the Resource Area is in the process of inventorying the functioning condition of all high and medium priority riparian habitats and that data will not be available for inclusion in the Final RMP/EIS. However, both streams referenced by commentor occur within the Blue Mountain area which is second priority in the Resource Area, for development

of an Integrated Activity Plan to address management issues and concerns, including the condition and management needs of riparian habitats (Table 1-3, page 1-5, Draft RMP/EIS).

253. Comment: Riparian. **We regard the health of streams in the WRRA as desperately poor as a rule. In this light, the BLMs suggested riparian protection program seems much too vague and discretionary. Experience elsewhere appears to suggest that the restoration of western streams in the presence of their major threat, -livestock grazing, -requires one of two actions: 1) total enclosure of livestock from stream channels by fencing, or 2), an earnest desire and ability on the part of permittees to actively herd their stock away from channels. Alas, neither remedy appears to be offered in significant measure in any alternative of this plan. The BLM should keep in mind that its riparian zones are, to the public, its most conspicuous and understandable sign of mismanagement.**

Response: The management objectives contained in Table 2-27 (page 2-39 through page 2-41, Draft RMP/EIS) provides sufficient management direction to improve and maintain at least 75% of all riparian areas in proper functioning condition. These management objectives are directed at high and medium priority riparian habitats (Tables 2-24 and 2-25, Draft RMP/EIS). The specific suggestions of commentor of fencing riparian habitats or herding livestock are specific management tools to achieve the desired management objectives. These very tools are currently in use in the Resource Area and are likely to be expanded as site specific Integrated Activity Plans or allotment management plans are developed following the RMP. Each stream system has its' unique characteristics and needs that would be best addressed in a site specific analysis to determine the specific management tool required to achieve and maintain a proper functioning condition.

254. Comment: Grazing Management. **Under the "Stocking Levels" heading on page 2-52, the text says that AUMs on the resource area have been reduced 21% from 1980 to the present. The table on the same page shows that despite this reduction, 86% of grazing allotment lands are in the "improve" category, and 83% of the total AUMs are allotted to "improve" lands. However, in all alternatives, forage allocations to grazing remain the same. We are concerned that improvement from to the "improve" category to the "custodial" or "maintain" levels may be difficult to achieve under the most current (1981) grazing document. Table 2-37 (p. 2-53) shows rangeland vegetation manipulations will be applied to 130,520 acres. It's not clear on this page what kind of time span is being considered for these manipulations. Elsewhere in the document we gather that it's a 20-year span. Our concern is that this acreage is 9% of all BLM land in the resource area. While treatments might be appropriate, and in some cases beneficial to some wildlife, we are concerned with what kind of analysis will take place before this much vegetation manipulation will take place. It is our hope that analyses will not be done on a "project-by-project as they are proposed" piecemeal basis. A comprehensive, ecosystem analysis must be conducted, considering the potential impacts over the long term.**

Response: Rangeland condition is not the only criteria used to categorize grazing allotments (page 3-21, Draft RMP/EIS). Many allotments are placed in the "improve" category for reasons other than unsatisfactory rangeland conditions. As noted on page 3-21, allotment categorization is used to prioritize funding and personnel capabilities and is based upon a broad range of criteria. It is not the intent of allotment categorization to make necessary management changes to move an allotment from one category to another. Many allotments are in the "improve" category, based upon resource conflicts, current and potential, such as deer winter range. Those potential resource conflicts will always be present, thus the allotment will always be in the "improve" category. The intent of categorization is to focus management attention on managing resource conflicts at an acceptable level.

Vegetation manipulations proposed in the RMP are an estimate of potential treatments considering limitations including economics. These improvements will be subject to additional site specific analysis. The need for treatment would be analyzed in an Integrated Activity Plan or allotment management plan followed by a site specific environmental analysis. It is BLM's intent to look at these improvements from an ecosystem management and needs approach and not on a project-by-project basis.

255. Comment: Grazing Management. **In the Sierra Club's view, the goal of the management of grazing on the public lands "...is to restore and maintain fully functioning natural ecosystems, with their full complements of native species...". One does not see the same goal in evidence in the grazing management proposed in the plan. Instead, one learns that allotment management plans for only 19 of 54 "improve" - category allotments have been completed, and even the condition of many of the remaining allotments is not known. Moreover, the BLM will rely on a grazing EIS now almost 15 years old to guide it. On those few allotments where BLM seems to be taking an active management interest, one of the main tools seems to be rest, applied every other year, when most people interested in this issue realize by now that rest and use have to be much more dynamically managed to prevent overuse and the selective grazing of palatable species. The whole grazing management philosophy in the WRRA appears to be one of not-so-benign neglect. This is tragic in light of general watershed conditions.**

Response: Allotment Management Plans (AMP) on only 19 of 54 "improve" category allotments, is not an accurate assessment of how much public land is under AMPs. By comparing acreage, nearly 580,000 acres of public land are within those 19 AMPs which is 47% of the total public land acreage in all the "improve" category allotments (Appendix D). Available funding to implement AMPs has been the limiting factor as to how many AMPs have been completed.

As discussed in Chapter I, Draft RMP/EIS, BLM will be doing Integrated Activity Plans (IAP) on larger areas which would encompass major watersheds and all the grazing allotments within. Available funding will continue to limit how many IAPs that can be implemented. Through economy of scale, the ten priority IAPs (page 1-5, Draft RMP/EIS) would encompass 1.2 million acres and nearly all M and I category allotments. These IAPs are intended to look at management from an ecosystem management perspective to implement the soils and vegetation management objectives outlined in Chapter II, Draft RMP/EIS.

Livestock grazing systems developed in the 19 existing AMPs and those to be developed in proposed IAPs will, and do include more site-specific resource objectives than simple rest periods. The minimum rest periods recommended in this document are management guidelines designed to prevent continuous growing season long grazing use by livestock on most allotments. The level of management detail intended in this document does not allow analysis of detailed site specific grazing systems required to accomplish Resource objectives outlined in this document.

256. Comment: Grazing Management. **The EIS fails to describe the condition of existing allotments nor does it demonstrate the impacts that reissuing grazing permits would have, therefore further study is needed before permits are reissued. This area has been grazed since 1940 and surely a detailed study is warranted. Riparian areas are vital to American Kestrel, Bald eagle, Osprey, Merlin, Northern harrier, and Short-eared owl, so protecting this habitat should be a priority. The resource area is overstocked and overgrazed, if grazing is not reduced habitat and rivers will be degraded beyond what is acceptable by BLM standards. I recommend reducing stocks, increasing rotation, and resting those areas which are overgrazed.**

Response: Livestock grazing management proposed in this document continues implementation of management prescriptions proposed in an extensive evaluation of livestock grazing within the Resource Area in the 1981 "White River Resource Area Grazing Management Final EIS" and 1981 "Rangeland Program Summary" as referenced on page 2-51 of the Draft RMP/EIS. The 1981 grazing EIS addressed the impacts of livestock grazing on other resources or uses, as well as the condition of grazing allotments. The 1981 grazing EIS addressed the impacts of continued livestock grazing use at various levels. This document would continue implementation of management decisions made in the 1981 Rangeland Program Summary which were and are still acceptable management decisions for management of the forage resource on a sustained yield basis. As part of the 1981 livestock evaluation, rangeland monitoring studies were undertaken. These studies were established on over 80 allotments that were identified as conflict allotments. Forage use studies were conducted on these allotments between 1981 and 1987 to validate the livestock grazing capacity allocated for these allotments. Long term rangeland condition studies were established on these allotments to monitor the trend in rangeland condition. These studies are conducted periodically to evaluate livestock management prescriptions and identify any changes needed in current management.

The commentors statement that the Resource Area is "overstocked and overgrazed" offers no data to support such a conclusion. Riparian area management in the 1981 grazing EIS did not have any well defined priorities or management objectives other than improvement in riparian habitat. While some riparian habitat improvement has been documented, most improvement has been modest. Increased priority has been given to riparian habitats in this document as noted on pages 2-32 through 2-41. Improved livestock management techniques have been shown to improve riparian habitats and will be implemented on priority habitats in order for livestock grazing to remain in those areas.

257. Comment: Wildlife, Riparian. **We support the proposal to protect beaver colonies by means of NSO stipulations, and, in fact, encourage the BLM to make much greater use of the services of this marvelous and little-appreciated animal. Perhaps the best management tool for beaver would be for the BLM to pound on the Colorado Division of Wildlife to get them to reduce trapping permits in areas where beaver are active and making a difference in improving riparian environments. The experience of using beaver in East Douglas Creek comes to mind here.**

Response: Not all riparian habitats in the Resource Area have the natural capability of supporting beaver colonies or do not contain sufficient woody plant species to support beavers, at present. The site specific capability and need of each stream to support beavers would be identified during development of the Integrated Activity Plans proposed for the Resource Area. Specific management decisions for managing beaver populations would be coordinated with Colorado Division of Wildlife through development and implementation of activity plans. Reducing trapping permits in all riparian habitats with active beaver colonies in the Resource Area may or may not be an appropriate management tool for some riparian habitats. There are some streams which contain beavers but do not have sufficient woody vegetation to support the needs of the beaver and protect the stream system. A logical management decision may be elimination of beavers from such streams until the woody vegetation can both support beaver and protect the stream channel. In the experiences of East Douglas Creek referenced by commentor, we learned it was more important for the long term improvement and stability of the riparian system to control beaver populations at a lower level to prevent boom and bust population cycles that resulted in over-utilization of the woody forage base, thus decreasing the stability of the riparian system.

258. Comment: Forestry. **We support the reduced availability of pinyon-juniper commercial harvest in alternatives C and D. We also believe that firewood permits (whether for live or dead wood) should not be issued in WSAs, to protect the relatively natural qualities of these areas.**

Response: This restriction is also policy within the bureau as a part of non-impairment of wilderness qualities. The final has been re-written to improve clarity in this regard.

259. Comment: Roads. **Moreover, there are no proposed road closures on fragile soil or in soil management areas in alternative D in Table 2-58. We advocate such closures in such areas.**

Response: The road closures in fragile soil areas were not identified in the RMP because it is intended to do so during the Integrated Activity Plans when the inventory will be complete and public input is analyzed.

260. Comment: Recreation. **The BLM is proposing to build or lease a private campground somewhere on the Harper's Corner Road. We would urge the BLM to NOT locate this facility near the Plug Hat Rock Picnic Ground or near any WSA. We have used the area adjacent to the Plug Hat Rock Picnic Ground for "semi-primitive" camping on several occasions, but encouraging too much use here would encourage over-use of the fragile environment within the WSAs.**

Response: Locating a camping facility adjacent to the National Park Service, Plug Hat Rock Picnic area or one of the WSAs is an option. However, you are correct that this may cause unacceptable impacts to the semi-primitive nature of the current setting in this area. Other preferred options are on BLM Public Land away from this area, one of which may be below the Plug Hat Rock area. Given the current budget constraints on the federal government, BLM will pursue the option of a private entity actually constructing and operating a facility somewhere along Harpers Corner Road. This will also require close coordination with Dinosaur National Monument.

261. Comment: Use Authorizations. **The construction of pipelines and power lines in these narrow valleys have caused disproportionate social, economic, and environmental impacts to these lands in the past. These valleys are typically flood irrigated across the entire valley and the water table is at the ground surface in many areas during times of flood irrigation. Production from these irrigated fields is reduced substantially, often for several years, each time a pipeline or power line crosses a field. These areas also require numerous stream and irrigation ditch crossing and have the greatest potential to impact springs, wells, water**

quality and riparian areas. We realize that geographic location and topography requires that utilities cross and sometimes follow these valleys. However, major utility corridors should be located on non-irrigated lands and away from the major irrigated valleys to the maximum extent possible.

Response: Because of land ownership patterns, the scale of the maps used, and/or to show connections with other corridors outside the planning area, private lands may appear on a map as being within the corridor. We are very sensitive to the fact that identification of corridors can result in impacts to private land owners. However, it is virtually impossible to identify these corridors, without involving some private lands. To the maximum extent possible, corridors have been identified in such a manner as to avoid as much private property as possible, particularly the agricultural lands. The corridor map has been adjusted to delete those areas crossed which are largely private lands.

262. Comment: Wild Horses. **Does your agency really have the authority to remove wild horses?**

Response: Public Law 92-195 (The Wild Horse and Burro Act, 12/15/71) gives the Secretary of the Interior, and through him, BLM, the authority to remove excess animals to "protect the range from deterioration associated with overpopulation...."

263. Comment: General. **Are your policies written too vague and too general for interpretation by future BLM representatives to be able to enforce fairly and feasibly?**

Response: RMPs are written to intentionally provide a general direction and broad goals for the management of a particular resource. The site specific implementation of the RMP decisions are refined in an Integrated Activity Plan that is completed after the RMP is approved. The activity plans are designed to have a more narrow scope and are much less general or ambiguous.

264. Comment: Wild Horses. **I also resent the amount of money spent by the BLM to control wild horses. Let the public control them as before, or sell a license allowing one to be caught, shot for meat to be eaten or for dog food.**

Response: Present law or regulation does not permit management according to the prescription which you have proposed.

265. Comment: Motorized Travel. **I suggest an area be set aside of OHV users and other use be regulated by a permit/license which your agency could issue. Forest Service has self issue permits already.**

Response: This is a good suggestion and will be an issue to consider when the transportation plan is written for the Resource Area.

266. Comment: Motorized Travel. **I think the issue of retrieving dead animals could also be handled by permit or licensing of people who are physically unfit. All other healthy people should be able to cut up and pack out their animals.**

Response: The Colorado Division of Wildlife does allow disabled hunters to enjoy certain privileges such as hunting from a vehicle. BLM will allow the use of vehicles to retrieve downed big game by vehicle.

267. Comment: Motorized Travel. **I do see some wordage like "already established trail" needs a lot of thought because of the interpretation by various groups. I think designating areas or trails with this group might be the best approach.**

Response: The term "already established trail" would be very difficult to interpret and will not be used. Roads and trails will be designated both in the RMP (in ACECs) and in the Travel Management Plan to be completed after the RMP. Existing roads and trails have been mapped using aerial photographs from 1993 as a bench mark.

268. Comment: Fire Management. **The entire resource area should be managed to allow natural fires to run their course and burn out. The only fire suppression allowed would be to protect private property. All prescribed burns should be at least 1000 acres in size to prevent overgrazing afterwards. Prescribed burns should be done in the spring whenever possible. When burns are done in the spring, all the native grasses and desirable browse species will grow back the first summer. Fall burns should only be done at high altitudes which make it difficult to achieve spring burns. The natural progression of rangeland is: grassland, brush, forest, fire, grassland, brush, etc., and only man has the ability to change to that progression.**

Response: Although we agree with the prescribed fires should be larger concept, we disagree on the need for a minimum of 1,000 acres on every fire. The acres burned should be dependant upon the objectives and goals for a specific landscape. For instance, the objective for an area may be to develop a number of burn sites within a larger area with each individual burn not to exceed 300 acres, with an overall goal of burning a total of 1,500 acres. Another area may have an objective of burning 1,500 acres to convert sagebrush community to a variety of grasses and forbs, which would alleviate grazing pressures from livestock and big game. Generally spring burns are more favorable and show an immediate response on a short term basis over a fall burn. However, some plant communities are more conducive to spring burns than others, while other plant communities need to be burned in the fall because that is the only time when fire can be sustained under those weather conditions and parameters. It may also be the objective of the burn to have a "hotter" fire to consume more of the individual plants, rather than a fire that is "cooler" and burns in a mosaic pattern in the spring. When all possible, spring burns will be conducted because it will allow less preburn preparations. Generally the federal government conducts prescribe burns, but overall fire is not used enough to significantly improve ecosystem health or reduce hazardous fuel buildup through fire suppression.

Because of the "Storm King Fire" the federal government has recognized the need to emphasize fire has a natural role in the ecosystem. This natural role should be considered and identified in land management plans on a landscape scale, and across agencies boundaries. Prescribed fire will be used to protect, maintain, and enhance resources, and prescribed natural fire will be allowed to function, as nearly as possible, in its natural ecological role. All prescribed fire must be consistent with resource management plans, and approved prescribed burn plans. When these areas have fully developed plans such as Prescribe Natural Fire (PNF), the individuals concerns identified will be alleviated.

269. Comment: General. **In our latest meeting you stated, as ATV users we need to form a club and give you our input. We shouldn't have to form a club to be able to voice our opinions as to the use of BLM land.**

Response: Your comment is absolutely correct. However, we were merely pointing out the benefits that are available to a group that are not enjoyed by individuals, such as the ability to compete for recreation funds from organizations like Go Colorado.

270. Comment: Motorized Travel. **I feel our Colorado OHV Registration stickers should be our "permit" to utilize this land, we pay for them just as we do firewood, grazing, oil drilling permits, etc., that is the intent of buying the permits.**

Response: While the monies from the Colorado OHV registration program are available for project work, the registration does not give unrestricted access to public lands for this use. The federal OHV regulations are meant to provide protection of resources and resolve conflicts among users of the public lands and have no relation to the Colorado registration program.

271. Comment: Motorized Travel. **If the land is patrolled as Bill Hill recommended, then anyone that objects to an ATV user could call in a users plate and that user would then be forced to prove his innocence. All I can say is I want the freedom to use this land just as the other users have the same right. We should try to be realistic and fair to all users and not single out ATV users as the whole problem.**

Response: All vehicles that are capable of traveling off the road are, by definition, OHVs. Additionally, OHVs and ATVs are not only used for recreational purposes. The RMP does not discriminate against any group, or their particular reason for using OHVs. The RMP identifies areas where vehicular use would be limited due to resource concerns, and what those limitations are.

272. Comment: General. **The primary non-commodity values in the Resource Area, namely wildlife, unique plant communities, primitive recreation, free-flowing rivers, and healthy riparian corridors, need to be more fairly balanced with commodity uses in the final RMP. Simply giving non-commodity values the scraps that commodity extraction does not desire is unacceptable. Instead the BLM needs to pro-actively protect all riparian areas, Wilderness Study Areas, the White River Corridor, critical wildlife habitat and migration corridors, and proposed Areas of Critical Environmental Concern from further degradation, and where necessary, begin restoration efforts.**

Response: As discussed in Chapter II, of the Draft RMP, increased emphasis is placed on restoring and maintaining properly functioning riparian areas (pages 2-32 through 2-41). Public lands along the White River would be designated as an ACEC to protect riparian habitats (page 2-81). Management of WSAs to protect their suitability as wilderness is noted on page 2-75 and 2-76. Priority management would be offered to important values within proposed and designated ACECs to protect those values (page 2-80 through 2-82).

273. Comment: Motorized Travel. **At an absolute minimum vehicles should be excluded from all Wilderness Study Areas, Pinyon Ridge, and the White River corridor west of Rangely where the main canyon begins until the Utah state line.**

Response: All of the wilderness study areas will be closed to OHV use. The Pinyon Ridge area has been determined to not possess wilderness characteristics and no special management of the area is warranted. The White River corridor west of Rangely contains less than 30% public lands that are scattered, with little or no OHV use at this time except for access from county roads to the river in a few locations.

274. Comment: Motorized Travel. **Of course, the practical question is, as always, whether significant enforcement of road or off-road travel will occur. I think I met once the single individual who does full-time law enforcement in the Resource Area; he did not look like Superman to me. Roads should be closed Physically, and not just rely on signage and (very) occasional police presence.**

Response: The Implementation section for Travel Management in Chapter III has been clarified in the Proposed Plan to discuss means for enforcing limitations. Administrative measures will be relied on most: signing; educating the public; on the ground discussions with users; and reliance on self enforcement by users. Law enforcement personnel will be relied on, only if necessary. These actions will be a part of day to day operations, and will not add to or require increases in funding.

275. Comment: ACECs. **The management prescriptions for the ACECs need to have more teeth in the final RMP.**

Response: Based upon experience and analysis of BLM resource specialists responsible for managing the important values within ACECs, the management prescriptions for ACECs would be sufficient to protect and/or perpetuate the important values of the ACECs. In addition, more explicit management prescriptions would result from subsequent Integrated Resource Plans.

276. Comment: ACECs. **I appreciate the ACECs the BLM did recommend for designation in the draft plan. All protect some very important and sensitive lands. I, however, feel that four additional areas deserve the ACEC designation. The cultural sites in the Texas-Missouri Creek area are very sensitive and susceptible to disturbance and need the special management an ACEC can provide. Oil Spring Mountain just east of Texas-Missouri Creek deserves to be considered for ACEC designation because of its spectacular scenery and wild character. It is basically an island of wildness surrounded by a sea of development. Soldier Creek also warrants ACEC designation because of its sensitive plants and potential Colorado cutthroat trout habitat. I also think the BLM should reconsider the North Cathedral Bluffs area because of its sensitive plant and scenic values.**

Response: The Texas-Missouri Creek area was proposed for ACEC designation under Alternative C. Through analysis of the ACEC, the interdisciplinary team determined the area did not meet the relevance criteria for an ACEC, in light of significant oil and gas development taking place within the area. The important values of the ACEC are protected by the Antiquities Act. It is unlikely the entire area contains the important values, thus, ACEC designation would add just another layer of regulation onto an area sufficiently protected by existing regulations.

The commentor felt critical wildlife migration routes should be designated as ACECs, specifically Piceance Basin, Flat Tops and Nine Mile Gap. First, the critical migration routes noted continue to serve as migration routes and are not in jeopardy from proposals in the Proposed Management Plan. These areas, though important, have not been identified as migration routes for species other than big game animals, which are not in need of special attention. BLM has recommended ACEC designation for the White River corridor which

is known to be a migration route for many wildlife species, not just big game. BLM administers only a small percentage of the land base in the Flat Tops and Nine Mile gap areas and also in the upper elevations of Piceance Basin. ACEC designation of small, scattered parcels of public lands within these three areas would have little effect on maintaining the integrity of these migration corridors. The Oil Springs Mountain area is being proposed for ACEC designation. The Soldier Creek area would also be designated as part of the larger East Douglas Creek ACEC (refer to the footnotes of Table 2-53 on page 2-81 of the Draft RMP).

The North Cathedral Bluffs area was nominated for ACEC status during the evaluation period for the 1987 Piceance Basin RMP. The area of consideration in the Piceance Basin RMP split the proposed boundaries of the ACEC leaving portions of the proposed ACEC outside the area of consideration and deferring evaluation of the merits of that part to this planning document. That part of the ACEC within Piceance Basin RMP was determined to not qualify, because nearly all important values were on oil shale mining claims that were patented into private ownership during the evaluation process. The remaining portions of the proposed ACEC outside the Piceance Basin RMP, which are still in public ownership, were evaluated in this process. The values identified for this remaining area were in outstanding scenic view and a rare plant species, the oil shale columbine. An ACEC designation would not protect the view shed seen from this high point. The oil shale columbine, once considered rare, has been found in numerous localities across Northwest Colorado and Northeast Utah and is not in need of special protection. The plant is still a BLM sensitive species because it is an oil shale endemic species dependent upon seeps and springs in an arid region. Through the evaluation, the North Cathedral Bluffs proposed ACEC was considered not to meet the relevance and importance criteria required of an ACEC designation and thus not recommended for designation. The commentor equated designation of these ACECs to increased area which would result in increased population size and frequency of species as postulated in the "Island Biogeography Theory." One would have to assume habitat loss is taking place effecting species diversity. In this case, habitat loss has not occurred to any degree in this area. Designation of these ACECs is intended to prevent habitat losses and associated declines in species diversity.

277. Comment: Wilderness. **The Wilderness Study Areas in the Resource Area are valuable undeveloped areas that contrast sharply with other parts of the Resource Area that have been highly developed. Their undeveloped, roadless character needs protection even if they are not included as components of the National Wilderness Preservation System by Congress.**

Response: BLM does recognize the importance of roadless areas. However, most of the roadless areas within the White River Resource Area have long since vanished. There is an adverse impact to those people who wish to engage in more "primitive" types of "non-motorized" recreation such as: hiking, hunting, backpacking, horseback riding, backcountry camping, etc. There are no areas left in the entire White River Resource Area that can be classified in the "primitive" setting on the Recreation Opportunity Spectrum (ROS). This includes all of the Wilderness Study Areas because of the proximity of roads on the boundaries of these areas (see appendix G, ROS Settings in the Draft RMP).

The Bull Canyon, Willow Creek, and Skull Creek WSAs would be protected and managed as an ACEC if not designated as wilderness. The Oil Spring Mountain ACEC would also provide some protection of that area. Refer to Appendix E of the Draft RMP for a description of management of WSAs if no designated by Congress as wilderness.

278. Comment: General. **Map #1-1 is a useful component of the overall planning document, but we do not relinquish any of our ownership rights to our Fee Lands as a result of the publication of this map.**

Response: The only use of this map is to display the general location of BLM surface ownership and the mineral ownership of the United States Government. It in no way affects the ownership rights of others.

279. Comment: General. **Table 2-5 Douglas/Cathedral - Specify which Trail Canyon is under consideration.**

Response: Amend Table 2-5, should have identified Brush Creek instead of Trail Canyon.

280. Comment: Grazing Management. **Our ranch is committed to further improvement of the Riparian areas within our allotment. However, we need to maintain our production level in order to be economically viable. We feel we can do both.**

Response: Properly managed livestock use within riparian habitats has resulted in improvement in both riparian habitat condition and livestock forage availability. Development of Integrated Activity Plans or allotment management plans following the RMP will address needed riparian improvement and the needs of the ranching operation and develop a site specific management program that can accomplish both given the criteria outlined in Table 2-27.

281. Comment: Land Ownership Adjustment. **We are on record requesting that Twin Buttes Ranch be allowed to acquire several small parcels under Section 203 of FLPMA. These parcels are completely surrounded and/or surrounded on three sides by private lands. The strategy displayed in the Draft RMP places these few public parcels in a category which prevents such acquisition. The RMP should be modified to sell these tracts under Section 203 of FLPMA.**

Response: These lands were placed in Category II which allows exchanges - our preferred method for disposal. However, they have been reviewed, and those which appear to meet the criteria set forth in section 203 of the Federal Land Policy and Management Act have been added to the list in Appendix I.

282. Comment: Access. **We are concerned most about access to BLM land and wildlife management on those lands. Our choice at the present time would be to leave public access as it is and reopen Moosehead Mountain access. We have been particularly affected by its closure because it represents the closest stand of aspen and highest elevation close to our community. Its year round closure has hurt scout troops and our families from picnicking and camping opportunities in the hot summer heat. We also have experienced having our older and younger members being unable to access certain historically accessible areas while private ranching, oil and gas companies, and government employees go as they please during the archery season.**

Response: We realize that limitations and closures on Moosehead Mountain may inconvenience some past users. However, these restrictions are intended to prevent the further loss of the resource values that make this a desirable location to visit, which is not, in itself, precluded by these limitations. Other areas with similar resources provide similar recreational opportunities, without restrictions on vehicular use.

283. Comment: Access. **I would like to protect my resources, and be able to keep public access roads open to enjoy a variety of activities and beautiful scenery. The 1976 law states you cannot close public access roads.**

Response: Public roads and rights-of-way which were validly appropriated under RS 2477 will not be effected by the RMP.

284. Comment: Reclamation Seed Mixes. **Non-native reclamation species do not necessarily compete better than native species with non-native annual weeds. Site conditions (e.g. moisture, nitrogen levels) and reclamation monitoring may have more influence on reclamation plant establishment than innate "competitive abilities" (Chambers 1989, McLendon and Redente 1992, Smith and Chambers 1993). When non-natives are better competitors, they may out-compete native species as well as non-native annual weeds, resulting in permanent changes to the structure and composition of plant communities. Non-natives also have the potential to compete with and reduce the vigor of threatened, endangered, or sensitive plants and should be avoided in these habitats.**

Response: It is true that site conditions and soil preparation, such as soil amendments and mulches, do have a significant influence on seedling establishment. These are site specific considerations that will be addressed in environmental analyses on future disturbance. Use on non-native species does result in changes to the structure and composition of affected plant communities and will be so noted in the Final EIS. Site specifics would be addressed in an EA (Environmental Analysis). The Final RMP/EIS will be changed to prevent use of non-native plant species in reclamation on habitats of threatened, endangered and sensitive plant species.

285. Comment: Noxious Weeds. **No plant species are known that decrease the spread of noxious weeds. These plants are considered noxious because they may out-compete natives and non-native plant species in disturbed and intact communities.**

Response: This comment is true. Item number 2 under Alternative A, page 4-30 will be deleted from the Final EIS.

286. Comment: Reclamation Seed Mixes. **Non-native species generally are not the ecological and functional equivalents of the native species they replace. Many of the commonly-used reclamation species are cool-season grasses, whereas the natives they replace (e.g., basin wildrye, blue grama, galleta) are largely warm-season grasses. Thus, lower quality forage is available to livestock and wildlife later in the growing season in areas dominated by exotic cool-season grasses.**

Response: This comment is not true. The majority of sites in the Resource Area are dominated by cool season species because of predominate precipitation patterns. Precipitation patterns do not support extensive plant communities dominated by warm season grasses. Blue grama and galleta do occur in certain plant communities, but are not dominant species in those communities. Cool season species are dominate even on those sites that contain blue grama and galleta. Basin wild rye is not considered a warm season plant. It is included in recommended seed mixes for those sites for which it is native.

287. Comment: Reclamation Seed Mixes. **Many of the non-native grasses listed on pp. A15-16 are rhizomatous and are not functionally or ecologically equivalent for reclamation of areas that naturally support bunch grasses.**

Response: This statement is partially true for those sites dominated by bunch grasses. However, most sites contain a mixture of rhizomatous grasses and bunch grasses. The recommended seed mixes contain both. The specific seed mix or species within that mix are site specific factors best addressed in an environmental analysis following the RMP.

288. Comment: Reclamation Seed Mixes. **Native rodents, insects, birds and microfauna are not adapted to use exotics.**

Response: There is insufficient knowledge of many of these species to be able to determine to what degree use on non-native plants in reclamation would impact these species. A failed reclamation using native plants could likely result in the site being dominated by exotic annuals, as well as soil loss, which could have an even greater impact on these species. Changing the form and structure of the existing native plant community, then replacing it with a different composition of native plants could have similar impacts as if non-native plants were used. These are site specific needs and concerns that would be better addressed in a site specific analysis following the RMP.

289. Comment: Reclamation Seed Mixes. **Exotics such as crested wheatgrass and smooth brome are often less palatable to livestock than native bunch grasses. The season of use and the health of the ecosystem are more relevant factors to use to determine the tolerance of range for intense grazing use.**

Response: As noted on page 2-23, ecosystem health is a factor being used in determining whether or not non-native species should be used. Site specific recommendations made by commentor are best evaluated in an environmental analysis following the RMP.

290. Comment: Grazing Management. **Intense grazing pressure is not a desirable use for any rangeland in the semi-desert White River Resource Area. Such use has negative impacts which affect not only grazed plants but also soils, water quality, and ecosystem resiliency.**

Response: Intensive grazing management, as described in this document, is not intense grazing pressure or increased utilization of the forage resource, but rather, intensified control of livestock to achieve Resource objectives and to prevent over-utilization of the forage resource.

291. Comment: Reclamation Seed Mixes. **Only locally gathered, native plant species should be used in reclaiming disturbed areas in ACECs and RVAs.**

Response: Maintaining genetic integrity of native species in ACECs and RVAs is an important management consideration. The Final RMP/EIS will be changed to include a statement that: only locally gathered or genetic stock from locally gathered native species should be used in reclaiming disturbances in ACEC and RVAs; and the impact to genetic integrity of native species in ACECs and RVAs must be analyzed and mitigated through a site specific environmental analysis before authorizing disturbances within the protected plant communities in ACECs and RVAs.

292. Comment: Grazing Management. **The best management practices for grazing (A-11) should include special provisions for grazing in threatened, endangered, and sensitive plant habitats. Such provisions could address grazing intensity, resting periods, seasonal use, and monitoring of effects as related to the specific plants of concern.**

Response: Conditions of Approval for grazing in special status plant species habitats were not included in Appendix C because these practices are best defined and evaluated in a site specific activity plan, either in a grazing allotment management plan or a habitat management plan for special status species. A best management practice developed for a sensitive plant species may not be appropriate for all grazing allotments containing the sensitive plant. Listing all the best management practices for all sensitive plant species would take to much time and space and is not necessary in a document addressing basic land use allocations.

293. Comment: Economics. **Comments were made in the draft RMP/EIS that imply that local communities have lived in the shadow of the oil and gas boom and bust cycle for 90 years. This statement is misleading as it editorially uses "shadow", and it fails to state the reasons for oil and gas boom and bust cycles.**

Response: This section has been changed and the word "shadow" has been removed.

294. Comment: General. **Planning Issues and Criteria. All of these affect the use of BLM land, but the ones causing the most controversy are Recreation Management, Motorized Vehicle Travel and Public Access. I believe you need more input from the public before deciding the final alternative that will be used.**

Response: The Final RMP provides general goals and objectives for recreation, motorized vehicle travel, and public access. Subsequent activity plans (Integrated Activity Plans) will focus on smaller areas and provide a more site specific, on the ground plan. The public, adjacent land owners, and other governmental entities will be invited to participate in the development of these plans. Among the different recreational considerations that will be addressed in these plans, include the development of recreational facilities, opening, closing, or creating new trails for motorized and non-motorized vehicles, and developing increased access to public lands.

295. Comment: Minerals **Impacts from Oil and Gas Management. The concerns expressed in Paragraph 2 are more applicable to mining operations than oil and gas operations and thus should be so stated. Paragraph 1 appear to have been prepared by someone unfamiliar with oil and gas operations and existing state and federal requirements.**

Response: We agree with this comment, and have moved the subject paragraph to the cumulative impact section.

296. Comment: Economics **Social Attitudes (p. 3-45): "These communities have lived in the shadow of energy development for 90 years experiencing various boom and bust cycles in mineral development." Review resource management plan and remove unsupported, undocumented, inflammatory or editorial statements.**

Response: This section has been changed and the word "shadow" has been removed.

297. Comment: General. **I also feel that out of all the alternatives in the RMP the only alternative is Alternative "A". We can find other ways to maintain areas of concern such as taking concerns on a case by case basis.**

Response: A definition of planning is "An idea of what to do or how to do it, thought out ahead of time." Alternative A is based upon older planning documents that do not take the area's future growth and development potential into consideration.

298. Comment: Motorized Travel. **I (and my entire family) are avid hunters, photographers, hikers, sightseers and 4 wheelers and as such, we are frequent users and visitors of BLM lands. After seeing what the National Park Service has done and still attempting to do in Canyonlands National Park. I would be very upset to see the same thing happen in our "back yard" of the White River Resource Area. I understand that you are mandated by Congress to make certain changes. Please remember that "Jeeping or 4-wheeling" is a valid recreation use just as boating, camping etc. is. I feel that recreation use and access is just as important as access to some gas or oil well site leased by a major oil company.**

Response: OHV use of public lands is a legitimate use. BLM as well as all other federal land managing agencies is charged with the responsibility of protecting the public lands from undue degradation. As with any other resource use there is a place for this use and there are places that cannot support OHV use. Recreation use and access are part of the multiple uses of public lands and this is a valid consideration in the management of lands and resources. It is not the intent of BLM to limit access to BLM public lands but to ensure that resources are not adversely impacted as a result of indiscriminate uses, such as OHV use, in areas of fragile soil, areas subject to landslides or where other resources will be adversely impacted.

299. Comment: Recreation. **I am vehemently opposed to any changes that would limit or eliminate "recreation" use and access in any lands administered by the Bureau of Land Management.**

Response: BLM is not limiting recreation use or access to Public Lands. However, OHV use must be managed in certain areas where resources are subject to damage and allowed to occur in areas that can support the impacts of this use. It is not the intent of BLM to limit access to public lands. In fact BLM has increased access in several locations. Certain roads or trails that are "duplicates" in the same area, or not necessary for continued vehicle access into public lands, may be closed and rehabilitated without compromising public recreation use or vehicle access to the public lands.

300. Comment: General. **I do support the preferred alternative, Alternative D, because it appears to be the only alternative that maintains somewhat of a balance between the need for development and environmental protection.**

Response: The Proposed Management Plan carries forward most of the decisions developed in Alternative D.

301. Comment: Use Authorizations. **In alternative C, 1,000,858 acres are classified as avoidance areas and in alternative D, only 187,048 acres are classified as avoidance areas. This is a very large difference. I also favor the designation of formal right-of-way corridors for the sighting of future facilities. Exception could be allowed but more extensive site specific analysis should be required.**

Response: Avoidance areas are based on the identification of resource protection measures in each alternative. The difference in avoidance areas between Alternatives C and D represents the difference in

resource protection measures (largely related to fragile soils) in these alternatives. Case by case siting of all facilities will require further, site-specific analyses.

302. Comment: Motorized Travel. **As for your proposal to restrict vehicles to existing roads and trails. I don't have much problem with that idea, but is it going to be taken to extremes? If I pull off the road to park, am I going to be ticketed? If I find a deep nasty mud hole in the middle of the road, am I going to be expected to plow through, tear up the road making the mud hole deeper and maybe tear up my truck or can I use a little common sense and go around?**

Response: Exceptions and guidelines for leaving designated roads have been incorporated in the Proposed Plan. Where, or when off-road use is precluded, provisions are made for the physically challenged, and for pulling off to park, retrieve game, access camping sites, or load firewood.

303. Comment: Grazing Management. **Between my wife and I we pay about $250 a year in hunting and fishing license fees. Each year I spend a pretty fair amount on firearms and ammunition, 12.5% of which goes to Puttman Robinson funds. All of this money is supposed to be used for the benefit of wildlife. I pay my own way. From what I've read, that may not hold true of the livestock industries use of public lands.**

Response: The public debate over the fair market value of public land forage for livestock is now taking place, and is not an issue to be addressed in this document.

304. Comment: Motorized Travel. **At your meeting in Meeker, the idea was presented that maybe road use should be further restricted during critical stress times for big game, this is late winter early spring. As was brought up at Meeker meeting there is not enough use in most of this country to make a difference and most of that use is connected with oil field use. Who are you going to restrict?**

Response: Motorized travel restrictions apply to all users. The use of vehicles may be authorized for specific, legitimate permitted uses, even within closed areas.

305. Comment: Riparian. **The question of management of the White River also intimately involves the status of riparian areas and stream channels in the White River drainage. Regarding the most picturesque example, the sorry biological and hydrological state of Douglas Creek and its tributaries is not unique by any means, but rather characteristic of the Resource Area. My knowledge of the Resource Area is not exhaustive, but I don't think that I have personally seen any stream channel in the Resource Area that looks healthy! If stream channels are not deeply entrenched due to past failures to protect native riparian vegetation, they are now filling in with that despised and useless exotic, tamarisk. Ironically, tamarisk may eventually cure the stream channel instability problem because it is not palatable to livestock, but at a tremendous price in biological diversity in riparian zones.**

Response: Tables 2-24, 2-25 and 2-26 (Draft RMP/EIS) show the functioning condition and the current riparian plant community seral stage. Information in these tables reflect the riparian habitat conditions. As noted by commentor, tamarisk is a problem in some riparian habitats which usually results in a mid-seral or early-seral riparian plant community for those riparian habitats (Tables 2-24, 2-25, and 2-26). Not all mid and early seral riparian communities noted in Tables 2-24, 2-25, or 2-26 are a result of tamarisk invasion.

306. Comment: General. **Professional land management costs money and requires competent, on-the-ground personnel. The BLM has never had enough of either, and so the alternatives examined in this plan in the present political atmosphere have an Alice-in-Wonderland quality. Both the BLM and Forest Service used to have management plan alternatives in which funding would be either higher or lower than present levels, and these would give the interested public some notion of internal agency management priorities. If the Resource Areas operating budget should be cut by 20% (say), would the BLM cut its permitting of already subsidized uses that require (for example) road construction and maintenance, or would it take a more ecologically- and economically-sound approach? A candid world is awaiting such information eagerly.**

Response: Alternatives were developed for the RMP that realistically looked at different management options for individual resources without regard to future funding. A decreased budget alternative and increased budget alternative were considered but found to be too conjectural and were dropped from further consideration.

307. Comment: Grazing Management. **First area of comment has to do with the allocation of AUMs in the area. If the land is showing stress and not just signs of good grazing practice, by all means reduce the AUM allocations. Well-protected riparian areas should be encouraged for it has been shown that net water available increases when the damned lazy cows are kept out of the creeks. Perhaps refencing certain areas and timing creek bottom access deserves serious consideration.**

Response: The process for adjusting livestock forage allocations is located on page 2-52, Draft RMP/EIS. Management objectives for improving and maintaining acceptable riparian habitat conditions are located on pages 2-32 through 2-42, Draft RMP/EIS. The specific livestock management techniques referenced by commentor are tools to be considered in development of integrated activity plans or allotment management plans following completion of this document.

308. Comment: Motorized Travel. **I have done trail blazing in the past and been stunned to see persisting signs a year later. But I will also argue that OHVs and dirt bikes are able to traverse unmaintained roads and reach places with a lot less damage and gas use than a truck. Perhaps setting aside some nasty areas for wild riding and allowing existing but no new trails over the rest of the area will be a good compromise.**

Response: The designations in the Final RMP are similar to those you propose: parts of the Resource Area are limited to permitted users, parts are limited to existing roads and trails year-round, the remainder is limited to existing roads and trails from October 1 to April 30, and open the remainder of the year.

309. Comment: Grazing Management. **The social economic loss of reducing livestock numbers have not been addressed.**

Response: There is no change in livestock numbers and no economic impact would need to be addressed.

310. Comment: Plant Communities. **In order to accomplish a task specific goals must be established. Established goals must be measurable to validate if each specific goal is accomplished. When specific goals are reached then what? If allotment improvements enable an increase in forage production is there provisions to also increase AUMs for that allotment?**

Response: Provisions for adjusting livestock AUMs, both resulting from an increase in forage or a decrease in forage, is outlined on page 2-52, Draft RMP/EIS.

311. Comment: General. **This document should not affect the rights of private property and should pertain only to public lands.**

Response: The RMP addresses only management of public lands and resources (ie. split estate minerals).

312. Comment: Water Rights. **Change this section to reflect the following statement: BLM will continue to file for water rights under current "Colorado Water Laws."**

Response: An editorial change will be made to Table S-1 on pg S-4 to include the following statement "BLM will continue to file for water rights under current Colorado Water Laws on springs and/or water developments."

313. Comment: Water Rights. **We oppose alternates that are inflexible and mandatory. We do not disagree with improving critical areas but management options need to be developed with all current users in mind to enable continuation of the multiple use concept.**

Response: Comparing overall water demand and supply is a foundation of planning processes which insures that planned multiple uses do not exceed the water supply. This comparison does not preclude flexibility in managing existing water sources or in developing new water sources.

314. Comment: Motorized Travel. **Something definitely needs to be done to control the public from making new roads and driving all over the resource area. I would like to see some of the newer, short roads stopped, for example the roads up every drainage and ridge. I also think some of the main roads should be closed if conditions change to the point that the roads are being damaged. Weed seeds are also being spread by vehicles.**

Response: Travel management plans will be prepared upon completion of the RMP. Through a coordinated resource management approach, road closures and further limitations may be identified, as necessary.

315. Comment: Grazing Management. **Continuing dialogue between the BLM office, field staff and the users of the resource is a necessity. When BLM staff visit a permit to ascertain condition, potential, etc. the livestock permittee should be a part of the evaluation and monitoring process. Miscommunication occurs when there is insufficient dialogue between parties. Involvement in the process will help everyone develop a sense of ownership.**

Response: Consultation, cooperation and coordination with livestock permittees are an important part of managing the public lands and will continue, and probably become more important with implementation of this land use plan.

316. Comment: Air Quality. **Over the last fourteen years I have seen a marked increase in haze and an accelerated destruction of petroglyphs due to acid rain. There is not much, if anything, that can be done locally as the problem originates west of here, even as far as California. Unless the federal government in cooperation with private interests decides to do something about the problem, the problem will continue to worsen, and there will be nothing to do but grin and bear it.**

Response: The Bureau of Land Management is working with other governmental and private interests to maintain and improve regional air quality. The Bureau operates several National Atmospheric Deposition Program/National Trend Network monitoring stations (including a station in Craig, Colorado) to measure the chemical components and trends in atmospheric deposition (acid rain). The Bureau is also a partner in the Interagency Monitoring of Protected Visual Environments (IMPROVE) program, and the Grand Canyon Visibility Transport Commission, to monitor visibility related conditions and to develop cooperative approaches to improving visibility throughout the West.

317. Comment: Water Rights. **I note that Trail Canyon is mentioned, and I know that the owners have expressed interest in working jointly with BLM to open up and protect springs as noted in your best management practices so that a once free flowing stream can be restored.**

Response: The Trail Canyon mentioned in the Water Rights section is in error. It should be Brush Creek instead.

318. Comment: Plant Communities. **Management Alternative C: Whoever did this section did an impressive job. I would recommend a whole lot more prescribed burning of sagebrush or under certain conditions leaving natural fires to burn themselves out. I recall that sagebrush is one of those plants that inhibits the growth of other plants near it. Although studies indicate that the appearance of uplands, at least from a distance, have not changed much over the years, there is a lot more sagebrush now and less of other plants. Maybe some of this change can be attributed to grazing, but I would hazard a bet that a lot of the change is due to fire suppression.**

Response: Thank you! The amount of prescribed burns noted in Chapter II are only an estimate of what may be required and what can be realistically accomplished over the 20 year evaluation period of this document. Specific needs and proposals would be developed in Integrated Activity Plans (IAPs) following the RMP and may include increased acreages for prescribed burning or prescribed natural wildfires. Table 2-71 and map 2-28 identify an 182,000 acre area on the east side of Piceance Basin for a prescribed natural fire area in which fire, both natural starts and management ignited fires, would be allowed to burn under natural conditions.

319. Comment: Noxious Weeds. **I am not sure that requiring all vehicles to be cleaned prior to entering BLM weed free zones is practical or can be enforced. It may be better to concentrate on requiring vehicle to use existing roads and to consider closing unnecessary or duplicate roads in these areas.**

Response: The cleaning of equipment stipulation proposed for Alternatives C and D is intended to prevent the transport of noxious weed propagules and seed from known areas of infestation to noxious weed free zones. Application of this stipulation would apply to surface

disturbing equipment and would depend on the activity authorized. We firmly believe that this sort of preventative measure will be helpful in reducing the invasion of noxious weeds into previously un-infested areas.

320. Comment: Riparian. **Action on issues affecting riparian areas is critical. I commend BLM on what it proposes to do, and I hope you have the budget and personnel to do it. I would expect that most ranchers will be cooperative. Some of the damage to riparian areas is a result of a lack of knowledge. It ought to be possible to work out agreements with ranchers on private property. If help is needed, there would be volunteers from among the students at CNCC to install fencing, do plantings, and stabilize banks. Do not back off on this one.**

Response: The differences in riparian management between Alternatives C and D are due to budget and personnel capabilities. The management objectives outlined in Table 2-27 of the Draft RMP would be prescribed for all riparian habitats which may be impractical, given expected budgets and personnel capabilities. Alternative D, on the other hand, prescribes management objectives for all high and medium priority riparian habitats and for low priority habitat in a non-functioning condition. Efforts under Alternative D (the Proposed Management) would be directed to priority areas to the capabilities of budgets and personnel. Volunteers and cooperation with ranchers have, and will continue to be utilized to extend our capabilities and will be an important resource in future management.

321. Comment: Roads. **It would be a good idea to establish an advisory committee of motor vehicle users, ecologists, and other interests as well as representatives of the general public to review any proposals for road closures and/or relocations.**

Response: The Travel Management Plan will involve a coordinated resource management type of public involvement. All interested publics, user groups, special interest groups, and other state and local government agencies will be invited to participate in the development of the plan.

322. Comment: Forestry. **I will miss cutting my own fir or spruce Christmas trees. However, this restriction is necessary in my opinion, among others, to preserve these species. I would suggest that certain limited areas where firs and pines used to grow and thrive be fenced off from grazing to see if these trees would naturally propagate themselves. Other limited areas where grazing is permitted could be replanted. I have observed that in some woodland areas where grazing occurs the understory seems to be nothing but puckerbrush and eroded cattle trails and seedlings have a very hard time getting established. Again student volunteers from CNCC might be available for a project of this type.**

Response: The methods you propose for regeneration of tree species are valid. As we further develop our on the ground management, through Integrated Activity Plans, we hope that any conflicts which degrade forest stands, or any other vegetation type, can be addressed and reasonable solutions found. Public involvement will be critical to identifying and determining solutions to specific problems. We hope you will take the time to help us prepare the plans for the areas on which you have concerns. We have been using volunteers for public land enhancement projects over the past several years. Some of the projects include, willow plantings, in stream structures, riparian fences and exclosures, and spring developments.

323. Comment: Motorized Travel. **This land is public land which means to me, "this land is your land, this land is my land." In other words, this land is our land and to deny me access to the use of this land would take away one of the freedoms I have enjoyed for many years. I have had the satisfaction of knowing that when I want to "roam" these hills on or off roads to observe the wildlife and the vegetation, I could!**

Response: The RMP does not deny access to public lands. The Final RMP provides for most of the Resource Area to be open to cross country travel from May 1 through September 30.

324. Comment: Motorized Travel. **In the BLM plan there is no mention of the American Disability Act, nor is there any mention of senior citizens. I am a senior citizen and I am disabled. I feel that because I cannot walk very far and because I am growing older I am going to be discriminated against. Oh! Yes, BLM could issue me a special permit but that permit would be for me to go where BLM wants me to go, not where I want to go.**

Response: The concept of equal access, and the principles of the Americans with Disabilities Act is to ensure that recreational opportunities are accessible to everyone, not to ensure that all recreational settings are equal. As written in the Proposed Plan, OHV limitations are consistent with this concept. We realize that limitations and closures on Moosehead Mountain may inconvenience some past users. However, these restrictions are intended to prevent the further loss of the resource values that make this a desirable location to visit, which is not, in itself, precluded by these limitations. Other areas with similar resources provide similar recreational opportunities, without restrictions on vehicular use.

325. Comment: Ecosystem Management. **According to a published BLM internal memo (Ecosystem Management in the BLM, December 1993), the primary goal of ecosystem management is to "develop management that conserves, restores, and maintains the ecological integrity, productivity and biological diversity of public lands." It is further stated that ecosystem management is the "integration of ecological, economic, and social principles to manage biological and physical systems in a manner that safeguards the long-term ecological sustainability, natural diversity and productivity of the landscape." Chevron believes the Preferred Alternative D only recognizes these stated goals, without regard to socioeconomic impacts. The memo also states the "ecosystem management recognizes that natural systems must be sustained in order to meet the social and economic needs of future generations." These needs are singularly ignored in the RMP/EIS.**

Response: We believe the RMP reflects the principles of Ecosystem management.

326. Comment: Minerals. **Chevron believes that the BLM, as the land management agency, bears the responsibility to conduct scientifically valid surveys to identify the presence of habitat or cultural resources prior to proposing that these stipulations be applied. What motivation would Chevron have to pay for a NSO lease on the hope that a company-funded study would show that the resource in question is not on the lease?**

Response: The BLM is ultimately responsible for determining if a resource is present, however, unless the project proponent is willing to wait for the BLM staff to conduct the required inventory, it is more

timely to contract with outside specialists for inventory in the specific project area in question. The BLM does not require an entire lease to be inventoried for cultural resources prior to lease issuance. Only those areas to be impacted need be inventoried and only at the time the impacts are proposed.

327. Comment: Minerals. **This stipulation creates a burden on the oil and gas lease owner in a large concentration of acreage with high potential simply because it might be potential habitat for listed and candidate T/E plants. At most this should be considered for CSU rather that NSO.**

Response: Potential habitat can be eliminated from further NSO requirements, if an inventory finds no protected species on the potential habitat. There is a high likelihood of protected species occurring on potential habitat, and a high likelihood they might occupy extensive areas of potential habitat. The NSO stipulation was chosen for this reason. A CSU stipulation provides a legal right for a lessee to occupy some portion of the lease. There is some likelihood no occupation site could be found on some areas. Thus, the NSO lets a prospective lessee know there may not be a spot on the lease in which to develop the lease. Since development of the Draft RMP/EIS, inventories have better defined the limits of potential habitat and will likely be decreased when re-mapped. The new maps of potential habitat for T & E plants will be included in the Final RMP/EIS.

As noted on page 2-1, Alternative A is the existing management alternative. Under existing land use decisions, NSO stipulations are applied only to oil and gas leases and not to other surface disturbing activities. Oil and gas was not singled out. Other surface disturbing activities are restricted from sensitive plant habitats through an evaluation process which proceeds issuance of a lease or permit. No surface occupancy stipulations are unique to oil and gas leasing, undercurrent management. The other alternatives would apply NSO stipulations to all surface disturbing activities, not just to oil and gas leasing, as now occurs. Known habitat as used in the RMP are known locations where T & E plants have been verified to exist based upon past inventories. In all probability, the plants still occur on those known habitats, thus, protecting known habitat is protecting the plants. The EA process is used as the site specific evaluation for development of a lease. The evaluation in an EA may determine it is possible to develop on a portion of a lease without impacting sensitive species, and if so, the NSO stipulation can be modified based upon the site specific evaluation.

328. Comment: Visual Resources. **Under Alternative D, the BLMs preferred alternative, visual resources management lands will be increased to approximately 1.5 million acres. Again the RMP/ EIS is vague regarding what positive impact, if any, Visual Resources Management will have upon the resource area. The management plan does, however, state that meeting Visual Resources Management restrictions will involve high costs to developers. Page 2-78. The BLM must not be allowed implement a plan which will result in high costs to developers when it cannot prove that the plan will have positive results.**

Response: Management of the scenic quality of the landscape is part of multiple resource management as mandated by FLPMA. The VRM Classification of the public lands is a management guide for areas where it is desirable to protect the quality of the visual landscape. The positive impact is retaining the high quality of the visual resource that exists in parts of the Resource Area. This is an important part of the heritage of the west. The challenge is to allow development of resources and other multiple uses while retaining the integrity of the visual landscape. Keeping the vast expanses or "wide open spaces" of the typical western landscape is the goal. This is also one of the reasons why many people live here as well as visit the public lands. The visual resource is an important part of the experience visitors to the public lands seek and residents expect.

Management of VRM Class II and III areas could mean some restrictions on certain development activities and projects. However, it does not necessarily mean that costs of a project will be increased or that the project will be denied. The statement on page 2-78 is incorrect. There are many techniques available to help development blend in with the natural landscape such as: location, proper planning and design, materials used, painting with natural colors, avoid "sky lining", landscaping, proper reclamation, etc.. It is not the intent of BLM to hinder development or add to the costs of a project. Generally, projects may be much easier to blend into the landscape in Class II and sometimes Class III areas because these areas generally have a diversity of vegetation and topography. Entities that are proposing projects should also plan and design them to fit in with the natural landscape where ever they may be located and without regard to VRM classes. The planning and design of projects should take into account the color, line, form and texture of the landscape in which it will be developed. In some cases costs of developing a project can actually be reduced. Each project is different and the requirements may be different, dependant upon location, size and scale, amount of disturbance, time of year, type of project, reclamation required, etc..

329. Comment: Air Quality. **At least one of the thirteen areas subject to Colorado Visibility Impairment Analysis near Dinosaur National Monument that would be created by Preferred Alternative D, could be affected by emissions from already-existing facilities at our Rangely Field.**

Response: The analysis would involve setting emission limits and permitting new facilities or modifications to existing facilities. As long as already-existing facilities are operating under approved operating permits, no further analysis is anticipated.

330. Comment: Air Quality. **According to the RMP/EIS, "Visibility impacting proposals would not be issued a permit...unless the impacts could be mitigated to an acceptable level." These facilities would not have to be located on BLM lands to be subject to these restrictions, only posse the "potential to affect" BLM lands designated as visibility sensitive areas. In addition, the application for a permit would have to be approved by the State of Colorado, not the BLM. The RMP/EIS does not specify definitions for "potential to affect," "visibility impacting proposals" or "mitigation to an acceptable level." Also, a description of possible mitigation measures is not included in the document. To fully understand the dilemma these designations and undefined terms create for an operator of an oil and gas facility would entail a much more involved explanation than is feasible in these comments. The potential impacts resulting from the designation of these thirteen scenic vistas identified for visibility impact analysis under Preferred Alternative D would be significant.**

Response: The quote is incomplete, and may have created a misunderstanding of the technical and legal process involved in air quality management. The full text (Page 2-2) is "Visibility- impacting proposals would not be issued a permit by the State of Colorado unless the impacts could be mitigated to an acceptable level." Also, as stated on Page 2-1 "Under Alternatives B, C and D, scenic areas listed in

Table 2-1 would be identified as areas to be considered for visibility impact analysis by the Colorado Department of Health, Air Pollution Control Division." The State is responsible for implementing the Federal Clean Air Act and its own legislation regarding setting standards, emissions limitations, issuing permits, collecting fees, etc., in order to protect public health and welfare from air quality impacts. Through its established permitting process, the State defines "potential to affect," "visibility impacting proposals" and "mitigation to an acceptable level.

The Bureau is responsible to assure its actions (including use authorizations) comply with local, State and Federal air quality laws and regulations. The Bureau must also assure "the public lands be managed in a manner that will protect the quality of ... scenic; [and] ... air and atmospheric ... values; ..." (FLPMA). Clearly, air resource management is a shared responsibility between the Bureau and the State of Colorado. The Bureau is not responsible for evaluating and managing all sources of air pollution in the White River Resource Area and vicinity. The management of air quality is a shared responsibility among private, local, State, and a variety of Federal agencies.

331. Comment: Minerals. **The discussion in Chapter 4, Environmental Consequences, of the impacts associated with oil and gas development fails to take into consideration the Best Management Practices described in Appendix A of the DEIS. Therefore, the analysis is predisposed toward identifying adverse impacts which are unlikely to occur due to stipulations, conditions of approval and mitigation measures which must be followed. Consequently, the analysis is unavoidable flawed.**

Response: All four alternatives had the Best Management Practices (Conditions of approval) applied in the same manner to help mitigate environmental impacts associated with development. The residual impacts, or impacts remaining after application of the Conditions of Approval or special leasing stipulations are brought out or identified as the impacts resulting from the differences in alternatives.

332. Comment: Motorized Travel. **I do have to admit that previous generations have had a detrimental impact on the environment but I do not feel that the only workable solution is to completely eliminate motorized vehicles from forests or BLM land. Although I do use existing roads, it is apparent that many people do not. I feel that with proper information being presented to the public, and enforcement of penalties for those that take advantage of what is available, the damage to the environment can be minimal and easily managed.**

Response: Eliminating motorized vehicles from public lands is not the intent of the RMP. Enforcement can only occur if there are standards established for use. This is one purpose of an RMP. Once these standard are established, they can be posted at various places on the public lands to inform users.

333. Comment: General. **I sincerely believe that with effort from the BLM, Federal Agencies that are involved and the public input, a more judicial plan can be done that would satisfy all entities.**

Response: It is extremely difficult, if not impossible, to completely satisfy all special interests in the development of a comprehensive and controversial plan such this. However, our goal has been to develop a plan, with the help of public input, in which all interests may not agree but at least can support as we move into the next step in the process. Balancing resource values and competing uses on the public lands cannot be accomplished by the BLM alone. This will require broader understanding, ownership, and responsibility among all public land interests. That next step will involve the initiation of Integrated Activity Plans that utilize coordinated resource management and partnerships to accomplish the desired goals for the health and sustained productivity of the land.

334. Comment: Integrated Activity Plans. **Are the areas in table 1-3 listed in the order of which area will be looked at first? I am assuming that you will be taking one area at a time and looking at the specific priorities. I would like to see each area targeted with a specific date as to when the plan will take affect. This should be done with all public and private land users. (I feel that this has not been done to this point.)**

Response: Table 1-3 lists the Integrated Activity Plan areas in the current priority of intended initiation. The current priority listed may be subject to change if unforeseen circumstances cause a change in priority emphasis. Identifying a date for initiating one of the activity plans would be premature at this time. Public notification of the initiation of one of the plans will be given well before the plan is started. All adjacent land owners and holders of vested interest, as well as interested publics will be invited to participate in the process.

335. Comment: Plant Communities. **I believe all people would like to see an ecological balance of plant life. I think that this will cost the taxpayer a lot of money to maintain. Surely a compromise could be reached on this issue that will help maintain plant communities for the future.**

Response: A plant community in ecological balance with its environment should cost the taxpayer nothing to maintain.

336. Comment: Noxious Weeds. **Weeds are a problem, but in order to control them you are asking us to limit our off road access. The ranchers and farmers in this area would also encounter higher cost. We assume the oil companies are already under a limited weed free ruling now. If not, they to would experience higher cost. Are you really being fair?**

Response: Noxious weeds are our problem collectively. As long as they continue to negatively affect the productivity and use of the Public Lands, BLM WRRA is committed to an aggressive integrated management approach which is equitably applied. No single user group or constituency can or should be held accountable for the problem.

337. Comment: Riparian. **In the low priority Riparian areas I believe unlimited road access is suitable. The medium and high priority areas would need to be looked at to see if a compromise on road access could be made.**

Response: Because of a management policy of no net loss of riparian habitat or wetlands, unlimited road access or newly constructed roads would not be allowed in any riparian or wetland habitat.

338. Comment: Threatened and Endangered Plants. **This is an area of compromise. It is understood that protection of endangered plant species must be looked at. In this understanding of looking at known and potential T/E plants you are placing the existing roads to public utilities under a great deal of scrutiny. Who is eventually going to pay for the relocation of these utilities?**

Response: Valid existing rights will not be effected by the RMP. Relocation of facilities held under existing rights would not be required, and the Proposed Plan has been changed to clarify this.

339. Comment: Forestry. **This is an area that needs to be looked at so that it could be decided by the public what the usage is going to be, either commercial or non-commercial based on the most current study that has been done. We believe that the people most effected by this are the ranchers and the small business that cuts timber.**

Response: Public involvement is a critical part of the planning process. During development of this RMP we had an advisory group, of interested individuals that had expressed concerns about various resources. There was a member of this team that was a sawmill owner and user of public timber resources. As we developed the alternatives there was review and participation by this group. The draft Resource Management Plan is also an opportunity for public involvement.

Concerning your comments that, "I believe the people most affected by this are the ranchers and the small business that cuts timber". Demand from ranchers and small business for woodland products is less than 200 cords/year, while we propose to allow harvest of 42 acres/year which would be more than 400 cords/year. We exceed demand. Demand for timber is low. Within this Resource Area only 400 acres have been classified as available (suitable - commercial) for timber harvest. With a 100 year rotation age this makes four acres available per year. Demand and supply would be higher if we had the resource.

340. Comment: ACECs. **This is an area that could be used as a compromise point allowing the public to make open comments on the usage of all other areas, with special consideration being paid to off road vehicle use.**

Response: This commentor feels ACECs should be used for compromise purposes when evaluating restrictions on off-road motorized vehicle use within ACECs, in exchange for lesser or no restrictions on off-road use in all the other areas. ACEC designation is intended to place priority management consideration on important values or biological/ecological processes of global or national significance. Many local/regional values and biological/ecological processes that could be impacted by off-road use are not given priority management consideration through a ACEC designation. To compromise local/regional values and biological/ecological processes in exchange for protection of important global or national values is not sound land stewardship. Each area of consideration whether an ACEC or not, should be evaluated on its own merits. The public must be involved in evaluating those merits. Maintaining healthy conditions of the basic soil and vegetation resources should be the guiding principles in evaluating land uses, including suitability for off-road motorized and non-motorized vehicle travel.

341. Comment: Motorized Travel. **Motorized vehicle travel is absolutely essential for resource development purposes. By closing roads and restricting travel, the BLM will cause Mobil Mining and Minerals Company to incur increased costs. Mobil Mining and Mineral Company will incur increased costs from being forced to establish and use alternate routes. Surveying land for development will be virtually impossible and the transportation of resources from the area will be unreasonably impeded. The RMP/EIS does not sufficiently state whether or not limiting motorized travel will have its desired effect. The BLMs findings regarding motorized vehicle travel are speculative at best and do not justify the strict limitations sought to be imposed by the RMP/ EIS.**

Response: While the Preferred Alternative places some limitations on placement of roads and pipelines, many of these limitations are already in use. Road densities are goals which can be accomplished by several means other than cost prohibitive restrictions, and, under limitations listed in the Proposed RMP, there should be no adverse impacts to resource exploration or development. One of the requirements for an RMP is to designate areas as open, limited, or closed. The "remedies...currently available" are designed to remedy emergencies, or to protect sensitive resource values until proper designation can be made through the RMP process. Prior existing rights, such as rights-of-way for pipelines, cannot be diminished by the RMP, and relocation of these facilities would be voluntary, not be required. The Proposed Plan has been changed to clarify this point.

342. Comment: Motorized Travel. **You erroneously conclude that unregulated off-road travel causes soil compaction and erosion. This is contrary to our collective experiences. We find that traces of isolated off-road travel by a motorcycle or ATV are not visible in any way in a relatively short period of time, certainly within a year (this generally depends on the amount of rain or snow fall).**

Response: Studies show that off-highway travel can cause soil compaction, reduce soil permeability and increase water erosion. Although these studies have not been conducted in this area, they are applicable to soil conditions encountered within this Resource Area. References to these subjects are: Environmental Effects of Off-Road Vehicles (1982) edited by Robert H. Webb and Howard G. Wilshire; Journal of Applied Ecology (1982), 19, 167-175, Controlled Experiments on Soil Compaction Produced by Off-Road Vehicles in the Mojave Desert, California; Water-Resource Investigations 76-99, Effects of Off-Road Vehicle use on Hydrology and Landscape of Arid Environments in Central and Southern California, by Snyder, Frickel, Hadley and Miller. These references as well as others are available for review in the White River Resource Area office.

343. Comment: Motorized Travel. **First of all we primarily travel by existing roads and trails. Secondly from past experience of putting on a National Hare and Hound motorcycle race, we found through inspection of the race course (used by motorcycles and 4WDs) that there was a lack of adverse impact.**

Response: It is our understanding that, in addition to dry washes, the Sandwash race utilized existing roads and trails. Utilization of existing roads and trails can be deceptive in determining impacts. Literature on this subject, and the actual condition of heavily used roads with minimum maintenance would indicate that a total lack of impacts at Sandwash is highly unlikely. As noted, portions of the area utilized were also utilized in a subsequent four wheel drive race. The promoter of the subsequent race was required to rehabilitate (including seeding) some of this area used in common.

344. Comment: Motorized Travel. **The minimal impact from intermittent off-road travel is totally overshadowed by the Livestock Grazing Management proposals. A 2-inch wide motorcycle track has no impact on the environment, especially in comparison to the wholesale disruption you call for on 210,000 acres in the name of grazing - chaining, chemical kills, prescribed burns (that usually get out of control), etc. You clearly are intent on chasing the mice while the elephants run by!!**

Response: A lot of the acreage of vegetation manipulations noted are designed to improve rangeland conditions to near the potential natural plant community for the treated site. Most treatment methods would be accomplished by use of fire, a natural process in the evolution of many plant communities in the White River Resource Area.

Any proposed treatment would be subject to a site specific environmental analysis to evaluate the impacts of undertaking the project. Some treatments or treatment methods proposed are likely to create undue environmental impacts and would likely be modified or eliminated depending upon the site specific analysis. Off road motorized vehicle travel can create undue environmental impacts and likewise, should be subject to a site specific environmental analysis.

345. Comment: Wilderness. **We are totally against any further expansion of wilderness areas and request that all wilderness study area designations be dropped. We have too much wilderness already designated. Multiple use management has worked for ninety years. The ludicrous position you are in now is wanting to designate an area as wilderness ("untouched by man") yet in the same breath talk about restricting travel on roads in the wilderness area. Obviously, such an area should not be candidate for such designation in the first place. I believe the wilderness study areas on Blue Mountain, Moffat county should be turned back to multiple use areas.**

Response: Wilderness studies were mandated by Congress in FLPMA. The 6 WSAs in the Resource Area have been inventoried, found to possess the required wilderness characteristics, and designated as wilderness study areas as required under FLPMA. The wilderness study was completed in 1991 and all recommendations were sent to the Congress. Only Congress can designate an area as wilderness or release it for other uses. In the interim, BLM is required to manage the WSAs so as not to impair their wilderness values until such time that Congress makes the decision to designate or not designate them as wilderness. Wilderness is one of many multiple uses of the public lands. The WSAs are the last remaining undeveloped areas in the entire Resource Area comprising only 5% of the public lands.

The roads you refer to are outside the boundaries of the WSAs. Some of the areas do contain "ways" (i.e. routes that are maintained solely by the passage of vehicles). However, unrestricted off road use of vehicles is occurring and in some locations has escalated within the WSA boundaries causing loss of vegetation and soil erosion. This use is not consistent with the mandate of Congress and FLPMA and must be curtailed in order to reduce resource damage and ensure that wilderness characteristics are not adversely impacted within the WSAs.

346. Comment: Access. **This forced access surely cannot be worth the total negatives it incurs because it literally will only gain approximately 3000 public acres to vehicular circulation. This is really incongruous because there are virtually hundreds of thousands of acres closed to the public being controlled by energy companies within thirty miles of Davis Gulch. And these are public acres also!**

Response: Davis Gulch is a location within an area of approximately 5000 acres identified as needing enhanced access, for the benefit of the general public wishing to use public lands. Restrictive access for the general public is the result of land ownership patterns along Piceance Creek, and the fact that County Road 5 in the area makes only limited crossings of public land. Access for the general public is, then, limited to parking along the County Road, which is not often safe to do, and walking up steep, rocky slopes. The means chosen for enhancing access in this area, was to acquire an easement from the private land owner, for an existing road at Davis Gulch, allowing vehicles to safely park on public land off of the County Road (no campground was ever planned). Access beyond this parking point would be limited to foot or horseback. No general opening to vehicular circulation was intended. The statement at the February 4 meeting was of a general nature (not specific to any one situation) in response to a question regarding what the Bureau does if a land owner refuses to sell an easement. The answer was that, upon review of all alternatives, a manger could utilize condemnation. This, however, is extremely rare. There is currently no plan to "force" access across private property at Davis Gulch.

347. Comment: Noxious Weeds. **There is currently a problem in Davis Gulch because of the Houndstooth, Burdock, Musk Thistle and Canada Thistle. The increase in use of this area will, without question, proliferate the spread of these noxious and problem weeds.**

Response: We are well aware of the noxious weed problem in Davis Gulch and are working on reducing it through a cooperative program with the private property owner and the Rio Blanco County Weed Department. If you would like to participate in the project, we would greatly appreciate your assistance.

348. Comment: Access, ACECs. **The same RMP 1995 document designates as the lead Area of Critical Environmental Concern: DEER GULCH. Now, believe it or not, Deer Gulch is part of our ranch BLM permit and it drains into Davis Gulch. Matter of fact, it drains onto the exact location where the proposed campground is to be established.**

Response: The Deer Creek ACEC does drain into Davis Gulch but not onto any proposed campground. There is no campground identified in this document for Davis Gulch. Davis Gulch has been identified as an area in need of improved public access which means acquiring access from a willing private land owner. If improved public access was ever attained into Davis Gulch, public use within the Deer Gulch ACEC would have to be compatible with the important values of the ACEC. Camping and motorized off-road vehicle use would not be compatible with the values of the ACEC, thus not allowed. Access into the ACEC would be limited to foot or horse travel. An access point and parking area on public land in the lower part of Davis Gulch, outside the Deer Gulch ACEC, are likely the only facilities that would be allowed.

349. Comment: General. **What would be wrong with the plausible and functional notion of coordinated resource management representation reaching decisions that show cooperation and knowledge. Such an effort would dispel any outward signal that the whole RMP effort extended for public input and assimilation is not window dressing masking predetermined decisions.**

Response: The coordinated resource management process will be utilized in the development of the site specific Integrated Activity Plans that will follow completion of this RMP.

350. Comment: General. **The need for a new 15-20 year plan was not clearly established. Secondly, there were no criteria established to justify a 15-20 year plan as opposed to a 1,5,10,15,20 year plan.**

Based on our modern times, it seems that a 15-20 year plan is too inflexible to survive a 20 year period. There should be provisions to periodically revise the plan as conditions change.

Response: The need for a new management plan for the White River Resource Area was detailed in the Purpose and Need section of Chapter I. The BLM planning regulations has a built-in amendment process. If new issues arise or situations change that were not anticipated in the RMP, then provisions exist that would allow an amendment of the plan to incorporate the new issue(s)/change(s).

351. Comment: Integrated Activity Plans. **Page 1-5, second column states the following: "Partnerships with all landowners and public users will be pursued." We would like the BLM to clarify this statement.**

Response: Resource decisions made on public lands can have an impact on adjacent land owners, whether they be individuals, corporations, state and local governmental agencies, or other federal agencies. For that reason, when the specific Integrated Activity Plan areas have been delineated, all vested interests and adjacent land owners will be invited to participate in a partnership or workgroup that will assist the BLM in developing measures to help implement the decisions and goals for that area. The text on page 1-5 will have the word 'adjacent' added before "land owners" in the second column in order to help clarify the meaning.

352. Comment: Integrated Activity Plans. **The second part of your plan calls for an IAP which involves many unidentified actions with no associated cost/benefit. This is supported by your statement the IAPs will be prepared after the approval of the RMP. Thus, there exist the possibility of hidden agendas. Suggest IAPs be incorporated within each proposed RMP alternative along with a cost/benefit analysis and cause/effect of each respective alternative.**

Response: The resource activity planning process has been a part of BLM planning regulations since the early 1980s. They are intended to provide site specific direction on implementing the general goals developed for specific resources in the RMP. Integrated or coordinated has been added to the title to place more emphasis on analyzing how resources are interdependent to each other from an ecological standpoint, and the involvement of the public in the process. By BLM Manual guidance, every activity plan must contain an estimate of the cost, over time, for implementing the plan.

353. Comment: General. **There is no direct summary of these criteria directly relating them to each RMP alternative.**

Response: The planning issues and accompanying planning criteria in Table 1-4 are the reason that the development of this document occurred. Each alternative looked at these specific issues from a different perspective.

354. Comment: Water Quality. **There was a statement about compliance with state water laws, one of which is pollution. On page S-3 it was stated sediment and salinity could not be quantified based upon BLM authorized actions. This is not entirely correct. The state Dept of Health water division quantifies water quality all the time (phone 303-692-3605). Tests are continually conducted on water for many elements such as oil and harmful minerals/ metals in water.**

Response: We agree with the comment. Changes will be made to Table S-1 on page S-3, and the first sentence deleted.

355. Comment: Forestry. **The 100 year cutting idea appears on the surface to be a good idea; however, how many years does it take to grow timber in the area? If 100 years OK, if 70 not OK. I think an analysis of the entire acreage would be beneficial in assisting in this decision to cut trees with reforestation.**

Response: The Timberlands Management section has been rewritten to improve clarity and to give more background information. As the final RMP only shows the Proposed Management the draft must still be used for comparison purposes. The rotation age considers the growth capability of the tree species, the age at which growth declines and disease increases, and age at which a marketable product is reached. From literature and comparison with our site characteristics a 100 year rotation was determined. We could have used a 70 year rotation age, but stands would be producing smaller product. Often in the management of tree stands different prescriptions are used to either enhance the growth of the remaining trees (pre-commercial and commercial thinning) or to meet demand for specific products. A 100 year rotation allows for thinning and selection of specific products throughout the rotation period. A 70 year rotation does not allow for the maximum growth potential of the trees. All of the acreage of timberland and woodland were considered in the development of alternatives.

356. Comment: Cultural and Paleontological Resources. **Cultural Historical & Paleontological Resource Management. This area is one of those where it is a problem without a solution. It is a case of conflicting laws. If one follows the National Historic Preservation Act, then there would be no oil, gas, sodium, recreation, roads, humans, etc., allowed on the subject land. If one followed the Federal Land Policy and Management Act then we disturb the fossils, artifacts, etc. This is because the area is heavily laced with fossils, Indian artifacts, wickiups, arrowheads, Indian camps, old homesteads, etc. Thus, to strictly comply with historical preservation no human use could be made of the land. Resolution then is through our Congress which would result in a compromise position. This is what the RMP represents-a compromise plan in which we look the other way when we want oil, gas, travel, recreation, domestic resources, etc.**

Response: The National Historic Preservation Act of 1966 as amended is not intended to totally prevent development nor to protect every arrowhead, lithic scatter of old homestead. Instead, a compromise approach is built into the legislation and implementing regulations that require the "consideration" of the impacts of any project on the resources and the "significance" of the resource. If the resource is considered to possess valuable data about past life ways it can be avoided by project redesign or the scientific data may be recovered by disciplined, peer reviewed excavations, for example, and upon completion of data recovery the project may proceed as designed, even though the resource will be destroyed. In some cases the scientific value of the resource is completely recovered when the site is properly recorded, in which case, no further work is possible or warranted and the project may proceed. In most cases the BLM does not "Look the other way" when the nation needs the resources of Public Lands for the well being of its citizens.

357. Comment: Wilderness. **To use the excuse, we need to provide more lands to those on foot to have a closer walk with nature is bunk. The same walk can be had in any of our National Forests**

and the person can experience the same thrill in either wilderness or non-wilderness. I am opposed to any new wilderness areas. Further, where is the justification to establish a wilderness are other than someone thinks it would be nice to have more of them? What about the cost benefit, policing, etc?

Response: Wilderness studies were mandated by congress in the Federal Land Policy and Management Act (FLPMA). The six WSAs in the Resource Area were inventoried and found to have wilderness characteristics and designated WSAs as required by FLPMA. The wilderness study was completed in 1991 and all recommendations were sent to the Congress. Only the Congress can designate and area as wilderness or release it for other uses. In the interim, BLM is required to manage the WSAs so as not to impair their wilderness values until such time that Congress makes a decision. Wilderness is one of many multiple uses of the public lands.

As noted in the Wilderness study report, designation of the WSAs as wilderness would tend to increase long term recreation use particularly from those outside the region. This recreation use (tourism) would generate some long term increase in local economies and although not large, could be noticed in small nearby communities. Since there is little to no mineral values in 5 of the 6 WSAs, there would be no mineral revenue lost if the areas were designated as wilderness. Even much of Oil Spring Mountain could be developed for oil and gas if it were designated as wilderness because of valid existing rights. Livestock grazing in the areas would continue if designated as wilderness.

358. Comment: General. **Nor does it address the custom and culture of this region.**

Response: We do not see the need to address the custom and culture of this region at this time. We did address social and economic concerns.

359. Comment: Noxious Weeds. **CIG would strongly favor implementation of Alternative C in specific regards to the Noxious Weed stipulations contained in Table 2-23. The third stipulation in this table, only to be implemented under Alternative D, would require "All authorized users of disturbed areas will be required to inventory for noxious weeds in both the spring and fall. Immediate action will be taken to suppress any noxious weeds found." In the case of pipelines, once the disturbance has been completed and rehabilitation has taken place, further disturbance would occur only for maintenance, repair or replacement activities. Normal pipeline operation should not require any further field reviews. If field reviews were to be required, they should coincide with DOT required pipeline monitoring activities, usually every 12 to 24 months.**

Response: The application of this stipulation is discretionary and its intent is to insure that disturbed areas are monitored during the period from construction to successful revegetation. This is the period when these areas would be most susceptible to noxious weed invasion and establishment. After revegetation, we envision that it would only be necessary to monitor those areas which are disturbed as a result of pipeline repair or reconstruction activities.

360. Comment: Corridors. **Table 2-65, listing corridors for major rights-of-way and their disposition, apparently left out the Park Canyon-Magnolia Corridor that will reflect CIG's Uinta Basin Lateral and Questar's existing pipeline. Also, this corridor should be extended from the junction with the Dragon Trail-Atchee Ridge Corridor to the Utah State Line.**

Response: This oversight has been corrected...the Park Canyon-Magnolia corridor is addressed in Table 2-65 of the Draft RMP. It should be noted that the western end of this corridor does not follow the CIG and Questar routes. It drops to the south to avoid Little Horse Draw, which is over crowded with major facilities. The corridor ends at Dragon Trail, on the eastern edge of a block of private land. From this point there are alternative routes which potentially affect different land owners. The corridor was not extended to the State line in order to keep from dictating which alternative was chosen, and thus which landowner would be affected. This will not effect existing facilities or rights. This corridor segment has not been added in the Proposed Plan.

361. Comment: Use Authorizations. **Provision needs to exist in Alternative D (the preferred alternative) to allow for new communication site locations in the circumstance where no existing location can be reasonably used to modified to meet the needs of the user. In the case of natural gas pipelines, failure of communications along the entire length of the system can result in violations of other regulatory requirements and, to some degree, a safety hazard.**

Response: This has been incorporated in the final.

362. Comment: Minerals. **Controlled Surface Use stipulation is a category that highlights some of the more prominent impacts to be considered for management of the surface such as fragile soils and paleontological resources. After review of the paleontological areas some 750,000 acres has been included within this category. This will require a survey prior and during any surface disturbance activities which is going to provide an additional expense for the operator. The operator is currently furnishing a cultural survey complete with flora and fauna. Most of the more intense fossil areas are now at his time and it appears that this requirement is only data collection.**

Response: The BLM realizes that a considerable acreage is currently in the Class I designation. Class I geological rock units are designated Class I due to the presence of known scientifically important paleontological resources and the likelihood that more exist in those units. In actuality, areas of very steep slopes, thick vegetation, and deep soils will not need to be surveyed as fossils will most likely be located in obscured or inaccessible exposures. Much of this can be determined in the office before an on-the-ground survey is necessary. When a paleontological survey is deemed necessary, the operator will probably have to bear the cost of a permitted paleontological consultant if the results are needed in a timely manner. A database of paleontological information has been assembled, but the information is relatively scant. As more surveys are completed and other information is reported to BLM, the Class I areas can be better defined and reduced. As this occurs acreages for the different formations can be adjusted accordingly.

363. Comment: Minerals. **It is noted that oil and gas management which has one of the largest impacts in the White River Resource Area only covered one and one half pages of the plan while plant management required over 11 pages as did riparian with over 10 pages. Is it possible that while preparing the document that time priorities were allocated improperly?**

Response: The difference in which individual resource data was presented in the document is related to the type of use expected to occur to that resource as well as establishing goals to sustain or improve

the resource condition. Oil and gas development can occur throughout the Resource Area, while some of the resources that would be impacted from oil and gas development only occur in limited areas. The goal for the oil and gas resource is to provide for leasing with or without special stipulations. However, there may be several different goals attached to the other resources, such as vegetation. This difference is what results in some sections being longer than others.

364. Comment: Paleontology. **We are concerned about the requirements for paleontological review prior to ground breaking activity in your area. Any formation that has known sensitive fossil resources (ascertained during a literature and museum search) should be carefully evaluated in the field prior to impact. Just because there are no known sites in the area does not mean that the resource isn't there.**

Response: All geological units are potentially capable of containing scientifically important paleontological resources. However, assigning Class I status to certain geologic units and areas is based on the presence of known, scientifically important paleontological resources. Class I status is meant to be organic in nature, i.e., this status will fluctuate based on new information. Certain areas may be dropped from Class I status as more localized information becomes available. Conversely, Class I areas may be added as more fossil finds are made and recorded. Currently, only vertebrate fossils, and in some rare cases, some invertebrate and plant fossils are considered scientifically important. Class I units are based mainly on the known presence of vertebrate fossils. BLM's policy is to include consideration of paleontological resources in all actions. To this end, the WRRA maintains information on paleontological resources, which is upgraded with new information as it becomes available. It is not BLM's position to require blanket inventories - only surveys in areas likely to produce important paleontological resources (as defined above).

365. Comment: Paleontology. **It is very important to recognize that the Colorado Plateau, including your area, is extremely sensitive paleontologically. In fact, geologic maps suggest that more than 50% of your resource area is comprised of paleontologically sensitive units. Few places in the world have the wonderful nonrenewable resource that we have here. We need to protect and study it, not allow it to be destroyed in the name of economic progress.**

Response: Known paleontological resources have been addressed in the WRRA RMP, and geologic rock units have been grouped into Class I units based on current information.

366. Comment: Grazing Management. **With many other areas of public land available for opening to the public, I cannot understand why pressure is being put on ranching operations in certain areas. This seems to be an unnecessary attack on ranching interests as legitimate multiple use options.**

Response: Table 2-67, pages 2-100 through 2-103, Draft RMP/EIS, lists areas that have been identified for enhanced public access. Most of these areas contain larger blocks of public land with insufficient access for the general public to access their public lands. Public recreational use is just as legitimate use of public lands as is livestock grazing.

Enhanced public access is not an attack on ranching operations as suggested by commentor. Enhanced access would be accomplished, by policy, under a willing seller philosophy, such as, through exchanges or purchases of easements. Condemnation of public access, an option available to BLM, could be considered a threat to a ranching operation, but by policy, BLM would use condemnation as a last resort and only in situations of highest priority, as determined through separate analysis following completion of this document. Identification of areas with opportunities for enhanced public access is not a threat to ranching operations utilizing those areas.

367. Comment: Wild Horses. **About wild horses, does the range mangers know about the 8 or 9 head that are living up here in this area?**

Response: The BLM is aware of the horses in this area. They were illegally released there and we believe that they originated west of Yellow Creek. We plan to remove them as soon as we are able to.

368. Comment: T/E Plants. **Is it necessary to close an area due to T&E plants? Every living thing on this planet is tied to evolution. Fence off an area of concentrated plants and wait to see if the plants are coming or going.**

Response: The two threatened plant species in the Resource Area are narrow endemics which have evolved to occupy a limited habitat. They are the end result of evolution, until a disturbance, natural or man-caused, changes their environment. Management proposed in this document is designed to prevent a man-caused disturbance.

369. Comment: General. **The Endangered Species Act reauthorization and the Range Land Reform will both affect this RMP document. Common sense dictates that a one year extension will allow those changes to be incorporated without requiring an amendment to a document recently promulgated.**

Response: The changes in existing laws referenced by commentor may not take place. It makes more sense to complete this RMP than to prevent further delays in implementing land use decisions not affected by Rangeland Reform or The Endangered Species Act reauthorization. Changes in law may not affect many of the land use decisions.

370. Comment: General. **There are several reasons to encourage a return to scoping and subsequent plan revision. First, a recent meeting of the Moffat County Commissioners indicates a substantial amount of controversy associated with the draft in its current form. This controversy centers around a perception that the public involvement required by NEPA was not sufficient.**

Response: There was not a "substantial amount of controversy" at the briefing meeting, that was held with the Moffat County Commissioners. The Commissioners asked that we hold a public meeting in Craig, Colorado, and we agreed with that suggestion. All requirements of the National Environmental Policy Act have been followed in the preparation of the Draft document.

371. Comment: General. **Even if the planning did meet NEPA requirements, a return to the process is advisable since agency philosophy has moved to encourage a reliance upon locally obtained consensus as a starting point in the decision process.**

Response: The use of locally obtained consensus to help resolve conflicts in public lands management is a priority in the BLM. That process will be utilized to help the BLM develop the Integrated Activity Plans that will follow completion of this RMP.

372. Comment: Roads. **This should be a decision made by the voters of Western Colorado, as to the closure of public roads on BLM land.**

Response: There is no legal precedent for holding and election to determine how to manage public land resources. Future road closures on BLM lands will be determined through a coordinated resource management system in which the public and other governmental agencies will be invited to participate. However, under certain circumstances, such as when resource damage is occurring, certain areas may be subject to emergency closure.

373. Comment: General. **The RMP/EIS is also vague and overly speculative. The RMP/EIS does not give concrete proof that implementing Alternatives B, C or D will have the desired effect. In Chapter 4 of the RMP/EIS, Environmental Consequences, there is a lack of reasonable certainty regarding the effectiveness of each alternative.**

Response: The RMP process establishes broad, generally defined goals and objectives for each resource. The activity planning that follows the RMP will combine the various resource objectives for a given area and set out site specific implementation procedures for obtaining those objectives. A requirement of the activity plan is to develop a monitoring system that will track implementation of the on-the-ground developments to assure they are meeting the resource objectives identified in the RMP.

374. Comment: Economics. **By failing to adequately address economic issues, the BLM is violating its own rules an deregulations, and therefore, the RMP/EIS is legally insufficient.**

Response: A revised economic analysis was completed with the assistance of the oil and gas industry. The revised analysis is contained in Chapter IV and supporting documentation is located in Appendix D

375. Comment: Minerals. **The RMP/EIS must go back to committee and individuals working in the oil shale industry should be consulted regarding the adverse effects of implementing the proposed surface stipulations.**

Response: If past history is any indication, the surface stipulations identified in this document as applied to future oil shale development, will be a minor inconvenience. Mitigation measures and monitoring requirements on oil shale lease tracts will be developed through site specific environmental impact statements. Mitigation developed for the two existing federal lease tracts are far more extensive than the lease stipulations identified in this RMP.

376. Comment: Minerals. **On page 4-10, the RMP/EIS states that surface disturbing activities such as oil shale production would increase soil erosion and thereby increase sediment and salinity in nearby drainages. The RMP/EIS alleges that surface stipulations would provide a solution to that problem. However, the BLM fails to quantify what amount of sediment and salinity comes from industry and what amount occurs naturally.**

Response: Without very intense studies, it would be impossible to determine the amount of sediment that goes into solution as a result of natural erosion, man enhanced natural erosion, and erosion caused from disturbance. The intent is to not allow a net increase to sedimentation resulting from surface disturbing activities.

377. Comment: Minerals. **On page 4-17, the RMP/EIS discusses impacts on groundwater management. According to the RMP/EIS, the development of oil shale would have several adverse effects upon groundwater. Again the RMP/EIS has insufficient evidence to support such conclusions. The conclusions reached by the BLM are speculative and unreliable. To determine what impact, if any, oil shale development would have on groundwater, the BLM must conduct extensive groundwater quality and hydrological studies. As far as can be determined from the RMP/EIS, the BLM has not conducted such studies and therefore, its conclusions regarding the impacts on groundwater from oil shale development must be discarded.**

Response: The impacts outlined in the White River Draft RMP were a summary of impacts discussed in the Piceance Basin RMP. These impacts were determined using hydrologic studies and models preformed by various consultants and USGS hydrologists. These models addressed impacts to both groundwater and surface waters of the Piceance and White River drainages from oil shale development and are available in the Resource Area office for review.

378. Comment: Grazing Management. **The BLM proposes to reduce the amount of land allotted to livestock grazing without demonstrating that any benefit will result therefrom. The BLM also fails to consider the economic ramifications which would result from imposing such severe limitations. Several ranchers depend upon BLM grazing rights for their livelihoods. The RMP/EIS must be redrafted to consider the negative impacts which would result from the implementation of its proposed livestock management plan.**

Response: The Draft RMP/EIS does not reduce the land allotted to livestock grazing. As noted on page 2-51, grazing management decisions made through a "1981 White River Resource Area Grazing Management Program EIS" and a 1981 "Rangeland Program Summary" are to be incorporated into this document. The land available to livestock grazing would remain the same under each alternative in the Draft RMP/EIS (Table 2-36, page 2-52, and Table D-1, Appendix D). The economic analysis suggested, was included in the 1981 "White River Resource Area Grazing Management Program EIS". That document analyzed the economic impacts of varying levels of livestock grazing, including no livestock grazing on public lands. Continuation of existing livestock management decisions does not require additional economic analyses.

379. Comment: Waterpower and Reservoir Management. **The RMP/EIS fails to discuss in detail what impacts, if any, the RMP/EIS will have upon waterpower and reservoir resources. Although the RMP/EIS is vague regarding this issue, it is believed that the BLM will not be altering waterpower and reservoir resources management. Mobil Mining and Mineral Company relies heavily upon water resources development in planning for its future activities. If the RMP/EIS will have a significant impact upon waterpower and reservoir resources management, it must be redrafted to specifically state the nature of those impacts.**

Response: The waterpower and reservoir resources section of the document relates to lands withdrawn specifically for these purposes by the federal government. The Bureau of Land Management has no current plans to develop these resources, and the lands are open to other, compatible uses. Development of such resources by private individuals and companies will be dependent upon State adjudication of water rights, and, where public land is involved, authorization of

related facilities by the Bureau. The open, avoidance, and exclusion designations will apply to these authorizations. Since only 7% of the White River Resource Area is in an exclusion area, the RMP would not be expected to interfere with waterpower and reservoir resources management.

380. Comment: Motorized Travel. **Separate environmental studies should be conducted in each area to determine it's most practical application and to limit multiple user conflicts. Perhaps some areas should be open to Alternative A travel (the current condition) and some of the more ecologically vulnerable areas restricted to travel.**

Response: This Resource Management Plan is only the beginning of the planning process which is dynamic. Additional environmental analysis and planning will occur for the Geographic Reference Areas as listed in priority order in the RMP. Refer to comment number 178.

381. Comment: General. **Alternative A is the only one in the BLM draft that will allow us to use our public land.**

Response: All alternatives presented in the Draft allow the use of public lands. There may be limits on the type of use, such as permitted uses that would have conditions of approval attached in order to protect sensitive resources, but most casual uses would occur without limitations. If resource damage occurs from either casual use or permitted use, the BLM is required by law to take corrective action.

382. Comment: General. **Public lands are to be used in the best interest of all citizens. To deny reasonable and sane development of natural resources on public land is to deny jobs and adds to the trade imbalance, not in the best interest of most citizens.**

Response: White River Resource Area has tried to plan use of the public lands, with the best interest of most citizens in mind.

383. Comment: General. **The selection and organizations and specific representations to write the preferred alternative D was in my opinion not in balance. This violates the rights of our user group and the BLM is in violation of FACA. This draft was a long process and the White River, BLM should have endeavored to further contact a OHV representative.**

Response: The workgroup representation that was formed to assist the BLM in developing a range of alternatives for the Draft document were selected from interested volunteers that attended the public scoping meetings at the beginning of the RMP process. Both state and local OHV group representatives took part in those public scoping meetings.

384. Comment: General. **In conclusion it appears the BLM is managing land for something other than public use. It also appears that the necessary studies to implement such a drastic plan as alternative D have not been done.**

Response: Information used to develop the RMP was based on the best data available as well as the BLM resource specialist knowledge of the resources occurring on the ground. Expertise from other state, federal agencies, and the public were also relied upon at arriving at the proposed decisions. Please refer to the list of agencies contained in the Consultation and Coordination sections of Chapter V.

385. Comment: Motorized Travel. **Continued use of the public lands for motorized recreation, while mitigating problems before closures, which is not true management, are implemented is supported by the Colorado Association of 4 Wheel Drive Clubs.**

Response: Mitigating problems after they have occurred is a reactionary technique which, in the case of some resource values, is simply too late. We would prefer to be proactive, identify those resource values that need protection, and take proper action before they are disturbed or destroyed.

386. Comment: Motorized Travel. **Please do not close all of the roads and trails in the White River Resource Area.**

Response: None of the Alternatives in the Draft RMP of the Proposed Management Plan contemplate or propose the closing of all roads & trails.

387. Comment: Minerals. **Our main objection to the proposed RMP is the 800% increase to 148,450 acres of "no surface occupancy" designation. This is proposed primarily to protect two "sensitive" plants (The bladder-pod and mustard weed). AGNC believes that existing BLM management of ACECs is adequate protection. Special management instructions can be directed to lessees in these areas sufficient to protect the plants.**

Response: The comment is referring to a NSO stipulation on potential habitat for two threatened plant species. As noted for NSO stipulation #NSO-25 the acreage to which this stip would be applied is 46,840 acres and not 148,450 acres. The stip requires an inventory for T & E plants. Those areas inventoried that do not contain any T & E plants would no longer be considered potential habitat subject to the NSO stipulation.

388. Comment: Minerals. **AGNC also objects to the potentially costly requirement that more studies will be required, financed by lessees, before additional resource leasing is allowed. The public lands in this region have been thoroughly studied during the proposed oil shale development period. Additional studies would just add unnecessary costs on resource development.**

Response: Public lands studied during the Proposed Oil Shale Development period represent a very small part of the total BLM land available for leasing. Inventories are required to protect sensitive resources (ie, T/E species). Unfortunately, BLM's budgets are declining and money to conduct inventories are not available. The option would be to not lease lands needing inventories until such time that BLM could conduct the inventory.

389. Comment: Access. **Davis Gulch is made up mostly of shale. The combination of the shale and the present flood plain have resulted in floods which have moved large amounts of shale across the Piceance Creek road and onto the irrigated fields. We certainly do not need this area disturbed causing more erosion. A public road through this fragile area would make the flooding worse. We know from past experience with the access on Cow Creek that the BLM won't keep up their access.**

Response: If the Bureau were to acquire an easement at Davis Gulch, the road would be renovated based on designs prepared by qualified engineers.

390. Comment: Access. **The polluting of our Davis Water Rights is also of certain concern. This access would bring people into the area and with the people would come their vehicles and their trash. It carries into the soil.**

Response: This is a valid concern which will be addressed at the Integrated Activity Plan (Piceance Creek GRA) planning stage.

391. Comment: Access. **Approximately three miles from this proposed access road there is an existing public access through our ranch property. It was purchased as a State Game and Fish Right-of-Way, but last year when we contacted them about the trash that was left and scattered, by hunters, we were told it belongs to the Bureau of Land Management. We found that the only legal document in the Rio Blanco County Court House shows that the Colorado State Game and Fish owns the right-of-way. The BLM and the Game and Fish will neither one take responsibility for the maintenance of this right-of-way. The road is not taken care of and the fence, which was not properly built in the first place, is constantly being torn down along with the signs and the gates.**

Response: The right-of-way in question was transferred to the Bureau of Land Management on April 20, 1989, and the deed was recorded in Rio Blanco County Court House on June 1, 1989 (book 477/page 836). The road is on an annual maintenance schedule, and is bladed every year. Each year during hunting season, we issue a contract to have trash picked up at the junction of this road and County Road #5. The large number of hunters using and passing this road make it difficult to insure that no trash is left for a long enough period to result in some problems, but we are trying to improve the situation.

392. Comment: General. **As a long time resident of Rangely, I am a responsible user of the resources of this area. I cannot support any of the alternatives in the RMP except A. I believe to force the excessive restrictions, as outlined in Alternatives B, C and D, on the general public is an unfair and irresponsible move on the part of the BLM.**

Response: We appreciate the fact that most local residents are responsible users of the public lands. The management decisions in the Final were developed based in large part on local input on the Draft document. The restrictions that remain are considered to be the minimum necessary to maintain and improve the health of the land and still provide for the social and economic needs of current and future generations.

393. Comment: T/E Plants. **When was the last on the ground mapping done on plant locations? Has there been any monitoring done? If so who has done the monitoring and how often? Why are these areas being enlarged and why are NSO stipulations being placed. According to Ed Hollowed, no Biological assessment has been done. Why has there been no Biological assessment?**

Response: Rare plant inventories began in 1982 and have continued each year since. All known locations of sensitive plants have been mapped. Monitoring of most sensitive plants occurs each year within several of the designated ACECs. The number of ACECs have increased because of recent inventories finding sensitive plants in those areas. NSO stipulations are applied to newly inventoried populations of sensitive plants to protect them from surface disturbing activities. A biological assessment is required only for actions negatively impacting a listed threatened or endangered species. NSO stipulations and ACEC designations protecting these species are actions benefitting them and do not require a biological assessment.

394. Comment: General. **I personally, am certain that to implement Alternative D would severely limit the use of this land for recreation, agriculture, and the energy industries. I realize that the local representatives of the BLM are willing to work with the local custom and culture, but future decision makers in the BLM may not and I chose not to give them the opportunity to restrict my rights further. If someone else decides to exercise their rights and not use this land, that's fine, but it is no excuse to limit me. My feelings are based on past experiences with other agencies of the Federal Government as well as the BLM, and I am certain that others will agree, if given an inch with the best intentions they will take a mile as has been adequately demonstrated time and again.**

Response: BLM will continue to work with local populations. Future changes to the plan would require a plan amendment, which would also require additional public involvement.

395. Comment: General. **The question is did the White River Resource Area violate the Federal Advisory Council Act (FACA) when it established and received recommendations from this group? FACA required, among other things that meetings be open to the public. The meeting notes be available for public inspection. The committee "be fairly balanced in its membership". Calling it a "team" does not alter its nature.**

Response: Workgroups formed at the scoping stage of the RMP did not violate provisions of the Federal Advisory Council Act. The workgroup members were selected from volunteers that were in attendance at the public scoping meetings, and all the workgroup meetings that were held were open to the public.

396. Comment: General. **In the RMP/EIS the BLM also proposes to add issues not addressed in earlier land use plans, for example: (1) management of BLM land near the Dinosaur National Monument, (2) salinity in the Colorado River, (3) oil and gas development throughout the resource area, (4) the spread of noxious and problem weeds, (5) reintroduction of the black-footed ferret, and (6) unrestricted motorized travel throughout the resource area, as well as habitats for wild horses, livestock and big game. While MEPUS feels that addressing these issues is commendable, and perhaps needed, we feel this is overly ambitious and creates a scope that is much too large, making it extremely difficult to fairly evaluate each new directive on it's own merit. It is our opinion the additional issues should each be put out for comment separately so we could evaluate them with individual cost/benefit analyses.**

Response: The scope of resource management in the White River Resource Area is large. That's why BLMs planning system consists of a two step process for most resources. The RMP lays out the overall goals of the proposed management and the activity planning, or integrated activity planning step that follows, will greatly reduce the area to be focused upon in the next step. Individual program cost benefit analysis can be applied more accurately during the second step.

397. Comment: Roads. **We would also like a written indication of what a road or a trail is by definition of the BLM. The RMP draft does not address this.**

Response: Definitions of the terms trail and road have been added in the Proposed RMP.

398. Comment: Grazing Management. **Effects on livestock as considered in Alternative D are stated using rather confusing wording: "a decrease in forage loss of 1 percent from Alternative A" (Page S-8). This double negative says that more land will be given to livestock that could further deplete the WRRAs resources. Range improvements necessary to control livestock and improve rangeland conditions would include "approximately 200 miles of fencing and about 700 water developments including reservoirs, wells, springs and associated troughs, tanks and pipelines" (Page 2-53). These "improvements" seem to waste resources; the RMP isn't clear about the benefits of increased livestock use of the area.**

Response: The one percent forage loss as noted on page 5-8 is a comparison between the four alternatives. It does not imply that livestock would deplete resources, but rather, actions proposed under Alternative D would result in a 70 AUM forage decrease above that estimated for Alternative A. The range improvements referenced on page 2-53 are only an estimate of what would be required for proper livestock management. Before range improvements are constructed, they must undergo additional environmental analysis and are subject to a cost benefit analysis. These additional analyses are a safe guard against unnecessary improvements or those with unacceptable environmental impact. Likewise, increases in livestock grazing use would be subjected to additional analysis to ensure the increased use is sustainable and meets the objectives of rangeland health and desired plant community goals as noted on pages 2-20 and 2-21 in the Draft RMP/EIS.

399. Comment: Socio-Economics. **I can imagine the concern that may arise when one looks at the social and economic conditions of Rio Blanco County that may occur as a result of Alternative D (as depicted by Table 3-30 (Page 3-45)). The overall population predictions for the thirty-five year period of 1980-2014 are deceiving. Although the total population decrease of Rio Blanco County for 1980-2014 is 26%, if we examine ten year periods and do some minor computations, we get a different picture. For 1980-1989, the decrease was 18%; for 1985 to 1995, the decrease will be 15%, and for 1989-2000, the decrease should be only 5%. Thus we see that the population is not decreasing as a constant rate but appears to be approaching stabilization.**

Response: Thank you for your comment.

400. Comment: Economics. **I beg you, reconsider the implications of Alternatives C and D in light of how it will effect this area. True, it will protect the public lands, but no one's going to be able to live here to see it.**

Response: A revised economic analysis was completed and presented in Chapter IV of the Final document. As can be seen the socio and economic impacts resulting from the four alternatives are not that different.

401. Comment: Ecosystem Management. **Biodiversity and Ecosystem Management are very flexible concepts which can be used to defend virtually any and every decision or action. Allowing the use of those terms without some type of clear definition or standard is akin to signing a blank check--not often a wise thing to do.**

Response: A definition of biological diversity and ecosystem management and how they are used in the document is located in Chapter IV pages 4-150 and 4-151 of the Draft RMP/EIS.

402. Comment: Minerals. **The Alternatives A-D of the Draft Resource Management Plan and Environmental Impact Statement "DRMP" would devalue our assets retroactively as they were acquired mostly by the bid process accepted by the BLM in August, 1994.**

Response: Without specifics as to how the assets are devalued, we cannot respond to this comment.

403. Comment: Minerals. **Sensitive plants should not be given blanket no surface occupancy restrictions around our Philadelphia Creek Area leasehold as it impedes our company in the development of the resources that by lease from the same BLM we have the right to develop.**

Response: New NSO stipulations are not applied to existing leases, and thus, do not change the existing rights granted under a lease from BLM. Conditions of approval may be attached to existing leases in which avoidance of sensitive species could be negotiated at the APD stage.

404. Comment: Economics. **We were disappointed in the limited economic analysis of the impact of the Plan. The people who can best determine these types of issues weren't consulted, i.e. industry and local officials. It apparently presumes that there will be no impact beyond the confines of Garfield, Rio Blanco and Moffat Counties when, in fact, the Plan would have far reaching impacts, particularly in oil and gas development.**

Response: One of the guiding principles of the BLM is to "Provide for a wide variety of public land uses without compromising the long term health and diversity of the land and without sacrificing significant natural, cultural, and historical values." Certain activities, by their nature, will limit relatively small areas to a single or a small number of uses. Coal mines, sodium mines, and oil and gas facilities are examples of a permitted use that will normally limit multiple uses of the land. Laws, regulations, and policy can also have an affect on limiting multiple use. Wilderness study areas must be managed in a manner that their wilderness characteristics will not be impaired until such time that the U.S. Congress can act to incorporate them into the Wilderness System or to release them to Multiple use management. Except for these types of limited restrictions the decisions developed in the RMP do allow for multiple uses of the public lands. The surface occupancy stipulations for oil and gas leasing were developed to allow for the development of oil and gas resources while at the same time affording protection to the other sensitive resources that would be impacted by that development. A new economic analysis was prepared in conjunction with the oil and gas industry. That analysis has been added to the Final document.

405. Comment: Use Authorizations. **There is an existing system that works and is in place, which maximizes revenues coming into the BLM from the White River Resource Area; and such funding of BLM projects will be threatened by Alternatives B-D, it would be easier to transfer sensitive plants rather than relocate the existing roads and utility corridors (pipelines, power lines and communication lines).**

Response: Road and/or public utility relocations would be required only within known T & E plant habitats and only after a site specific evaluation determines the road or public utility is creating additional impacts to or threatening existing populations of T & E plants. The relocation requirement was not intended to apply to all roads or utilities, nor was it intended to be applied on potential habitat. The Final RMP/EIS will be changed to reflect relocation of roads or public utilities within known T & E plant habitats. This would be required only after a site specific evaluation determines continued use and maintenance of the facility would result in additional impacts to listed species and only following Section 7 consultation required under the Endangered Species Act. Relocating plant species would not be possible because of physical characteristics of the plants and their habitat.

406. Comment: General. **I will ask that you listen to the people of Rio Blanco County and adopt Alternative A as the official Resource Management Plan.**

Response: The Proposed Management Plan in the Final document was chosen because it offered the most balanced approach for the integration of ecological, economic, and social principles to help safeguard the long term ecological sustainability and resource productivity of the land.

407. Comment: Grazing Management. **Page 2-52 of the draft RMP states the allocation for livestock to be 126,490 AUMs in the short term, and 146,060 AUMs in the long term. (This still gives livestock interests no less than 55% of the total forage allocation available, and as high as 63.4%) To what do we contribute the change in livestock forage allocations? Is it due to increased allocation to big game wildlife?**

Response: The long term forage allocations noted in Chapter II Draft RMP/EIS are estimates of forage that could be available if all the improvement in rangeland conditions are achieved. The increased long term livestock forage allocation, likewise is an estimate of available forage and is not a result of increased wildlife allocations. Actual forage allocations in the long term would be based upon procedures outlined in 43 CFR 4110. In those areas where an integrated activity plan is developed, conflicts in forage allocations would be addressed at that time

408. Comment: Wild Horses. **2,100 AUMs is currently allocated to wild horses and in Alternative C a maximum of 4,800 AUMs would be allocated to wild horses. This gives wild horses between .9% and 2% of the long range forage allotment. It appears that wild horses are definitely getting the short end of the forage allotment stick and that private livestock interests continue to get the lion's share. We object strongly to this biased method of forage allocation. It is time the public's wild horses were allotted enough forage to sustain viable, healthy herds on a long term basis.**

Response: The only direct correlation between allocation of forage for livestock, wildlife, and wild horses is that all are measured in the common unit- Animal Unit Months. Forage allocated to wild horses is based upon the number we feel the range can carry on a continuous yearlong basis while sustaining improving rangeland conditions. The allocation remains unchanged from the level prescribed in previous land use planning documents.

409. Comment: Wild Horses. **The AMBA supports Alternative C in the draft RMP with the following changes: 1. AMLs need to consider not only the number of total animals, but also the number of breeding animals. (This alternative provides for 60-70 horses in the Texas Creek HMA, and 40-60 in the North Piceance HMA. This would need to be raised slightly.) 2. All of the land currently falling within herd areas or herd management areas need to be designated as herd management areas. We support designating both the North Piceance and West Douglas Herd Areas in their entireties as herd management areas, with a healthy and manageable number of horses. 3. We object to using any HMA as a refuge for "older, predominantly male, unadoptable horses". This takes forage away from breeding herd members and these older geldings disrupt family band integrity.**

Response: While you object to the use of an HMA as a habitat for unadoptable horses, BLM is nevertheless obligated by law and policy to prescribe management that will include unadoptable horses. It is anticipated that few, if any geldings would be released into the HMA.

410. Comment: Wild Horses. **Due to the past and future increase in energy development, we feel that the Texas Creek HMA should be expanded to include all of the West Douglas Herd Area, so that the horses may use whatever area is necessary within their current range to obtain forage as an additional 4,000 acres is disturbed by oil and gas development in the area. Couple this with the pursuit of expanded sodium mining on wild horse ranges, there is a need for all current available acres of wild horse range.**

Response: In reference to the need for more wild horse habitat to mitigate the loss associated with sodium development, this was part of the rationale for increasing the size of the Piceance-East Douglas HMA by including the Greasewood allotment (28,830 acres). This is part of the Preferred Alternative of this RMP. A close inspection of the Preferred Alternative of this RMP should reveal that there is actually a net increase in managed acreage for wild horses due to the addition of the Greasewood allotment (28,830 acres) to the Piceance-East Douglas Herd Management Area.

411. Comment: T/E and Sensitive Plants. **The BLM has explained that these stipulations are proposed to protect potential habitat for endangered species, listed as well as candidate and for potential cultural or paleontological resource sites. These severe restrictions should not be imposed on potential habitats or potential sites in the same manner as known habitat or known sites. Moreover, NSO should not be imposed in these areas of potential habitat and potential sites when CSU stipulations would protect the resources just as effectively, without compromising oil and gas exploration and development. BLM must show that less restrictive measures were considered but found insufficient to protect the resources identified. We believe BLM has not done this. Please refer to the Uniform Format for Standard Stipulations.**

Response: The BLM does not recognize the concept of "Potential Habitat" for cultural resources. However, the BLM does recognize the potential for the presence of cultural resources in any area since man is the most adaptable species we have encountered. Therefore, those areas that are known to have high resource densities and "potential resource densities" are routinely inventoried prior to ground disturbance as required by law. In those areas where there is no inventory data, or very limited inventory data, inventory is required to identify resources that are present and determine what measures are needed to protect significant resources. In those areas where extensive and intensive inventory data exists to show the presence of extremely high resource densities surface use restrictions may be "severe".

412. Comment: Water Rights. **In order to avoid conflict with private property owners, the BLM should evaluate carefully before filing on new water rights. An effort should be made prior to formal water court filings to put potentially affected parties on notice. To the extent adversarial proceedings could be avoided everyone would benefit.**

Response: BLM Colorado policy is to not file for water rights on water sources located on private lands, unless specifically agreed to by the private landowner. For water sources located on public lands, the water court process provides broad notice to potentially affected parties. During the last ten years, private parties filed objections to less than one percent of BLM water rights applications. Most of the adversarial proceeding are resolved out of court.

413. Comment: Plant Communities. **The primary emphasis should be on development of the potential natural community. Development of wildlife habitat is desirable, but habitat contrary to the potential natural community should not be encouraged even if wildlife is negatively affected in the short term.**

Response: As noted on page 2-19, the objective for managing plant communities is to manage a community with a composition of plant species, which will maintain the health and productivity of the site, based upon criteria listed in Table 2-17. It is possible to manage a plant community to provide for wildlife needs and still maintain the productivity and health of the site. The specific composition of a plant community that best meets the productivity and health requirements and still provides suitable wildlife habitats, would be determined in an Integrated Activity Plan following the RMP.

414. Comment: Forestry. **Although timberlands and woodlands are relatively small in this resource area, the lack of a natural use of fire indicates to us that more manipulation may be required to reach the potential natural community.**

Response: Timberlands make up 3% of the Resource Area. The Timberlands section has been revised to include the following statement: "Commercial and non-commercial timber stands would be inventoried for condition, and production capability. These stands would be managed to maintain productivity, extent, and forest structure, and for the enhancement of other resources. Management prescriptions to maintain and enhance these forests, or to achieve the desired plant community, would include clearcutting, partial cutting, prescribed burning, and fencing. Specific planning for determination of the desired plant community would be at the activity planning level, either an Integrated activity Plan or Allotment Management Plan, and will require site specific environmental analyses." The above change is not a change in intent from the draft RMP. The use of natural fire is being proposed for some areas and is identified as prescribed natural fire (PNF) on page 2-106, 107 and 108. In addition to the area proposed, additional prescribed natural fire areas would be developed in Integrated Activity Plans as those plans are developed in the order noted on page 1-5. Also, prescribed burns (management ignited fires) would be utilized to accomplish many of the manipulations proposed for improvement and attainment of the potential natural plant community.

415. Comment: Grazing Management. **Cathedral Ranch, LLC recognizes that grazing by livestock is not a "natural" use consistent with the objective of returning the resource area to its natural condition. Balancing the impact of man (grazing) with the natural condition objective is, we believe, feasible. Management of grazing through reduction and reallocation of AUMs may not, however, be the most effective program. While significant progress has been made, and continues to be made, Cathedral Ranch, LLC believes aggressive programs should be developed and implemented to encourage permittees to adjust AUMs used on a year-to-year basis consistent with the condition of the rangeland. To that end, we would encourage the continued development of a partnership or cooperative philosophy and use of alternative dispute resolution programs in lieu of adversarial proceedings. Adherence to the "letter of the law" regulatory and administrative processes has forced the argument of a grazing "right" versus a grazing privilege.**

Response: As noted on page 2-52, adjustments in livestock use were made between 1981 and the present. These adjustments were made following analysis of rangeland monitoring studies conducted during this same period. BLM must, and will continue to use the regulatory and administrative process to adjust livestock grazing levels when rangeland studies indicate a need. However, we do intend on using a "cooperative philosophy" based approach through an Integrated Activity Planning process to look at allocation levels and reallocations of forage. We recognize there are management options other than reducing livestock grazing levels to achieve our goals. The Integrated Activity Plans on allotment management plans will become the vehicle in which we explore those options. In the end, and if no other option exists, we must use the regulatory process to adjust livestock levels to a sustainable level of forage production.

416. Comment: General. **We find the current organization of this document to be extremely cumbersome for the lay and non-lay reader. It would be much easier for all readers of this document if a cross reference index was provided. This type of index would facilitate the reader being able to follow all of the plan's proposals for a particular topic; e.g., water borne recreation. We feel that including this type of index would make this document more valuable to the people who want and need to use it.**

Response: We have endeavored to simplify the presentation of information in the Final document.

417. Comment: Wild and Scenic Rivers. **We concur with the determination that none of the White River qualifies for designation as a "Wild and Scenic River." Our concern is that while you have said that the river does not qualify, you have left the maps and considered locations descriptions in the plan. We are concerned that this information will be later used to designate these and other portions of the White River as "Wild and Scenic" without further public input.**

Response: BLM is required to consider all land uses and resources in all land use plans. BLM policy is to evaluate all rivers and streams for eligibility under the Wild and Scenic Rivers Act. Portions of the White River were found to be eligible for WSR designation, however, a suitability study is not warranted for several reasons. The study process requires public participation and input. Without local support, designation of the White River under the Wild and Scenic Rivers Act is very unlikely.

418. Comment: General. **Likewise, federal administrative action aimed at rangeland reform has been delayed. Again, how this reform looks when approved by the Administration seriously affects implementation of this Plan. Especially issues like occupancy limits, access; i.e., road closures and permitted land**

uses. In the interim, the District believes that the BLM should continue to manage these lands as that have in the past. Same occupancy limits, access and permitted uses. We are especially concerned that no additional restrictions be placed on roads previously covered by RS-2477.

Response: The administrative proposals in "rangeland reform" are administrative in how BLM manages livestock grazing under existing laws. The existing laws relative to livestock grazing on public land require BLM to determine the appropriateness and level of livestock grazing use in the mix of multiple uses through a land use planning process such as this document. The administrative proposals of rangeland reform do not affect the basic livestock grazing decisions proposed in this document and are, thus, not a sound basis for delaying this land use planning process.

Rangeland reform is not expected to alter administrative actions involving occupancy limits, access, road closures, and permitted uses. By law, most are discretionary actions, and we know of no plans to alter this. While regulations regarding RS 2477 remain pending, the RMP will not effect or diminish valid rights appropriated under this act.

419. Comment: General. **We believe that with a little more work by all parties in conjunction with BLM, this Plan can become a useful productive document. Given the size of this document and the potential economic impacts, people need additional time to review and formulate comments. We would like to suggest that the BLM extend the comment period for this Plan until March 31, 1996. During this extension, we would also suggest that the economic analyses rewritten and strengthened. Again, we would like to recommend that a cross reference index be developed to facilitate reading and understanding of this Plan by both the lay and non-lay reader.**

Response: The comment period was extended until April 28, 1995. The revised economic analysis was completed with a great deal of assistance from several representatives of the oil and gas industry.

420. Comment: Paleontology. **The plan emphasizes that natural erosion is detrimental because it damages or destroys fossils. On the contrary, without erosion vegetation is able to thrive, ultimately preventing the exposure of fossils.**

Response: The WRRA RMP approaches paleontological resources as being non-renewable resources. Erosion works both for and against paleontological resources. It does destroy or damage fossils, but erosion also allows fossils to be exposed for discovery. Vegetation also works for and against fossils. Plants may hold the soil in place, but the roots and acids may cause deterioration of fossils. Also, heavy vegetation obscures fossils, in many instances, and keeps them from being discovered.

421. Comment: Paleontology. **DIS supports the idea of conducting paleontological surveys before major land disturbances occur. However, it is important to realize that in most instances the significance or scientific importance of the fossils present does not necessarily warrant the prevention of a proposed project.**

Response: The BLM agrees that most paleontological resources, even though they are all worthy of recordation, are not necessarily scientifically important with regard to invertebrates and plants. The need for paleontological resources surveys will be addressed project by project according to fossil visibility and outcrop accessibility conditions combined with what is currently known about paleontological resources in and near a proposed project. No projects have been prevented from occurring because of paleontological value.

422. Comment: Paleontology. **We feel it would be a mistake to designate the Parachute Member of the Green River Formation a Class 1 area because it contains primarily invertebrate fossils or rare fossil fish only found when fresh rock is exposed during a surface disturbance. Using this criteria would make it necessary to also deem the Mancos Shale a Class 1 area because it contains fossil fishes, marine reptiles and an abundant and diverse invertebrate fossil record that may be of scientific importance.**

Response: In the Green River Formation of the WRRA, only the Parachute Creek Member has been designated Class I. This is based on information about known scientifically important paleontological resources and the need to identify and better define the boundaries of these resources. In the case of Raven Ridge, much of the paleontological aspects of this ACEC is based on scientifically important paleontological locality information resulting from known research. There are many reported instances of vertebrate fossils being found, and many Holotype insects and rare plant fossils found in the Parachute Creek Member in the WRRA. Until more information suggest otherwise, this status will remain as Class I. However, Class I status does not rule out hobby collecting of petrified wood and common invertebrates in reasonable quantities. Only this member of the Green River Formation has been designated Class I due to the localized relative abundance of scientifically important fossils. Certain strata of the Mancos Shale should also be designated Class I based on known scientifically important paleontological resources. With more data, the Class I areas will be better-defined.

423. Comment: Paleontology. **Lastly, we believe that surveys conducted to prevent unnecessary land disturbances in situations where fossils may be in jeopardy should be conducted only by paleontologists.**

Response: BLM agrees that paleontological resource surveys should be conducted by qualified (permitted) paleontologists.

424. Comment: Wild Horses. **Item 10, Page A-5. This item states that within the Wild Horse Range, the reserve pit fence will be 84" high. Further, the BMP states the bottom 48" will be woven wire and the top 36" will be three strands of barbed wire. A major concern is the cost that would be incurred to construct this type of fence. This type of fence would add an incremental $1,500 per site. Besides the cost, the real value of this type of fence must be considered. During drilling operations the activity levels at the site would discourage wild horses from entering upon the location. If after drilling concludes and the reserve pit contains water, it is typically fenced as required by the BLM. We are not aware of the standard fence design being deficient for restricting entry by livestock and/or wild horses. It is, therefore, recommended that this item be eliminated from the final RMP.**

Response: Item 10, PA-5, is in error and will be corrected in the Final RMP. The proper standard for fencing to keep wild horses out of the reserve pit is a 52" high fence- 49" field fence (woven wire) with a single strand of barb wire 3" above the top of the woven wire. Thank you for bringing this error to our attention.

425. Comment: Hazardous Materials. **Item 21, Page A-7. This item states that the concentration of hazardous substances in the reserve pit at the time of pit backfilling must not exceed the standards set forth in CERCLA. This should be deleted from the final RMP. Exploration and production wastes are not hazardous wastes under RCRA or hazardous substances under CERCLA. Exploration and production wastes are of two types: RCRA exempt wastes and non-exempt wastes. RCRA specifically exempts drilling fluids, produced water and associated wastes from the definition of a hazardous waste. The exempt status of these E&P wastes was affirmed in EPAs exhaustive study on the nature of oil and gas wastes and its subsequent 1988 Regulatory Determination. These wastes are statutorily excluded from the definition of "hazardous substance" under CERCLA Section 101(14). The legislative history of CERCLA also makes it clear the exclusion applies "notwithstanding the presence in such substance of any hazardous or toxic chemical." Congress specifically indicated that "drilling muds and brines, which have been excluded from regulation by the 1080 amendments to Section 3001 of RCRA, are not hazardous substances..." (Senate Report No. 848, 96th Cong. 2nd Session, 1080, at 28.) On-site disposal of RCRA exempt wastes does not create CERCLA liability. If this requirement is maintained, operators will be forced to incur at least $1,500 per well in sampling and analytical costs. As such, this particular requirement should be deleted from the final RMP.**

Response: Not all materials found at a drill site, or in a reserve pit, are necessarily exempt from regulation under RCRA. Nor does such exemption alter the character of a substance. Based on court decisions, and subsequent EPA determinations, exemption under RCRA does not necessarily equate to exemption from CERCLA liability.

426. Comment: Minerals. **Item 22, Page A-7. This particular requirement addresses the potential for aquifers being developed as a water well after plugging of an oil and gas well. The second sentence of the BMP states that suitable wells would need to meet Colorado water well completion standards and have applicable permits filed with the State. This requirement seems to infer that the company or project proponent would be required to meet these standards and file the applicable permits. If the BLM elects to assume responsibility for the plugged well, both the standards and the applicable permits should become the responsibility of the BLM, not the project proponent. As such, this requirement should be deleted from the final RMP.**

Response: It will not be the responsibility of the oil and gas operator to make sure a converted oil and gas well has met the standards required by the state for a water well. The intent of this COA is to assure that personnel in the Resource Area office will not arbitrarily take over wells that may or may not be suitable as water wells and that the procedures for conversion meet state standards so the BLM may file a water right. Also, it may be determined through this process, to be cost prohibitive to meet state standards. In such cases, it would then be the companies responsibility to plug and abandon the well.

427. Comment: Cultural Resources. **Item 7, Page A-10. This item states that the operator shall follow the mitigation requirements concerning protection, preservation, or disposition of any sites or material discovered. However, in cases where salvage excavation is necessary, the cost of excavation shall be borne by the holder, unless otherwise stated. The statement that salvage excavation is the responsibility of the project proponent is cause for concern. If the site has been avoided it will not be impacted further from a project proposal. Requiring the project proponent to incur costs to excavate avoided sites is inconsistent with current BLM policy as stipulated in IM89-216 issued in 1989 by the BLM Director. As BLM is aware, costs to excavate a site can easily exceed $100,000. Consequently, the sentence regarding the cost of excavation being borne by the holder should be eliminated in the final RMP provided the site is avoided.**

Response: Item 7, Page A-10 refers to discovery of resources by the operator during operations. Paleontological resources are managed by BLM in accordance with NEPA and FLPMA and other applicable laws, regulations, and policy. With the ground surface having been surveyed and cleared for ground-disturbing operations, there is no possible full avoidance of paleontological resources once they have been impacted during ground disturbing operations. The costs of salvage excavation can be lessened in some cases through subsequent avoidance of paleontological resources.

The commentors are missing the essential point of the statement "When salvage excavations are necessary, the cost of the excavation would be borne by the holder." Law and regulation provide that the BLM and State Historic Preservation Officer (SHPO) must consult (Peer Review) on the adequacy of avoidance and the need for excavation. If a site is avoided to the satisfaction of the BLM and SHPO no excavation is likely to be necessary and no further costs are likely to be incurred.

428. Comment: Wildlife. **NSO-04, 05, 06. There are several references to raptor nests and T&E species. NSO-04, NSO-05 and NSO-06 do not allow for exemptions, modifications, or waivers. While the specific species of raptor is not identified, NSO-08, 09, and 10 do allow flexibility for exceptions, modifications and waivers for the type of T/E species. It is recommended stipulation flexibility provided in NSO-08, 09, and 10 be applied similarly for NSO-04, 05, and 06.**

Response: The NSO stipulation 04, 05, and 06 were identified for Alternative A only. There were not carried forward into the Proposed Management Plan. Consequently there is no need for the exception, modification, or waiver language.

429. Comment: Wild Horses. **CSU-10 is a conditional surface use occupancy stipulating stating that no intensive construction activity will be permitted for a specified 60 day period when the spring foaling time of March 1 through June 15 will exist in wild horse habitat. Alternatives C and D provide for 179,230 acres that could be affected by this conditional surface use stipulation. Two questions exist with this stipulation: What is the definition of what would include "intensive construction?" Are certain types of activities acceptable over others? This conditional surface use occupancy stipulation listed does not allow for an exception, modification or waiver. It is suggested that exception language be provided if the wild horses are not using portions of this habitat where proposed activities will occur.**

Response: In reference to CSU-10, please note that in the Final RMP, this will be changed to a lease notice. Our definition of intensive construction activity would be earth moving activities or drilling operations. Normal production activities would typically not be subject to this timing limitation. In answer to your second question, application of this timing limitation would be discretionary and would depend on when and where development activity would occur.

430. Comment: Paleontology. **The practice of scientific peer review is well established in the scientific community as means to promote quality science. The RMP makes no provision for scientific peer review of the BLM personnel and their decisions regarding paleontology. To remedy this defect, the UPPS proposes addition of provisions in the RMP for scientific peer review of paleontological decisions.**

Response: The comments sought and received through the RMP process constitute a definite form of peer review. Comments received express a diversity of opinion on paleontology related issues. Also, all paleontological decisions are based on consultation with various experts within the BLM, including the BLM State Paleontologist, and with other paleontologists knowledgeable about paleontological resources in the WRRA.

431. Comment: Paleontology. **The RMP makes no provision for the long established role of amateurs in the world of paleontology. To remedy this oversight, the UPPS requests that provisions be added to the RMP to insure that amateurs and the public in general have access to fossils and paleontology.**

Response: The WRRA RMP does not affect standing regulations and BLM policy that allow for amateur collecting of petrified wood and common invertebrates (i.e not Holotype fossils) in reasonable quantities. No oversight to amateur collectors is intended. To keep the RMP manuscript relatively brief, it does not quote all existing laws, regulations, and policies governing management of BLM public lands.

432. Comment: Minerals. **The BLM form a multi-disciplinary task force of affected agencies, the Colorado Oil and Gas Conservation Commission, local government representatives, and oil and gas industry professionals to rewrite significant portions of the RMP/EIS in order to create a document which focuses on the importance of oil and gas development and balances these concerns with the environment.**

Response: Workgroups composed of oil and gas industry representatives and BLM personnel were formed after the comment period closed to look at revising the Reasonable Foreseeable Development Scenario and the economic impact of the lease stipulations. The revised RFD is included in this document as Appendix D. The revised socio-economic analysis has been included at the end of Chapter IV, Proposed Management.

433. Comment: Economics. **The oil and gas industry makes significant economic contributions to the federal government and the State of Colorado. IPAMS believes the BLM needs to recognize these important contributions in the Draft RMP/EIS. The federal government received approximately $40 million from mineral production in Colorado (1993). In 1993, the State of Colorado received $35.9 million from federal royalty revenue from mineral production. Natural gas contributed $15.5 million and oil $18.6 million. The State of Colorado derives significant revenues from oil and gas production from severance and ad valorem taxes. Severance taxes contributed approximately $15 million to the State of Colorado. Ad valorem taxes contributed approximately $250 million in 1993, to Colorado most of which went directly into local county government budgets. Ad valorem taxes are a tremendous contributor to the public school systems in Colorado.**

Response: We have changed the text to reflect your comments. Please see the revised economic section in Chapter 4, Environmental Consequences.

434. Comment: Economics. **In the economic study area (ESA), the energy industry is the primary contributor to the local economies. Energy industry related employment represents approximately 24% of the employment in the ESA. Employment in the energy industry represents 9% in Garfield County, 41% in Moffat County, and 58% in Rio Blanco County. Oil and gas development in these counties is very important to the local economies.**

Response: We agree the energy industry is important to the local economies. Pleas see the revised economic section in Chapter 4.

435. Comment: ACECs. **Proposed "areas of critical environmental concern" (ACECs) would be excluded from development even though these areas have high potential for oil and gas. Texaco does not oppose designations of new ACECs. However, we do oppose more restrictive management in these areas without adequate justification. Texaco disagrees with BLMs statement that because most of the proposed ACEC areas are lenticular in nature they can be developed with the use of directional drilling. We are not aware of any successful horizontal wells drilled in the Piceance Basin to date.**

Response: Refer to response to comment number 10. The proposed ACECs are not being excluded from mineral development, refer to Appendix F, Management of Areas of Critical Environmental Concern in the Draft RMP/EIS. All eighteen of the areas considered, as noted in Appendix F, are open to oil and gas leasing. Ten (10) of the proposed ACECs are open to leasing with standard lease terms and the surface stipulations identified in Appendix B. The remaining eight (8) proposed ACECs are open to oil and gas leasing with a no surface occupancy stipulation on the entire ACEC area. The no surface occupancy stipulation may decrease the likelihood of developing oil and gas within an ACEC, but does not exclude the area from leasing. The NSO stipulation in Appendix B (NSO-19) provides an exception which can be granted on areas within an ACEC where surface disturbance would not impact the important values of the ACEC.

Justification for applying more restrictive management within proposed ACECs is based upon the important values of each ACEC as identified in Table 2-53 on pages 2-80 and 2-81 in the Draft RMP/EIS. Additional justification for restrictive management within ACECs containing rare and sensitive plant species can be found in Table 3-15 on pages 3-16 and 3-17 of the Draft RMP/EIS. Table 3-15 identifies the rarity of each plant species considered in the applicable ACEC.

436. Comment: Minerals. **IPAMS believes that most environmental concerns are best addressed at the site-specific level.**

Response: This comment is true, however, certain rights are granted with the issuance of an oil and gas lease. Most environmental concerns can be mitigated under authority contained in Section 6 on the standard lease form. Unfortunately in some instances, mitigation will be required that goes beyond the terms contained on the lease form. If the reason for the mitigation is based on law or regulation, then there is no problem with enforcement. If on the other hand, that mitigation has no basis in law, but has been developed over time as professional judgement, then enforcement could use up the rights granted under the lease. It is for that reason that leasing stipulations are developed in resource management plans and their associated environmental impact statements. Attaching stipulations to a prospective lease parcel should not only help to protect the reason for the stipulation but also alert prospective bidders on that parcel of a potential environmental problem.

437. Comment: Grazing Management. **Item #2: Livestock grazing S-8: Alternative D, is preferred but reduction of AUMs seems an unreasonable action when one considers that it is good stewardship practices that have made possible increases in deer, elk and antelope numbers.**

Response: The forage loss referenced on page 5-8 is not a reduction in livestock AUMs, but rather an expected loss of forage allocated for livestock use resulting from proposed management. There are options available to manage this loss other than reducing existing levels of livestock use, such as forage enhancing rangeland improvements. These improvements could be developed to increase livestock forage in areas where surface disturbance created the initial loss or to increase wildlife forage in areas experiencing increased populations. There may be areas with no options for increasing forage, in which case, this forage loss would result in a decrease in existing livestock grazing levels.

438. Comment: Water Rights. **Item #5: Water Rights S-4: The practice of BLM securing water rights runs directly afoul of the United States Constitution, see Article 10.**

Response: Article 10 of the Constitution reads as follows: The powers not delegated to the United States by the Constitution, nor prohibited it by the states, are reserved to the States respectively, or to the people. The State of Colorado has the power to allocate water within its borders. Every water right secured by the BLM has been granted to the federal government by the State of Colorado through the Colorado water court system. The Colorado Supreme Court has consistently ruled in several cases that the federal government may apply for and hold water rights which support federal land management objectives.

439. Comment: Motorized Travel. **Item #8: S-16: Off road use should not be restricted by the BLM. Alternative A is the best choice given...except it embraces the closure of roads in the "Blue Mountain Road Closure Area". There is no reason to do so...a step in keeping the public off public lands, and makes a mockery of the Multiple Use Concept.**

Response: Road closures and limitations are not designed to keep the public off of public lands. They are tools utilized to protect sensitive resources, and to provide a range of recreational opportunities. Limiting and closing some areas to certain types of use, while providing for these uses in other areas, is consistent with the principles of multiple use management.

440. Comment: Minerals. **MEC believes that the proposed stipulation to protect fragile soils, CSU-02, places unnecessary and inappropriate burdens on seismic surveys and on reserve pit management. Proposed CSU-02 would apply over a broad area--484,120 acres, an almost 30-fold increase over the 16,490 acres designated as "soil management priority areas" under current practices (CSU-01). MEC believes that the proposal inappropriately shifts the burden of proving no need for special protection from the BLM to the lessee.**

Response: Delineation of fragile soil areas on slopes greater than 35% (CSU-02) is a very broad area and that is why there are exceptions and waivers to the stipulation. When the environmental assessment is done during the preliminary stages, it may be determined the project is in fact not affecting fragile soils and no other special management would be required. On the other hand if the proposed action is on soils that are fragile and on slopes greater than 35% then COAs from Appendix C or other management practices would be necessary to maintain a healthy ecosystem.

441. Comment: Minerals. **The proposal would require conduct of all seismic surveys by "helicopter, horseback, on foot, or from existing roads." The restrictions can easily make exploration cost-prohibitive. In addition, the restrictions are excessive for the kind of temporary, short-term disturbances that characterize seismic surveys. MEC considers seismic operations to be critical to its exploration effort in this area and opposes imposition of such onerous restrictions on a broad area with exceptions available only after a "detailed environmental analysis", presumably to be conducted at the operator's expense. MEC believes that BLM has a responsibility to identify only those areas that have truly critical soil protection concerns and in other areas should rely on standard practices which provide an adequate level of protection for all but the most sensitive areas.**

Response: No new restrictions were identified for conducting seismic surveys. There are several reasons for the development of the practices to be followed for seismic exploration. Historically, this Resource Area has not approved the construction of roads or trails to conduct surveys, primarily due to the ruggedness of terrain. By imposing the practices to be followed for seismic exploration we insure that the impacts are "temporary, short-term disturbances". The detailed environmental analysis mentioned would be conducted by BLM personnel - not at the operator's expense.

442. Comment: Grazing Management. **I would like to thank you for deciding to continue with the 1981 Grazing Management Plan in its basic form. However, I believe that grazing and the current proposed RMP will not work together. If all we are going to do is improve 130,520 acres out of 1,455,900, the objective of the plan will not be met.**

Response: The commentor is assuming that 1,455,900 acres, the total public land acres in the Area, are in some condition requiring improvement. This is an inaccurate assumption. Forty three percent of public lands are currently in a high seral plant community or are the potential natural plant community (Table 4-12, page 4-38, Draft RMP/EIS). The improvements expected, as determined by a change in seral community, would be 218,340 acres of public land and not the 130,520 acres noted by commentor. As noted in Table 4-12, 58% of the public lands are expected to be in a high seral plant community or higher within the next 20 years. The remaining 42% that are in a mid or early seral community does not mean all of it is in a undesirable condition. Many of these mid or early seral communities are in a healthy condition providing a valuable benefit to the natural ecological variation required for many native plants and animals.

443. Comment: Forestry. **Pinyon-Juniper Management: Pinyon and juniper are very difficult to burn at a safe time for controlled burns and expensive to deal with by mechanized means. The BLM could attain a rapid improvement in Pinyon and Juniper stands by issuing green firewood permits. By clear cutting several forty (40) acre plots per allotment per year, (not 45 acres total, for the entire resource area) the BLM could improve the winter range at the cheapest, fastest and easiest rate.**

Response: The woodland management program proposes to harvest 45 acres/year of commercial/suitable pinyon/juniper woodlands. Resource area wide, woodland conversion for the benefit of other resources (livestock/rangeland improvement, and wildlife management) is projected at 28,270 acres over the life of this plan. For the Douglas/Cathedral geographic reference area the projection is almost 8,000 acres over the life of the plan. This information is

from Table 2-19 of the Draft RMP. Planning for vegetation manipulations would be at the IAP or Allotment Management planning stage. The Woodland Management section of the final RMP has been rewritten to improve clarity.

444. Comment: Plant Communities. **Sagebrush Management: This plan continues to perpetuate the idea that all species of sagebrush are the same. It needs to be recognized that big sagebrush contains a chemical which kills the rumen bacteria of deer, elk, sheep and cattle, causing them to die, with a full stomach, of malnutrition. White sage, black sage, etc., are highly nutritious, palatable and digestible to all of the above mentioned species.**

Response: The sagebrush management described in the Draft RMP/ EIS, Chapter II is not specific to different species or sub-species of sagebrush, but rather to the importance of sagebrush plant communities to certain species of wildlife. The white sage referenced comment, is not a species of sagebrush. White sage is a local common name for winterfat (Ceratoides lanata) a nutritious, palatable shrub. Research studies on nutritive value and palatability of black sage versus big sagebrush do not support commentor's conclusion. That research has shown that big sagebrush has a higher nutritive value and possibly has a higher preference by wintering mule deer than some forms of black sage (Welch, 1981 A and Sheeby, 1981). Likewise, research does not support the conclusion that the chemical content of big sagebrush kills rumen bacteria in deer. Research tends to show that the supposed harmful chemicals are volatilized and expelled from the animal before creating a problem for rumen bacteria (White, 1982 and Welch, 1981b). Certain varieties of big sagebrush do provide important seasonal nutritional needs for deer, antelope and sagegrouse, especially during winter. The sagebrush management proposed in the RMP is aimed at maintaining sagebrush as a plant community component on wildlife dependent rangelands.

445. Comment: Plant Communities. **Four Wing Saltbush: This plant has a variety that grows on Atchee Ridge, Utah, that is drought resistant and fire fertilizes and spreads it. It should be transplanted all over the resource area. Oak, service berry, choke cherry, mountain mahogany: These plants are over mature and overgrazed by deer and elk to the point of being useless forage. Fully 100% of the large stands need burned, so they can grow back from the roots and be utilized again.**

Response: Four wing saltbush is an important plant species in several ecological sites across the Resource Area and is recommended in reclamation seed mixes for several ecological sites (Appendix A, Draft RMP/EIS). Not all stands of oak, serviceberry, chokecherry, and mountain mahogany are over mature, overgrazed and in need of rejuvenation as suggested. Mature stands of upland shrubs in the mountain shrub plant community provide important watershed stabilization and important habitat for non-browsing wildlife species. We do recognize that past management practices, such as fire suppression, have created an over-balance of mature stands within this plant community. Desired plant community goals for mountain shrub rangelands, (page 2-22 Draft RMP/EIS), are aimed at managing about one third of this plant community in younger aged stands through treatment by prescribed burning or by wildfire within a prescribed natural fire area. Managing one third in younger aged stands more represents the natural disturbance regime of this plant community than burning 100% as suggested by commentor.

446. Comment: Forestry. **My father told me that the best value of building drift fences in the early 1960's was that it stopped the cattle from getting in the "quakies" the first of May and eating the new plants. Since 1980, the elk population increased to the point that we no longer have any new growth of aspen. The only thing I can see to do is burn enough of the older stands of trees off in order to get them to start over from the roots. Also, if the old growth Douglas Fir stands are logged off, we will see an increase in aspen until the Douglas Fir takes back over.**

Response: Site specific management goals for aspen will be developed during preparation of Integrated Activity Plans. At this time we will take into consideration, the site specific problems and with all of the users and resources, develop a reasonable management program. Your observations and recommendations are valid and will be considered during Activity Plan Development.

447. Comment: Plant Communities. **This is the group that takes the most thought in what we want to achieve. The idea that only native plants will be allowed to grow, and that livestock will only eat 50% of available plants and then be removed is the most politically acceptable premise. But, if this is the only way we handle grass, then we are not helping the range or the wildlife. The reasons for this are: Planting reed canary grass in problem riparian zones is the fastest, most efficient way to heal them up. Keeping grass short by livestock grazing gives grouse and waterfowl something to eat. If the grass is too thick, it will crowd out dandelion and other forbes that deer need to remain healthy through the summer. The reason we don't have chukar partridges on Evacuation Creek anymore is that we have done such a good job of range management that we have crowded out all of the cheat grass. If the Division of Wildlife ever wants to have chukars again, we will have to use livestock grazing as a tool to bring back their habitat.**

Response: "Take half and leave half" has been a general rule-of-thumb utilized in the range conservation community for many years. At the level of detail, or lack of detail in this case, required for an RMP, leaving half the forage base for watershed protection and for unquantifiable consumptive uses can be used for general guidance in managing the use of the total forage base. We recognize there are times when 50% grazing use may be too much, as well as times when grazing use can be successfully managed at greater than 50%. The planning and management to be developed in Integrated Activities Plans on allotment management plans to follow this document will address use of forage in greater detail to meet the multiple use objectives outlined in the RMP.

448. Comment: Ground water management. **Current practice is for the BLM to leave water wells running all the time, if they are concerned about depleting the resource, maybe they should be able to be shut off.**

Response: It is not BLMs policy to leave water wells running all the time. BLM has acquired some oil and gas wells that contain artisan flow. The BLM has and will be working to put shut off valves on these wells so they can be turned off. Newly acquired wells will conform to the BMP on page A-7, number 22, of the Draft RMP.

449. Comment: Water rights. **If the BLM is going to claim the water right, then they should pay for the entire project not make a permittee pay for it, then claim the right. The BLM cannot file on water without diverting it, building a reservoir or doing something to show beneficial use other than allowing it to run down the stream.**

Response: The Colorado Supreme Court ruled in United States vs. City and County of Denver that the BLM is not required to divert water with a structure to demonstrate beneficial use. Uses such as livestock watering, wildlife watering, and recreational fishing have been held by the courts to constitute a diversion of water for a beneficial use. Local water courts have ruled accordingly, and the BLM now holds hundreds of water rights statewide which do not incorporate a physical diversion.

450. Comment: Forestry. **You are not allowing enough of any kind of timber cutting. Pinyon-Juniper, especially, should be cut at a much heavier rate.**

Response: We disagree. All pinyon/juniper stands are not equal. Each stand must be evaluated to determine its potential and values. We have concentrated the woodland harvest program on those stands which have been classified as suitable/commercial and available for intensive management. These stands have the greatest potential for the production of woodland products with fewer environmental and economic problems.

451. Comment: Visual Resource Management. **This type of management should not impact areas outside of special management areas (i.e. Dinosaur Monument, WSAs).**

Response: There are many areas outside of designated special management areas that have high scenic quality or where it is desirable to maintain the integrity of the visual landscape. Residents and visitors both enjoy the vast open spaces or "western" landscapes found on public land in this region. For some people this is the reason they live here or visit the public lands. Development can be planned and designed to fit into the landscape, generally without impact to the project(s). The intent of BLM is to allow developments and at the same time retain the visual resource, "open spaces", that is an important part of this region and its heritage. Generally, management of the visual resource will not have an impact on development but development will have an impact upon the land if it is not properly managed.

452. Comment: Recreation. **Rangely Loop Bike Trail: This project needs to be totally tabled until the time the public parties involved are willing to negotiate with the private landowners involved.**

Response: The Rangely Loop Trail was initiated by the town of Rangely as an effort to: 1. provide a resource to increase tourism and thus improve the local economy and 2. provide residents with trails to use and improve on the quality of life in and around the community. Most of the Rangely Loop Trail is in place and follows existing roads and trails on public lands. The trail passes through a few private parcels on public roads or BLM has agreements for use of the existing roads through private lands. Negotiations with private landowners for access through 2 key sections of the trail are ongoing at this time. It will require the willingness of the landowners to allow access on these private roads before such use is allowed. The public is advised not to trespass on private property. Education and monitoring of use will continue throughout the Resource Area.

453. Comment: Paleontology. **I believe a better explanation of why a blanket coverage of certain formations and 680,000 acres in the Baxter-Douglas area should be given before anything but Alternative A is considered.**

Response: The WRRA RMP conveys BLM's current state of knowledge in regard to potentially, scientifically important fossiliferous geologic rock units. Until more and better paleontological resources inventory data is known, the WRRA, through consultation with the BLM Colorado State Paleontologist and other paleontologists, has assigned Class I rankings of importance to those geological units listed as such in the RMP. As the BLM's knowledge about paleontological resources increases, the acreage of Class I areas in geological rock units will fluctuate with both increases and decreases in many areas.

454. Comment: Land Tenure Adjustments. **The BLM mandates under the Taylor Grazing Act is to manage the land until disposed of. Because of this, all 1,323,080 acres in the White River Resource Area not identified for retention should be immediately proposed to be disposed of in the quickest means possible. I believe that all BLM land should be disposed of under Section 2 or 3 of FLPMA, the Desert Land Act, and the General Allotment Act. 100% of the Douglas/Cathedral GRA should be privatized. Why don't you dispose of all of Texas Creek, Missouri Creek, Evacuation Creek and Bitter Creek since you don't like the area.**

Response: One of the guiding principals of the Taylor Grazing Act, to "promote the highest use of the public lands pending its final disposal" has been superseded by the Federal Land Policy and Management Act, which states that "it is the policy of the United States that 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... ." We do not believe that disposal of these public lands would be in the national interest.

455. Comment: Minerals. **Lease Stipulations: The stipulations described in Appendix B are confusing. Too many stipulations make it difficult to decipher when and where they will be applied in accordance with each alternative. Moreover, it is unclear why there are two sets of stipulations, one developed by the WRRA and one developed by the BLM State Office. Only one set of stipulations should be used. We recommend for consistency's sake, that the SOs stipulations be described in the plan and utilized on the WRRA. Use of two sets of stipulations is redundant and a waste of time and tax dollars. Furthermore, it is inconsistent with the federal government's recent focus on streamlining and elimination of duplication and waste.**

Response: The format presented in Appendix B of the Draft RMP is confusing because the tables seek to layout the differences in stipulations between four alternatives. One of the reasons the BLM undertook this effort was to bring the White River Resource Area into conformance with the rest of the state. That is the reason that there were referenced to BLM State Office stipulations. Appendix B of the Proposed Management Plan and final environmental impact statement is more straight forward and should be easier to understand.

456. Comment: Minerals. **Texaco believes the range of alternatives is deficient. Only highly restrictive approaches were analyzed. BLM has presented no alternative that would rely on standard lease terms and conditions for resource protection. This would typically be the enhanced commodity alternative in most land use plans. BLM should analyze the least restrictive approach and demonstrate it's inadequacy for resource protection before evaluating more restrictive approaches.**

Response: Many of the stipulations identified in all the alternatives were developed to mitigate impacts to a resource protected by law or regulation. Adding an alternative that would ignore these protected resources would be unrealistic, if not illegal. The BLM is prohibited by law (FLPMA) from causing or allowing undue and unnecessary degradation of the public lands to occur. Many of the Best Management Practices identified in the Draft document consist of acceptable oil field practices that have been developed over time as standards to reduce the environmental affects of surface disturbance. Consequently the COAs were applied as mitigating measures, in the impact analysis sections of Chapter IV and to all four alternatives of the Draft document.

457. Comment: Use Authorizations. **Item 3 on Page A-8 requires all pipe lines to be buried. This is an inflexible and impractical provision. In extremely rocky areas it would be impossible to bury the pipe lines and extremely costly to deviate the pipe line to avoid rocky areas. We recommend adding flexibility in the language that will allow for above ground pipe lines when conditions warrant their use.**

Response: COAs are guides which will be utilized in most situations. They are not necessarily required for use in all cases, nor do they preclude the use of other practices warranted by special circumstances.

458. Comment: Motorized Travel. **I have observed damage caused by highway type vehicles so please don't put us in the same class as these vehicles that should be restricted to roads and trails because of their sizes and weight.**

Response: All vehicles that are capable of traveling off the road are, by definition, OHVs. Additionally, OHVs and ATVs are not only used for recreational purposes. The RMP does not discriminate against any group, or their particular reason for using OHVs. The RMP identifies areas where vehicular use would be limited due to resource concerns, and what those limitations are.

459. Comment: Paleontology. **My comments are on the aspects of the White River Resource Area plan that deal with paleontological resources. The definition of paleontological resources, The lack of economic or value balance in the management approach, and the excessive designation of 40 to 50% of the area as Class I paleontological areas.**

Response: Under NEPA, FLPMA, and various regulations, it is BLM's policy to consider paleontological resources in all management actions. Scientifically important (Class I) paleontological resources include all vertebrate fossils as well as some invertebrate and plant fossils that are important enough to be managed similar to vertebrate paleontological resources. This information is put together from existing knowledge of paleontological resources and in consultation with various paleontologists knowledgeable about the paleontology of the WRRA. Due to the known, fossiliferous, scientifically important geologic exposures in the WRRA, much of the WRRA is considered and managed, at present, as Class I. In working with these designated Class I areas, they will, through time be better defined, with acreages moving in and out of this classification as more data is gathered. It is up to management to make the final determination of economic or resource value balance and this is done with scientific resource input as well as economic benefits input.

460. Comment: Paleontology. **Objections to the collection and possession of fossils by amateurs (p. 4-147) reflect an elitist attitude prevalent among vertebrate paleontologists.**

Response: Except in special management areas, such as Areas of Critical Environmental Concern (ACEC's) and Research Natural Area's (RNA's), hobby collecting of common invertebrates, not Holotypes, in reasonable quantities and petrified wood in quantities of 25 lbs. plus one piece per day, not to exceed 250 lbs. per year per person is allowed under existing regulations. Scientifically important fossils (as found more often by definition in Class I areas) which include all vertebrate fossils and some plants and invertebrates (i.e. Holotype fossils), must be collected under a BLM Paleontological Resources Use Permit, which requires certain skills, knowledge, experience, and a BLM-approved repository for curation of the collections made under the permit. Such collections must be available to the public.

461. Comment: Paleontology. **Paleontological resources should be defined as "scientifically unique vertebrate fossils."**

Response: As per BLM policy, paleontological resources managed by the BLM constitute a fragile and nonrenewable scientific record of the history of life on earth. These resources also possess important public education and recreational values. Scientifically important paleontological resources include some paleobotanical and invertebrate fossils as determined on a case by case basis, as well as all vertebrate fossils.

462. Comment: Paleontology. **The BLM paleontologist has placed "Class I" conditions on several geologic formations that total nearly half of the area under consideration. These conditions will require special expenditures by multiple-use operators. Such conditions should be restricted to small areas of known vertebrate fossil content, not large areas.**

Response: Designation of Class I areas is based on the presence of scientifically important fossils. BLM has minimized Class I areas in the WRRA through application of known paleontological locality data. A Class I designation is expected to fluctuate according to presence or absence of known, scientifically important paleontological resources. These designations have been restricted to those rock units which have produced, and have the further potential to produce, scientifically important paleontological resources; this includes the Glen Canyon Group based on known vertebrate track sites. The BLM cannot, at present, restrict Class I designation to only small areas of known scientifically important fossil content, since this leaves out similar larger areas of unknown, but potentially important fossiliferous exposures.

463. Comment: Paleontology. **The requirement to examine the proposed disturbance area by a qualified paleontologist is a blatant move to increase paleontological employment. This requirement invites favoritism on the part the government paleontologist.**

Response: The WRRA BLM has been working with Class I areas and the associated planning concept for several years. Under NEPA, FLPMA, and policy, BLM is charged with managing natural and scientific areas and resources, including paleontology. This includes the need to locate these non-renewable resources for their proper management. Due to numerous ground-disturbing projects proposed by industry, and the fact there are only 3 paleontologists in the entire BLM, contractors may hire a BLM permitted paleontologist to do these paleontological surveys and possible mitigation measures when timeliness of results is a factor. Paleontologists allowed to do the work must be permitted by BLM. Permittees must be able to do the work as assessed through minimum standards of paleontological

education and experience and past permit compliance. A list of addresses and phone numbers of paleontological permittees is available to industry.

An objective determination (not done by paleontologists alone) of the value of paleontology must be based on the extent of known paleontological resources information and the recommendations of those most knowledgeable about the scientific, educational, and recreational aspects of these resources. BLM management must consider paleontological resources equally with all other resources in all proposed actions. It is true that surface disturbing actions may expose more fossils, but fossils are defined as non-renewable resources, and so the existing surface fossils must be protected if they are of a scientifically important nature. Some fossils may be noticed after much weathering, and other fossils may be noticed as a result of fresh excavation.

464. Comment: Paleontology. **To include the Mowry Shale because it contains shark teeth is similarly excessive. Shark teeth are locally abundant, but little scientific value is gained from more than a handful of specimens.**

Response: At least two museums have found vertebrate fossils other than shark teeth in the Mowry Shale in and adjacent to the WRRA. Due to these finds, scientific peers from these institutions have recommended to BLM that the Mowry Shale be designated Class I.

465. Comment: Paleontology. **Fish and other vertebrates are found in the various members of the Green River Formation. These occur in specific beds, such as the "18-inch bed" in Wyoming (Grande, L, 1980, Geol. Survey of Wyoming Bull. 63) where fish are common. Such occurrences could be managed as a specific paleontological site.**

Response: The Class I designation applies in the Green River Formation only to the Parachute Creek member. Certain "kill zones" and other zones of fossils do occur in parts of the Green River Formation. It is possible that with further knowledge about these paleontological resources such occurrences may be managed as a specific paleontological locality. Some similar areas on BLM public lands have been managed as Research Natural Areas (RNAs), Areas of Critical Environmental Concern (ACECs), and National Natural Landmarks (NNLs).

466. Comment: Wilderness. **Who has ever heard of a wilderness with trails that you can drive a tractor trailer down. People would expect a road way in the city not in the wilderness!**

Response: BLM is not constructing roads or trails within any wilderness study area.

467. Comment: Motorized Travel. **It was brought up that the oil and gas companies have too many roads, also if they had to put roads in to drill a new well that when the well was drilled that the oil company would put a gate up to stop the public from using it. The only thing I see wrong with that is the employees of the oil company has access to this land and can use it as they see fit. Who will patrol the roads and stop it?**

Response: Employees of the oil and gas companies are precluded from using these roads for other than official company business, based on conditions of approval under which the company is allowed to operate. Bureau employees monitor oil and gas activities to insure compliance with these conditions of approval. Appropriate administrative actions are taken against the company in cases of non compliance.

468. Comment: Surface Water. **Red Wash is listed as a fragile watershed and as a perennial stream not meeting state water quality standards. Western Fuels currently has access roads to degasification holes in the Red Wash area as well as the mine dewatering pumps which discharge into Red Wash. Monitoring of our discharge is done per our NPDES permit, and BLM currently reviews all our access roads for location. While always working to control runoff and sediment we feel that we must be allowed continued access in this area in order to insure the safety of our mine and workers. Additional restrictions in this area could prove to be overly restrictive and detrimental to the safety and livelihood of our operation.**

Response: The designation of Red Wash as a "fragile watersheds" is considered existing management. It was designated so by the Colorado Non-point Source Pollution Task Force primarily due to the sedimentation problem with Kenney Reservoir during its initial years of operation. The Resource Areas soil, water and air program uses this designation merely as a planning tool and in no way attaches additional stipulation to what has already been happening for the last ten years on proposed projects within the drainage.

469. Comment: Riparian. **In this section Red Wash is listed as a medium priority riparian habitat in non-functional condition. Several of the alternatives listed would place severe restrictions on road use and or construction in areas of high and medium priority. Some include closure or relocation of existing access roads, as well as the possibility of strict limitations for new access along the Red Wash Corridor. Here again, Western Fuels is not opposing the protection of these areas, but as stated above the more radical alternatives could prove disastrous for us.**

Response: Management objectives for riparian habitats as listed in Table 2-27 would require land use activities to avoid riparian habitat, not the corridor (valley bottom) as suggested by commentor. New development or access would be required to avoid riparian habitat. This does not extend beyond the area occupied by riparian obligate plants. Avoidance was not intended for roads, pipelines, fences, etc. which cross a stream and which would not affect the proper functioning condition of the riparian habitat. This change will be added to the Final RMP/EIS. Likewise, it was not intended to remove all existing roads and facilities from riparian habitats, just those determined to be impacting the proper functioning condition of riparian habitat. This change will also be made in the Final RMP/EIS.

470. Comment: Plant Communities. **I noted in Chapter 2, descriptions of Alternatives, that most of the proposed treatments in sagebrush areas are by mechanical or prescribed fire methods. There is a relatively small amount planned for chemical treatment. In fact most of the Geographic Reference Areas (GRAs) don't show the use of the chemical alternative for any of the sagebrush projects.**

Response: The proposed treatment method for vegetation manipulations identified in Table 2-19 (Draft RMP/EIS) are only estimates of both acreages and treatment method. The actual acreage and treatment method to be used would be determined in activity plans to be developed and would be evaluated in a site specific environmental analysis. This statement will be included in the final

for clarification. It is not our intent to eliminate chemical treatment as a viable treatment method in those areas where chemicals can be used.

471. Comment: Noxious Weeds. **Some of the language in this section is rather vague. The draft plan does not adequately quantify whether a problem in this area exists due to motorized recreation. Restriction of motorized recreation due to any such problems should be forestalled until and unless a nexus can be found between the two.**

Response: There is a well defined body of evidence showing that motor vehicles transport noxious weed seed. This is particularly true for the knapweed species. Restriction of motorized recreation to existing roads and trails would reduce the potential for and rate of invasion of noxious weeds. Management of noxious weeds would not be the primary motivating force for recommending and implementing a restriction of vehicle use in a given area, but it would benefit from its implementation. Physical damage to soils and vegetation and interference with the habitat effectiveness of wildlife and wild horses would be the primary reasons for controlled OHV use.

472. Comment: T/E and Special Status Plants. **The statements in all the alternatives are incorrect. Loss of these species can occur through any number of means. Motorized uses should not necessarily be singled out. Any type of recreation entry into the lands, motorized or not, can be a source of danger. Non-motorized recreational entry may pose a greater danger due to the status of many such enthusiasts as collectors of rare species. Trail bike and ATV enthusiasts are not normally seen as collectors and due to their speed, may not see the species for collection as would a walker. The restriction placed upon motorized recreations is there somewhat specious and should not be imposed except in specific areas where the problem is known to occur.**

Response: If illegal plant collecting became a problem with the potential to impact rare species, BLM could close an area to all, and authorize entrance to only those with legitimate needs. However, collecting rare plant species has not been a concern within the Resource Area. The rare plant species in the area are not plants that can be transplanted because of physical characteristics of the plants' root systems and the poorly developed soils upon which they grow. It would be highly unlikely a rare plant would survive transplanting, thus, an illegal collector would make no money, which is the driving force behind collecting.

As noted by commentor, the operator of an off road motorized vehicle would probably not see or even know a rare species occurs in the area it is traversing and could damage the plant or its habitat for the very reasons the plant could not survive transplanting. Off road vehicle restrictions are being proposed for this reason and are proposed for specific areas to protect rare plants. The restrictions are being proposed to prevent damage and loss to rare plants before damage occurs and not after it occurs.

473. Comment: Visual Resources. **Management of the area for visual resources that would limit trail bike or ATV recreation are not universally appropriate. Rather than taking the rote approach, any limitations should be explored on an area by area basis with those affected by the limitation.**

Response: Consideration of visual resources in regard to OHV use will occur with completion of a transportation plan. This plan will be completed with public input after the RMP is final. Any limitations imposed will be considered area by area and will be based on resource protection of conflict issues.

474. Comment: Motorized Travel. **The existing roads used for the mineral extraction industry have fragmented and damaged this region. Off road vehicles (ORV) use has already damaged this area, yet the acreage prescribed for continued ORV use remains high. Increasing ORV activity to this fragile and vitally important habitat seems irresponsible. I would like to request a copy of the road network data as it is not in the EIS. I also would like to recommend more non-motorized acreage, particularly in the Piceance Basin, which supports viable populations of a diverse range of species continues to be an increasingly important refuge for threatened species. I would like to stress the importance of this region, and recommend management that aims to protect this critical habitat, starting with the reduction of ORV usage.**

Response: The scale at which maps for inclusion in the document are made precludes effective portrayal of roads designated in the plan. A map for areas where closures or designations of specific roads are made in Alternative D is included in the final. Travel route information, consisting of maps, aerial photos, and GIS data, is available in the White River Resource Area Office. While this information has been updated, and is relatively complete, the inventory process is ongoing, because it is virtually impossible to have a totally complete picture of a changing environment, particularly when new roads and trails are being created all the time. Under existing conditions, the inventory will never be totally complete, given unrestricted expansion of travel route systems.

475. Comment: Economics. **This plan is "true" multiple use but the only two entities that have to compete in the economic capitalist market are the oil and gas industry and the cattlemen.**

Response: The oil and gas and mining industries and livestock operators are the major users of public lands in this area that extract a profit from using those lands. If it wasn't economic to do so, those entities would not likely utilize the public lands.

476. Comment: General. **This plan was scoped during 1990 to be a multiple use plan, now it is written for biodiversity. It is imperative that the federal land in the resource area be managed for multiple use and the natural resources of the area be utilized to provide for the economy of the local area and resources for the rest of the country.**

Response: The RMP is a multiple use document which makes land use allocations among sometimes competing uses. The plan was not written for biological diversity as suggested. Biological diversity was an issue and attribute of public land raised during the scoping process and is important to the health of the land and the rest of the country. The references cited on page 4-151 were omitted from the reference section due to our error. They will be included in the final RMP/EIS.

477. Comment: General. **It has been nearly five years since the scoping process began. This is such a significant time gap that a breach of the planning process has occurred, especially considering that the principle authors have changed and the current team leader was assigned to the project after the scoping process was complete.**

Response: There were no new issues raised during either the public hearings or through the comment letters received on the Draft. The planning process and format procedures for preparing an RMP are such that it doesn't matter if there has been a change in authors or team leaders. The issues, inventory, and impact analysis have not changed since the document was initiated.

478. Comment: General. **Further, the proposal for integrated activity plans contains coded language which will constitute a taking of private rights. "Partnerships with all land owners and public users will be pursued." Translated, this means that private owners will be required to comply with BLM plans during any permitting process.**

Response: Partnerships or workgroups are an ideal forum for making sure that all interests in an area are represented and that their concerns are heard and considered in the decisions that are developed. Todays public land management can no longer occur in a vacuum. Many decisions that are developed for the management of the public lands can have an impact on adjacent land owners. There is no coded language in the intent to include the public in public land management.

479. Comment: General. **Individuals within the BLM with duties to administer the activities such as oil and gas, grazing, etc. are also involved with writing the plan. This creates a chilling environment for outside individuals and companies that engage in activities administered by the same BLM personnel. To make meaningful comments and express valid concerns can be a very high risk endeavor. Even within the BLM and government in general, statutes apply whistleblower protection to government workers, but there are no such protection to outsiders. This makes for very reluctant witnesses.**

Response: All BLM planning documents and most environmental documents that have authorized actions to occur on public lands, have historically been prepared by the same resource specialist that administer and deal with those resources on a daily basis. The author of this comment and others that share this concern, have either not dealt with these specialists, or the BLM has failed to publicize the remedies available to the public to be able to voice their concern over public land management. Opening and maintaining lines of communication with the public land users is a top priority with the BLM, and is an essential and integral component of the future land planning process. No individual, company, or group should ever feel intimidated about meeting with or talking to BLM employees, especially if there is a concern over how their public lands are being managed, or their vested interests are being administered. We are a public agency assigned to administer your public resources. In that regard, we need to hear from you.

480. Comment: Minerals. **The RMP does not determine the value of oil and gas resources.**

Response: The value of oil and gas resources are difficult to measure, as well as being very price dependent.

481. Comment: Paleontology. **If paleontology is important to the BLM, then fund it. Don't shake down the oil and gas industry to support paleontologists who's work is not valued by the marketplace or worthy of funding in the resource area budgets. It is a classic example of economic rent seeking. In fact why not consider selling fossils to support the paleo work to evaluate the public lands? Contrary to the statement on 4-147, a fossil is not lost if it is privately owned.**

Response: Paleontological resources on BLM public lands are important enough to be managed for their scientific, educational, and recreational values. Since industry proposed actions may adversely affect these resources, it is up to the operators to either avoid these resources or pay for survey and mitigation costs if they desire results in a timely manner. According to NEPA and FLPMA, BLM manages paleontological resources in a multiple use concept through inventorying and assessing their scientific merit. This is an ongoing process based on incoming information about paleontological resources. According to existing regulations, it is illegal to sell any fossils from BLM public lands. The general public may collect certain amounts of petrified wood and common invertebrates in reasonable quantities, but a Paleontological Resources Use Permit is required to collect scientifically important fossils. All fossils collected under permit stay in federal ownership and are curated through BLM approved repositories. These collections of fossils must also be accessible to the public.

482. Comment: Cultural Resources. **During the past 20 years, how much has been spent on archeology by the oil and gas industry? What has been the result? Some cost benefit analysis is necessary. How has this information been used? What has been learned? Again this command and control bureaucracy has acted as a black hole where vast sums of money are spent with no discernable value or demonstrated results to the public or the Federal Government. Are new operating methods justified?**

Response: It is not possible to answer directly how much oil and gas companies have spent on archaeology since the BLM does not have access to company records in that area. The questions of what has been learned and how has it been used are difficult to answer since the questions are so broad. Environmental data is part of all data recovery, i.e. was it moister or drier 1,000, 2,000, etc. years ago: is the forest we see today what was here 5,000 years ago and if not what was here instead: how has the landscape been modified by past occupants and so on, which can help scientists understand if perceived temperature and rainfall variations are the result of natural processes or a result of human activities, for example.

483. Comment: Economics. **I don't believe there has been enough study done of the economic impacts Alternative D would cause to the area to justify implementing Alternative D.**

Response: A revised economic analysis was completed utilizing representatives from industry, state, and BLM. The revised analysis is contained in Chapter 4 of the Proposed Management Plan.

484. Comment: General. **Most importantly, I feel this document should include the "Effect on Existing Rights", Title VII, Public Law 94-579, October 21, 1976. (Federal Land Policy and Management Act) see Section 701 (a).**

Response: The Bureau is bound by the requirements of the Federal Land Policy and Management Act (PL 94-579). The RMP recognizes valid existing rights in the Introduction to Chapter II of the Draft RMP.

485. Comment: Integrated Activity Plans. **Considerable reference is made to "integrated activity plans", which is the same as an allotment management plan under the current law. Therefore, it is important that management plans be developed in "careful and considered consultation, cooperation and coordination with the lessees, permittees and land owners involved" as mandated under the Public Rangelands Improvement Act of 1978 sec 402 (d), (e).**

Response: The livestock grazing permittee(s) will be one of the partners sought by BLM in development of an Integrated Activity Plan. The commentor is correct in noting the similarity of Integrated Activity Plans and Allotment Management Plans and the requirements for consultation, cooperation and coordination. BLM will consult, cooperate and coordinate with livestock permittees on development of Integrated Activity Plans.

486. Comment: Grazing Management. **I am opposed to taking positive revenue AUMs from livestock and reallocating to negative revenue AUMs for wildlife or wild horses.**

Response: Allocation or reallocation of forage, based upon whether or not use of that forage generates any revenue, is not a criteria to be used by BLM in allocating forage.

487. Comment: Grazing Management. **The BLM should not have the authority to tell a land owner that he can not use his private property as he chooses. If the deeded land is intermingled with BLM, rest periods should not be used unless desired by the land owner.**

Response: As noted, BLM does not have authority, nor do we want authority, to tell a private landowner what to do on their private land. The landowner will be consulted on development of grazing sequences, especially on intermingled private/public lands. Resting and grazing sequences are intended to improve and/or maintain forage production on a sustained yield year after year, an objective also sought by most private landowners.

488. Comment: Grazing Management. **Forcing an operator to do without part of the historical use of the permit will cause undue hardship and expense on the permittee, thus jeopardizing the stability of his operation. Is the BLM prepared to compensate for this loss?**

Response: Nothing in this document implies that any grazing permittee will loose any portion of their grazing allotment, except for small parcels of public land identified for disposal (Appendix I). These parcels are isolated, scattered and small acreage. Disposal of these parcels would not jeopardize the stability of the affected livestock operation.

489. Comment: Plant Communities. **More areas of manipulations need to be allocated. Under natural conditions the sage brush and pinion juniper plant communities burnt an average of every 5-7 years.**

Response: The vegetation manipulations are only an estimate of what could be manipulated considering limitations on treating areas, including economics. Specific manipulation proposals would be developed during development of Integrated Activity Plans or allotment management plans and would be based upon the need, including replication of natural fire regimes.

490. Comment: Land Tenure Adjustment. **One of the earlier letters we received notifying us of the possible conflict, mentioned that we could possibly be cultivating BLM or public lands without authorization. Since that letter was received, we feel you should understand that we have not continued that practice. Indeed, it is ironic that the lands in question are the very lands we offered to purchase some time ago, as mentioned above, and which we would still very much like to purchase at this time. Such a transaction would certainly solve everyone's problem, and to the end we vigorously oppose the potential reclassification of the designation of these lands so as to preclude us from any possibility of purchasing the land, now or in the future.**

Response: Since these lands are adjacent to the White River National Forest, have legal public access from County Road 8, and have the potential to provide significant recreational, riparian, and wildlife related resources, we do not believe that they meet the criteria for sale found in the Federal Land Policy and Management Act. They have not been identified as suitable for sale.

491. Comment: Motorized Travel. **We believe motorized travel should be restricted to designated roads and trails only to 1) protect soil and vegetation from erosion; 2) protect wildlife and wildlife habitat; and 3) to provide higher quality hunting opportunities. We receive many complaints from hunters who have hiked into an area only to have motorized vehicles moving into areas and driving away game. Increasing use of off-highway vehicles reduces quality hunting experiences and hinders meeting harvest objectives.**

Response: Soil, vegetation, erosion, wildlife, and habitat are resource concerns utilized in coming up with our Preferred Alternative. They will also be important in developing travel management plans upon completion of the RMP. Motorized travel has been restricted in some areas to provide for a non-motorized hunting experience.

492. Comment: Riparian. **Improved management of riparian areas. Riparian areas are vitally important to the majority of wildlife species at least seasonally, if not year-round. The single most important action that can be taken to promote healthy ecosystems is to restore properly functioning riparian systems. Properly functioning riparian areas provide more, cleaner water that benefits wildlife and people. Soil erosion can be limited and reduced, lessening sedimentation and channel instability downstream. Healthy, self-perpetuating riparian vegetation (such as cottonwood and willow) contributes to the native biodiversity of both the aquatic and terrestrial ecosystems in and next to rivers and streams. Healthy riparian systems will be the best indicators of how successful we are at managing on an ecosystem basis. If we begin to see increases in the numbers of yellow warblers, nesting pairs of greater sandhill cranes, and miles of stream occupied by Colorado River cutthroat trout, progress is being made.**

Response: All statements in this comment are true and are the very reasons why the proposed management objectives for properly functioning riparian habitats have received increased emphasis in management importance.

493. Comment: Land Tenure Adjustment. **It appears that most of these types of lands are in category 2 under the preferred alternative. Exchanges with other public agencies should be the priority; exchange of such lands to private interests should be only with the concurrence of the adjacent public agency, or in the case of fishing access and riparian areas, the Colorado Division of Wildlife.**

Response: Small parcels of public land adjacent to other agency lands are considered Category II lands. They may be available for transfer to these other agencies through a variety of mechanisms. Preference will be given to these adjacent agencies in the disposal of these parcels,

and language to this effect has been added in the Final. However, we may entertain proposals for exchanges with private parties, consulting with adjacent agencies prior to making any final decisions. While many lands supporting special resource values are included as Category II lands, disposal would only take place if it could be shown to be in the public interest, based on relative values, and with full public input.

494. Comment: Corridors. **We concur with the general idea of consolidating utility corridors as proposed in Alternative D. Unfortunately, there is a lack of overlap between existing corridors and the corridors proposed in D. The corridors in the preferred alternative sometimes, appear to be brand new corridors. It is not clear to what extent these corridors may or may not follow existing major roads. To the extent that they do not follow existing major roads, they should be reconsidered. Specifically, we are concerned about the following corridors: Dragon Trail - Atchee Ridge; Park Canyon - Magnolia; Colins Gulch South (west branch); Magnolia - Rifle; and the unidentified corridor between the existing Bar D - Blair Mesa and White River City - Rio Blanco corridors.**

Response: Most corridors proposed in Alternative D are actually occupied. There are access roads along, to, or near all of them, or major segments of them. Dragon-Atchee is largely new, but for the most part follows existing roads, and was identified as a potential route for avoiding the landslides on Baxter Pass. Park Canyon-Magnolia is essentially the CIG/Questar route, with modifications to avoid Little Horse Draw and Dudley Bluffs. Collins Gulch South (west branch) is the Trans-Colorado route, is occupied and follows a road. Magnolia Rifle has been eliminated. The unidentified corridor is an extension of the Price Creek-Magnolia corridor, and follows the existing CIG and Rocky Mountain Natural Gas pipelines.

495. Comment: Water Rights. **The EIS states "Where in stream flows are needed, BLM will make recommendation to the Colorado Water Conservation Board and work with interested parties to achieve mutual goals." The Colorado Division of Wildlife is interested in working with BLM on in stream flows filings.**

Response: The Colorado Division of Wildlife was considered as part of "interested parties", when determining the stream flows.

496. Comment: Riparian. **First, the classification of many of the riparian zones strikes us as somewhat more generous than we might have been. For example, E. Douglas Creek is classified as "properly functioning" rather than what we might classify as "functioning - at risk."**

Response: By the definition of proper functioning condition given on page 2-33 (Draft RMP/EIS), East Douglas Creek was classified in proper functioning condition. The creek has sufficient woody vegetation (willows and increasing cottonwoods) to dissipate stream energy from high water flows which have occurred several times during the evaluation period. A functional at risk classification, by definition, requires a soil, water or vegetation attribute, or lack of such, to contribute to the susceptibility of the riparian system to degradation. Under current management schemes, the soil, water and vegetation attributes are working in concert to improve riparian habitat along East Douglas Creek.

497. Comment: Motorized Travel. **The motorized vehicle restriction on Moosehead Mountain should be applied across the board, including the grazing permittee.**

Response: BLM may permit commercial users of the public lands, such as grazing permittees, to use vehicles in their operations with restrictions on that use.

498. Comment: Wild Horses. **CDOW prefers alternatives that maintain or reduce wild horse numbers. Wildlife impacts from wild horse management described in Chapter 4 are of concern to us, particularly in reference to deer winter range and sage grouse. On page S-8, Alternatives A and D mention the same AUM figure (2100) for differing wild horse populations (60-140 horses vs. 90-140 horses) is 2100 AUMs based upon 140 horses?**

Response: The 2100 AUM allocation is based on a horse population of 140.

499. Comment: General. **The Draft Plan does not mention any kind of monitoring, whether for compliance with oil and gas stipulations, grazing, wildlife, riparian areas, off-road vehicle use. The plan should have some clearly stated, measurable objectives and standards to strive for.**

Response: Monitoring is a requirement of the individual resource programs and is usually established during the activity plan stage that occurs after a resource management plan has been completed. The activity plan is a more detailed and site specific plan for management of a single resource program that is undertaken to implement the more general resource management plan goals and decisions. Monitoring is required under the Federal Land Policy and Management Act and the Council on Environmental Quality's regulations for implementing the procedural provisions of the National Environmental Policy Act. Monitoring is designed to measure the site specific effects of implementing the RMP decisions.

500. Comment: General. **We are both bound by the legislative constraints placed on the Secretary of the Interior. One of those constraints on the Secretary is to take no action that would derogate the resources and values of a unit of the National Park System. The National Park Service is charged with managing its units in such a manner as well leave them "unimpaired" for the enjoyment of future generations (16 UCS 1). It is incumbent on the Bureau of Land Management to ensure that its plans and actions do not derogate the resources and values for which Dinosaur National Monument was established.**

Response: Implementation of the Proposed Management Plan decisions will not derogate the resources and values for which Dinosaur National Monument was established.

501. Comment: General. **The SUMMARY (p. S-1) states that the RMP proposes to resolve issues not addressed in earlier land use plans. The first example given is "management of BLM lands near the Dinosaur National Monument." The INTRODUCTION (Table 1-3, p. 1-5), notes, among the issues or concerns, the effects of BLM management on Dinosaur National Monument values. Beyond these references, there is little if any mention of BLM strategies or actions which would specifically protect park values. The Preliminary Draft EIS also did not specifically acknowledge or address such protections. It did, nonetheless, incorporate many of our concerns and suggestions which were enumerated in our memoranda of October 18, 1991, and November 12, 1993.**

Response: While not specifically mentioning a tie to the Dinosaur National Monument, several resource decisions were developed based

on comments and input received from Park Service representatives. Examples include the establishment of weed free zones, utilizing native seed mixes for reclamation work, and visual resource classifications within Monument viewsheds.

502. Comment: General. **We find that the Draft RMP and EIS have retained some of these protections but has (a) withdrawn several management strategies and provisions which would have served to protect park resources and values, (b) still failed to directly address park resources and values and (c) failed to discuss impacts of BLM strategies and actions on park resources and resource values. With lands of such high national value adjacent to the White River Resource Area, it is imperative that a major planning effort such as this RMP and EIS address these concerns. We recommend that the White River Resource Area (WRRA) clearly address these NPS concerns in the Final RMP and EIS. We further recommend additional NPS review before the document is issued with a Record of Decision.**

Response: Addressing the values contained within the boundaries of Dinosaur National Monument is beyond the scope of this BLM planning document. We are sure that the Park Service has adequately addressed planning concerns within the Monument boundary. This document has evaluated the resources occurring on BLM lands adjacent to the Monument and proposed specific management goals for those resources. There has not been an identified need to provide a buffer zone adjacent to the Monument boundary.

503. Comment: Visual Resource Management. **Although much of the Blue Mountain GRA is proposed for various stipulations on land use (no leasing, NSO, CSU, TL), it is difficult to determine which lands are subject to which stipulations for which purpose. Although they may, in effect, provide partial protection for NPS resources, these stipulations are generally imposed to protect BLM resources and resource values. The Draft RMP and EIS has also been changed significantly from the Preliminary Draft by removing NSO stipulations from VRM Class II lands. The effect of these changes is to diminish partial protections for NPS resources and resource values. Furthermore, the Draft RMP states that "surface stipulations could be excepted, modified, or waived by the area manger." This increasingly diminishes potential protection for NPS resources and resource values.**

Response: VRM Class II areas will not have a NSO stipulation because the characteristic landscape can be protected by other means. All proposed projects will be evaluated for their effects upon the landscape and modified to protect sensitive areas and resources. Generally, many projects can be designed to more easily blend into the landscape in VRM Class II and III areas due to diversity in topography and vegetation that allows for more screening. The effects of proposed projects on NPS resource values will be considered as projects are proposed adjacent to or near NPS lands.

504. Comment: General. **There is no reference to solitude or silence as resource values on BLM lands in the Resource Area. These are high public values within Dinosaur National Monument and, we expect, in the Blue Mountain GRA. We recommend that the Final RMP discuss solitude and silence. Dinosaur National Monument has conducted monitoring of ambient sound in areas adjacent to the Blue Mountain GRA. The data collected in that monitoring may be of use to WRRA in assessing levels of ambient sound and values related to ambient sound.**

Response: Solitude and noise levels are of great concern in the Blue Mountain GRA, particularly in and adjacent to the Wilderness Study Areas. These are the only areas where solitude and silence (noise levels) have been considered. The RMP does not contain a discussion of, nor does it consider solitude or silence as resource values outside of the Wilderness Study Areas.

505. Comment: Recreation. **The discussion of Recreation Management, p. 2-82, also presents a significant change from the Preliminary Draft. The Preliminary Draft proposed establishment of a Blue Mountain SRMA. The present document withdraws that proposal and notes only that the Blue Mountain GRA would be managed within the ERMA designation to provide specific recreation activity opportunities. SRMA designation would more appropriately highlight the recreation potential of the area, provide additional emphasis for management of recreational opportunities, and greatly facilitate development of cooperative recreation management activities with the National Park Service. Designation of the area as simply part of an ERMA would reduce the emphasis on recreation opportunities and make it more difficult for Dinosaur National Monument to secure funding for cooperative recreation management activities. We believe the Preliminary Draft presented a better management strategy and recommend that the SRMA proposal for Blue Mountain be restored in the Final RMP.**

Response: It is true that management of the Blue Mountain area as part of the ERMA does not place as much emphasis on recreation as the administrative SRMA title. However, focus on certain recreation management strategies will occur. Management of the public lands in the area does not preclude cooperation with Dinosaur National Monument and in fact is one of the main reasons why at least some emphasis on recreation management in the area is warranted. BLM can adequately mange the recreation resource without the administrative SRMA title.

506. Comment: General. **There may be some areas within the WRRA which have involved the Land the Water Conservation Fund grants program. We recommend that you contact the State Liaison Officer who is responsible for administration of the L&WCF in Colorado to determine if areas which are subject to provisions of Section 6 (F) of the Act are located within WRRA. If such lands are present, we recommend that the Final RMP address impacts of the RMP on administration of those lands.**

Response: The only such projects of record, for this area, are the Rangely Campground, and a recreation area in Meeker. Neither would be effected by this RMP.

507. Comment: Air Quality. **The air quality section of the Affected Environment (Chapter 3) is out-of-date regarding the discussion of total suspended particulates (TSP). The Clean Air Act was amended to replace TSP with PM-10 (fine particulates of 10 microns or less in diameter which affect the human respiratory process and cause visibility degradation). The discussion should be revised accordingly in the Final RMP/EIS.**

Response: It is correct that the TSP Ambient Air Quality Standard was replaced with a PM_{10} Standard. Although no PM_{10} data is collected within the White River Resource Area, the Colorado Department of Health, Air Pollution Control Division operates PM_{10} samplers in Fruita, Grand Junction, Rifle, Glenwood Springs, and Steamboat

Springs. The range of TSP values presented on Page 3-1 are not significantly different than the measured PM_{10} values, and can be considered a conservative estimate for both TSP and PM_{10}.

508. Comment: Plant Communities. **Table 2-18 (p. 2-21) appears to favor maintenance of high seral stages for grassland, saltbush, greasewood and sagebrush communities. We recommend that the Final RMP acknowledge the presence of early and mid-seral stages as appropriate components of a healthy, dynamic ecosystem.**

Response: Maintenance of high seral plant communities would occur under Alternative B of the Draft RMP. Under the Preferred Alternative (Alternative D), management of healthy lower seral classes is recognized for the need of other uses which can be equated to a healthy, dynamic ecosystem.

509. Comment: Reclamation Seed Mix. **P. 2-23 notes that only native plant species would be used under the preferred alternative for reseeding disturbed areas within the Blue Mountain/ Moosehead geographic reference area (GRA). We strongly support this proposal. We also suggest that WRRA and Dinosaur National Monument coordinate that development of a native plant/seed bank to provide locally produced materials for revegetation. Such an action would increase the effectiveness of management by both entities.**

Response: BLM would support an effort to develop a seed supply of local native plants. Some work has been done with the Upper Colorado Environmental Plant Center in this regard. Decisions to utilize native plant species in reclamation are included in the RMP. The process of obtaining or developing a seed supply does not need to be included in the RMP.

510. Comment: Grazing Management. **P. 2-52 begins the discussion of grazing management; p. 2-57 discusses big game management. The Bureau of Land Management and Dinosaur National Monument, together with other Federal and State agencies, have initiated a bighorn sheep restoration program. Recent research has indicated a very high correlation between survival of bighorn sheep populations and distance from domestic sheep. Removal of domestic sheep from certain allotments would more fully ensure survival of current bighorn sheep populations and enhance survival of current bighorn sheep populations and enhance survival of current transplant populations. The action which might be most appropriate is to stipulate that, if and when selected allotments are converted from domestic sheep use to cattle use, those allotments cannot revert to domestic sheep use. The allotments of particular concern lie south and east of Dinosaur National Monument. We recommend that the RMP discuss this situation and stipulate that conversions from domestic sheep use to cattle use on selected allotments cannot be reversed.**

Response: Any change in kind of livestock proposed by a livestock permittee would be subjected to an environmental analysis which would include an evaluation of impacts to bighorn sheep in Dinosaur National Monument. The primary area of concern within the White River Resource Area would lie north of Highway U.S. 40. The suggested stipulation will be added for grazing allotments north of U.S. 40 in the Final RMP.

511. Comment: Recreation. **Table 2-56, beginning on p. 2-84, notes proposed recreation management actions within the preferred alternative in the Blue Mountain GRA. Included is encouraging private sector development of 30-50 unit tent campgrounds along the Harpers Corner Road both north and south of Moffat County Road 16. In our experience there is demand for both tent and trailer camping on Blue Mountain throughout the summer and fall. We expect, given the nature of private lands and apparent lack of interest by landowners, there will be relatively limited possibilities of development of private campgrounds. We recommend that the Final RMP also include an alternative of developing and managing primitive campgrounds on federal lands in cooperation with Dinosaur National Monument. Designation of the area as a SRMA would make it easier for Dinosaur National Monument to secure funds and commit staff to cooperative planning and management of campgrounds along the Harpers Corner road.**

Response: BLM agrees and the final RMP reflects the change to cooperate with Dinosaur National Monument to develop and manage a primitive (tent) campground or campgrounds on public lands to accommodate use and meet demand. BLM recognizes a need for such a facility and the apparent lack of private entities in this remote area to develop such a facility near Dinosaur. While the administrative SRMA title would place more emphasis on recreation in the area, the same management objectives can be carried out without it. With the development of a local partnership, it is possible to apply for funding through other sources for development of recreation facilities adequate to accommodate the visiting public and meet demand.

512. Comment: Motorized Travel. **The discussion of Motorized Vehicle Management, p. 2-87, notes that motorized vehicles would be allowed only on designated roads and trails under the preferred alternative. This section also notes that a road density objective would be used in closing roads and trails. We support this management direction and request that Dinosaur National Monument be consulted specifically in any road closure decisions on lands adjacent to the monument. Closure of certain roads near the monument may aid in protecting park resources; closure of certain other roads may cause management difficulties for the monument.**

Response: A coordinated resource management approach will be utilized in closing roads. Potentially impacted agencies, companies, and individuals will be provided with an opportunity to comment.

513. Comment: Land Tenure Adjustments. **The discussion of Land Tenure Adjustments notes that certain lands would be identified for disposal. Table I-1 identifies some specific parcels near Dinosaur National Monument which would be designated for disposal. (Table 2-24 fails to indicate Category 1 lands near the monument.) Disposal of some of these tracts from federal ownership could complicate management of lands in Dinosaur. It would seem imprudent for one Interior agency to make land tenure adjustments which may negatively impact another Interior agency. We therefore recommend that those lands near Dinosaur National Monument in T6N R100W, T6N, R101W and T6N, R103W be redesignated from Category 1 lands to Category 2 lands. We further recommend that WRRA consult with Dinosaur National Monument prior to any further consideration of disposal of these lands.**

Response: The noted lands are only identified as Category I lands in Alternative A. They are Category II lands in all other alternatives, including the Proposed Management Plan.

514. Comment: Withdrawals. **The discussion of Withdrawals Management, p. 2-103, notes that additional withdrawals would be made to protect sensitive resources. As has been noted earlier, there are sensitive resources of high national value within Dinosaur National Monument. The EIS does not identify these values or recommend actions which would protect those values. We recommend that the Final RMP be amended to consider withdrawal of certain lands adjacent to Dinosaur National Monument to protect the high national values associated with park lands.**

Response: Withdrawals of public land under Bureau jurisdiction are only utilized in cases where the lands involved support the resources to be protect. They must stand on their own, and other forms of protection must be insufficient. The potential for unacceptable, nondiscretionary surface disturbing activities is also a consideration. At this time, we do not feel that creating a buffer is sufficient justification to withdraw additional public lands.

515. Comment: Fire Management. **The discussion of Fire Management on p. 2-106 utilizes terms which are no longer accepted in the interagency fire community. We recommend that the text be revised to use standard terminology, particularly with regard to the accepted strategies of confine, contain and control within the context of fire suppression.**

Response: During the late 80's, fire planning efforts centered around using terms of wildfire and various suppression strategies which was categorized under the term of conditional. The primary reason using conditional terminology was to provide greater flexibility to suppression efforts and to reduce impacts to the environment and reduce overall suppression costs. This was also an effort to simplify the old terms of modified and limited suppression action, which was commonly used and often confused both planners and suppression personnel. Current planning efforts will incorporate existing accepted interagency fire strategies of confine, contain, and control for all fire suppression actions discussed in the RMP.

516. Comment: Air Quality. **On p. 3-1 Air Quality, the document states that "no visibility or atmospheric deposition data are currently collected in the resource area." The Final RMP should note that visibility and fine particulate data were collected near the town of Dinosaur for several years by Deseret Generation and Transmission and by the National Park Service. Lichens from 11 references sites in Dinosaur National Monument have been recently collected for elemental analysis. Completion of that analysis will add to the baseline information on air quality near the Resource Area. Atmospheric deposition and other related parameters are being monitored by the Forest Service at the nearby Mount Zirkel Class I Wilderness Area. The nearest ambient air quality monitoring is being conducted in Grand Junction, Colorado. Summaries of the most recent data from those monitoring sources should be included in the Final RMP.**

Response: The Bureau was not aware of air quality data collected by the Deseret Generation and Transmission and by the National Park Service, and would appreciate obtaining copies of any reports that were published. The Bureau collects atmospheric deposition and visibility data in Craig, and at one time measured a wide variety of air pollutants in the Piceance Basin (through the Oil Shale Office). The Colorado Department of Health, Air Pollution Control Division operates PM_{10} samplers in Fruita, Grand Junction, Rifle, Glenwood Springs, and Steamboat Springs; and monitors TSP and sulfates at Colorado National Monument. Although an exhaustive data report is not provided in the RMP/EIS, air quality conditions are summarized on page 3-1.

517. Comment: Air Quality. **The same section states that "ozone levels in the Rocky Mountain West are relatively high but are of unknown origin" (p. 3-1). We recommend that corroborating evidence to support that statement (such as ambient monitoring data) be included in the final RMP, or that the statement be dropped.**

Response: The referenced statement is based on historic monitored ozone values in the Piceance Basin, and additional western regional observations by the late Professor Vincent J. Schafer (Atmospheric Sciences Research Center, State University of New York). Since local emissions of ozone precursor gases are not high enough to account for these observations, the cause is unknown. It has been postulated that elevated levels may be a result of stratospheric subsidence, long range transport, or even natural biogenic sources.

518. Comment: Plant Communities. **Discussion of the Grassland Association (beginning p. 3-11) should be amended to include needle-and-thread grass as a common species. The document notes that big sagebrush is actively invading this (grassland) type at all elevations. We recommend that this statement be amended in the Final RMP. Burn areas on portions of the Blue Mountain GRA (e.g. Plug Hat) and in Dinosaur National Monument exhibit little or no indication of invasion by sagebrush, even 10-20+ years after burning, when those areas are not subject to heavy spring and early summer grazing.**

Response: Changes recommended by commentor will be made in the Final RMP/EIS.

519. Comment: Grazing Management. **In discussing the impacts of livestock grazing on T/E species and special status plant management, p. 4-43, the document states that grazing by livestock would not affect T/E plants because the species are not palatable and because use of the habitat occurs after the growing season when the plants are dormant. We expect that some grazing occurs prior to plant dormancy. We also suggest the Final RMP indicate that trampling and other physical impacts may occur to T/E and candidate species as a result of grazing by livestock and wild horses.**

Response: We agree with the comment that some grazing may take place and some physical impact from trampling could occur. The Final RMP will be changed to note such. Current and proposed livestock management would not impact population viability or extent for the reasons stated on page 4-43 and will be changed in the Final RMP to reflect this statement.

520. Comment: Fire Management. **Chapter 4 does not contain any discussion of the impacts of other management activities on fire management. Since fire management is a major program across the entire Resource Area, we recommend inclusion of a discussion of such impacts in the Final RMP.**

Response: Fire was considered a tool to be used to accomplish specified goals and objectives for resource management.

521. Comment: Minerals. **The appropriate time to determine whether or not a particular oil shale project can meet the**

referenced environmental requirements is at the time of permit review and not at the pre-leasing stage. Furthermore, the determination as to whether or not a particular project meets an environmental regulatory standard should be made by the government agency with the vested responsibility and technical capability to enforce a particular environmental law, and not the BLM."

Response: The "Carrying Capacity" limitations developed for oil shale projects in the Piceance Basin Resource Management Plan (PBRMP) was the subject of several comments from industry during the public comment period for that Draft document. Since the PBRMP was prepared at a time when an oil shale industry was thought to be immanent, and the decisions in that document were carried foreword into this document, the response to this comment can best be answered by reiterating the response provided in the Final PBRMP. "The objective of the carrying capacity concept is to evaluate and identify situations where thresholds would be violated prior to issuance of an additional lease. Therefore, this process must be initiated at the leasing stage. A proposed project in violation of a threshold would require adjustment to avoid exceeding a threshold prior to issuance of a lease. The carrying capacity concept stresses monitoring of actual impacts for comparison with predicted impacts and the threshold levels. A lease would require adherence to these carrying capacity thresholds. Governmental agencies with the vested resource responsibility and technical expertise would be consulted during this process."

522. Comment: General. **There appears to be a typographical error on page 3-43, last sentence under WITHDRAWALS. Appendix "G" probably should be "I".**

Response: Comment noted Draft text changed to properly identify Appendix I.

523. Comment: Cultural Resources. **While we all recognize the need to identify and protect significant and unique cultural resources, the current process of data collection and review has become an excessive roadblock to surface activity of any type. The large volume of data inventoried thus far has been almost exclusively provided by companies and individuals engaged in responsible surface disturbing activities, i.e. oil and gas, pipe lines, mines, roads, etc. Most of these data would not even be available otherwise. The imposition of any further restrictions or areal exclusions in an attempt to further protect undiscovered cultural resources would be counterproductive and unwarranted.**

Response: All requirements for inventory are based on law and regulation. Where possible the BLM tries to reduce these requirements as provided for by those same laws and regulations.

524. Comment: Roads. **I would like a response on the reasoning behind the proposed closure of public roads. Thank you.**

Response: In some cases, where roads cross critical habitats, their use during specific times of the year results in stress on wildlife. In other cases, the use of roads crossing fragile soils leads to accelerated erosion. There are also situations where there are an excessive number of roads, often times of equal quality or standard, which lead to the same location, devoting unnecessary acreage to bare ground, as opposed to vegetation. Except for emergency situations, road closures will be determined through preparation of a travel management plan, that will be developed after completion of the RMP, using a coordinated resource management approach.

525. Comment: Motorized Travel. **Our position is that we are opposed to blanket seasonal closures. We feel that a year to look into specific areas, that have specific problems and true fragile soils is not unrealistic.**

Response: In the final transportation plan the resource specialists will identify areas in which road closures would be recommended based on their resource responsibilities (e.g. fragile soils and sensitive watersheds).

526. Comment: ACECs. **We are opposed to the enlargement of the ACEC areas. We believe that the BLM has not adequately assessed the proposed increase and is unsupported in fact and scientific proof.**

Response: Only two designated ACECs have been proposed for enlargement. South Cathedral Bluffs and Raven Ridge. The South Cathedral Bluffs ACEC addition is known to contain sensitive plant species as documented by rare plant inventories conducted in 1982. The 1987 Piceance Basin RMP encompassed only a portion of the ACEC proposed for South Cathedral Bluffs and was designated at that time. The addition to South Cathedral Bluffs was deferred until now. Monitoring studies conducted since 1985 verify the continued existence of the species of concern within the proposed addition and that this area still qualifies for ACEC designation. In the case of the Raven Ridge ACEC addition, the original ACEC was designated in 1986 for those areas known to contain sensitive plant species. Since that time, BLM has conducted inventories and has documented occurrences of sensitive plant species on the proposed addition. Also, part of the Raven Ridge ACEC addition was recommended by the University of Colorado for the occurrence of scientifically significant paleontological resources.

Table 2-53 on pages 2-80 and 2-81 list the important values contained within each proposed ACEC. The document size limitations for the Draft RMP/EIS prevented documenting in detail the facts and scientific proof for which the commentor said was not adequate. As for rare and sensitive plant species, Table 3-15 on pages 3-6 and 3-17 of the Draft RMP/EIS indicates the rarity of the species of concern which is backed by scientific evidence. Proof of the existence of a specie within a proposed ACEC is supported by rare plant inventories conducted by BLM.

527. Comment: Motorized Travel. **In regards to the Indian Valley area we talked about, I would like to review a copy of the contract or agreement done between the BLM and the Keystone Ranch. Specifically how the BLM informed the public that this area would be closed to motorized use. Did the BLM provide public hearings? Was there a comment time, if so how long and a synopsis of the comments.**

Response: The limitations in Indian Valley are not based on a simple agreement or contract. These limitations were imposed under a settlement agreement reached in a Federal Court case (Per Sten Johnson, et al., v. USA, et al., Civil Action No. 91-C-1995). In such instances, settlement negotiations are normally required by the court, are handled by lawyers before a court magistrate, with no opportunity to inform the public, hold public hearings, or allow for comments.

528. Comment: Motorized Travel. **Aerial photos are not a guarantee that all trails will be found by the BLM. Therefore the BLM would consider any trail found but not showing up in aerial photos as a addition to the system within the ACEC areas.**

Response: Aerial photography will be the primary means of reviewing whether or not a road or trail is new. However, other evidence will also be utilized.

529. Comment: Motorized Travel. **Moosehead trails were closed, was this a temporary closure or had there been a change in the frame management plan? If it was a change how was the public notified? Was there a comment period? Were public hearings held? If it was a temporary closure Moosehead has been closed for well over a year and there needs to be legitimizing or open Moosehead back up.**

Response: The current Moosehead closure, which was made via Federal Register notice, became effective July 23, 1990. It is temporary in that it is effective pending completion of the RMP (there is no set term). The public was notified by a press release, dated April 23, 1990, which was submitted to the Grand Junction Daily Sentinel, the Rangely Times, the Northwest Colorado Daily Press, and the Meeker Herald. A public meeting was held in Rangely, Colorado, on May 10, 1990. No comments were received prior to the effective date of the closure.

530. Comment: Noxious Weeds. **The cleaning of all construction vehicles entering weed-free zones is impractical. Mr. Rusty Roberts of your office said in a conversation with Gene Iley of this office that this statement was intended for "permitted activities" only (e.g., construction projects) and is targeted at dirt moving equipment rather than trucks. The RMP/EIS should be revised to reflect Mr. Roberts' statement.**

Response: Any standard above that which presently exists is going to make any construction work on public lands, both more costly and difficult. However, construction and the disturbance associated with it, is principally where new noxious weed infestations develop, on the public lands. In addition, construction equipment readily transports both weed seed and vegetative propagates from existing infestations to newly disturbed sites, that were previously uninfested. Therefore, it is both necessary and prudent to take reasonable precautions, to prevent the proliferation of noxious weeds into weed free zones. This stipulation is targeted at surface disturbing equipment.

531. Comment: Grazing Management. **In 1982 BLMs primary objective was to "improve or maintain an acceptable rangeland condition and to adjust vegetation uses to a sustained yield of that vegetation." The land use plan recommended establishing studies that would determine the capacity of available winter ranges for maintaining deer and elk populations at existing levels until such studies are (were) complete. The studies were apparently never done - no reference is made in the current document.**

Response: Permanent, long term rangeland studies, as noted in the response to comment number 256, were established on over 80 conflict allotments, many of which were established on wildlife critical winter ranges. BLM periodically evaluates habitat conditions and makes recommendations to the Colorado Division of Wildlife on habitat capacity. The Draft RMP/EIS evaluates alternative population goals (page 2-57) and the impacts on the habitat from those populations (pages 4-60 through 4-62).

532. Comment: Grazing Management. **The current draft RMP WRRA ignores any reference to this document detailing grazing management problems. Some of the problems in existence and identified in 1983 Grazing Allotment Plan include: 1. "allotment receives continuous use in the creek bottom areas of Little Horse Draw and Douglas Creek during the spring of each year. Consequently, these areas have been over utilized." As of March, 1995 twenty to thirty head of cattle along Colorado 139 have remained all winter and into spring. This may not only account for continued range (soil) degradation in these areas but also suggest the lessee has gone to a turnout policy that lets livestock stay year round near water sources that continue to deteriorate. 2. Sheep herds trailing through the northern regions of the allotment in the vicinity of Cottonwood Creek have caused overuse around watering holes and along trailing route. 3. Many of the major intermittent drainages contain deeply incised gullies which run the length of the drainage. 4. Salting cattle in the same spots year after year have caused congregation of cattle in these spots and localized deterioration of the watershed. 5. Poisonous plants have continued to increase since 1983 in this allotment: Halogeton in northern winter range, water hemlock in the drainages of Douglas Creek and West Creek, houndstongue, larkspur, locoweed, throughout central spring, summer, and fall ranges. The rangeland deterioration continues because conditions 1-5 have not changed. All of these conditions reflect livestock use and no apparent attempt by BLM to follow management rationale. Actual cattle AUMs have diminished little with 8,695 in 1983 and 8,139 in 1994. With an active preference of 11,410 (per BLM officials, Alternative A in the draft RMP states 11,500) since 1986 which appears to be excessively high for available forage. The proposed Alternative D in the draft RMP WWRA calls for a forage loss of 70 AUMs or 1%.**

Response: All fire problems and concerns perceived by the commentor are site specific concerns that are best handled at the allotment planning level through an allotment management plan and not through this document. There is an allotment management plan in place detailing commentors' concerns as noted by commentor. Generally, we disagree with commentors' assessment of rangeland conditions and continued deterioration of rangeland conditions across the referenced allotment. There are problem areas on the allotment detailed in the allotment management plan with grazing management objectives prescribed in the plan to deal with these problems. The plan also prescribes monitoring studies, which have been established, to evaluate grazing management objectives. Evaluation of those studies by BLM professionals have drawn conclusions different than those of the commentor.

Some of the problems identified on this allotment are not created by livestock grazing nor can they be resolved through improved grazing management alone. This allotment makes up a major portion of the Douglas Creek area which is BLM's highest priority area for an integrated activity plan (page 1-5 Draft RMP/EIS). Site specific problems and concerns of all multiple uses in this area will be addressed and evaluated in this plan, following the RMP. The 70 AUM forage loss referenced for Alternative D is 70 AUMs above the loss identified in Alternative A. Total forage loss estimated for Alternative D would be 11,500 AUMs (page 4-38, Draft RMP/EIS).

533. Comment: Wild Horses. **In a letter to Dee Jacobson, aide to then Congressman Ben Nighthorse Campbell, dated July 30, 1992 - 4710.1 (162-WRRA), White River Resource Area Manager Curt Smith states "The 1981 White River Resource Area Management Framework Plan land use decisions identified the West Douglas area as a herd removal area. A key factor in the land use planning decision to remove horses from the area was that intensive oil and**

gas development in the area was forcing/dispersing wild horses into areas where they did not inhabit at the time of passage of the Wild Horse and Burro Act of 1971." BLM has not substantiated Mr. Smith's claim. In this same letter, Mr. Smith acknowledges "WRRA is preparing a resource management plan (RMP) covering the entire area. In this document, land use planning decisions relative to wild horse management will be updated and revised. In response to some public interest in retaining wild horses in the West Douglas area, one alternative in the draft RMP is to designate the area as a Herd Management Area." Despite Mr. Smith's similar assurances to members of the Colorado Wild Horse Coalition of the same statement, the draft RMP does not show this as the preferred Alternative.

Response: The fact that wild horses can be consistently found on the Evacuation Creek, Park Canyon, and Banta Flats grazing allotments, all of which are outside the West Douglas Herd Area should substantiate the claim that horses are dispersing outside herd areas. We are not aware that at any time Mr. Smith indicated that designation of the West Douglas HA as a Herd Management Area would be the Preferred Alternative of this RMP. Under Alternative C, a portion of the West Douglas Herd Area would be designated as the Texas Creek Herd Management Area.

534. Comment: Wild Horses. **In conversations with Dr. Gus Cothran, wild horse researcher at the University of Kentucky. The effective number of wild horses for a healthy management herd must be 50 to 60 breeding individuals which when terrain, sex ratios, pressure of older non-breeding individuals, and other values are considered suggests in these areas minimum herds may need to be approximately 100 head. The habit of BLMs reintroduction of non-adoptable, older mares and stallions, as well as, geldings from the Colorado Correctional Industries Horse Program dramatically affect these necessary levels. Management principles to keep healthy breeding horses on the range rather than controlling type and numbers to meet BLMs adoption needs must be the goal.**

Response: We are aware that 50-60 breeding individuals is the minimum number necessary for a genetically diverse breeding herd. This is based on the assumption that the subject herd is not manipulated and has not reached a level of homozygosity which is reversible only by insertion of unrelated genetic stock. In our case, primarily because of the necessity to release un-adoptables back onto the range and return select breeding age females to the range to maintain a normal herd age structure, our herds would generally be considered as "manipulated". BLM's "habit" of releasing un-adoptables back onto the range is policy and is a recognized constraint in the management of wild horses on their range. Our principal objective has and continues to be the maintenance of a genetically diverse, healthy wild horse herd sustained by healthy rangelands.

535. Comment: Motorized Travel. **In the Moosehead area, who are the private land owners? Can they expand the number of partners in ownership, which would allow a large number of vehicles in the area?**

Response: Most of the private land is owned by K Ranch. The owner may have as many partners as he wishes. However, their use of vehicles must be limited to bona fide ranch-related operations.

536. Comment: General. **Bill Hill in Rangely meeting said that no additional personnel would be needed and in the Meeker meeting indicated that more personnel would be needed. Where would the money come from when budgets are being cut?**

Response: Resource decisions were developed in the Proposed Management Plan based on what is best for the resource and environment. Most of the decisions can be accomplished under current budgets and with the use of volunteers and partnerships.

537. Comment: Wild and Scenic Rivers. **We believe that the BLM has a responsibility greater than just deferring determination of suitability for protection. We believe BLM should take the lead in coordinating efforts to protect the White River.**

Response: The BLM can and would take the lead for studying the White River for suitability as a Wild and Scenic River. However, since the majority of the lands in the river corridor are in private ownership, a wild and scenic river study would require strong support from local residents and especially landowners along the river. BLM has no jurisdiction over private property. Adequate funding for a study would also be required.

BLM is providing protection for important river related resources on BLM public lands along the White River. Proposed management of the White River Riparian ACEC, recreation and visual resource management, fire management, as well as management of the endangered fish species under the Threatened and Endangered Species Act will help protect outstandingly remarkable values identified for the White River. In addition, the activity plan for the White River ACEC will identify specific management practices that will help protect important and unique resources and resource values along the White River. Management will also include coordinating with many private land owners along the river corridor.

538. Comment: General. **While in essence I agree that the decisions made in the process of finalizing the RMP may not be of the popular vote variety, I strongly disagree with the lack of importance you are giving the petitions and form letters submitted. Petitions are a strong part of this country's electoral and free foundation, to disregard them is to put yourselves and the RMP above the rights of the citizens. Although one written response to the signatories of the petition may be acceptable, each signature on the petition should be treated as, and given the weight of an individual letter or comment. The fact that one person wrote the comment and a group of people in agreement with the comment and signed it demonstrates the weight of the comment. As to the content of the petition, any reasonable person involved in writing a document such as the RMP that closes or limits access to a large portion of the area we live in must realize that to "leave the land open" or "don't close the land" and stating a preference for Alternative A is self explanatory. Any response less than serious is insulting to those who signed the petitions.**

Response: The signatures to the petitions received are given the same weight as if they were sent individually. The only problem the BLM has with the process is that the individual that signed the petition may have not taken the time to read the document, and consequently has responded to an emotional statement such as "Leave the land open" with no discussion of what that means or how it pertains to the decisions recommended in the RMP. In addition, decisions in this document will not close the land. Responding to that type of comment will not likely satisfy anyone.

539. Comment: ACECs. **Another question raised after the meeting is the appearance that your new map designating Areas of Critical Environmental Concern encompasses considerable more acreage than previous maps. What is the actual acreage involved and has it changed?**

Response: The actual acreage of public land within each ACEC is noted by alternative in Table 2-53 on pages 2-80 and 2-81 of the Draft RMP/EIS. Neither the public land acreage nor the boundaries of the ACECs have changed from what was printed in the Draft RMP/EIS to what was presented at public meeting since release of the Draft RMP. Map 2-19 depicts locations of the ACECs at a map scale of 1 to 500,000. At this scale, it is difficult to identify exact location of boundaries. Maps used in public meetings were at scales of 1 to 250,000 and 1 to 100,000. All maps referenced were derived from a Geographical Information System computer program based upon data collected and entered into the program at 1 to 24,000 scale.

540. Comment: Wild Horses. **Since 1971, there has been a loss of over 100 Herd Areas for wild horses and burros which totals approximately over 6 million acres of BLM land. When the URA maps where developed to determine wild horse and burros boundaries after the passage of the 1971 Wild Free Roaming Horse and Burro Act (PL 92-195), BLMs routine included only a one-time fly over to determine habitat areas for these animals. What wasn't taken into account at that time was winter and summer habitat areas. Therefore, this greatly favors speculation that habitat areas for wild horses and burros on the URA maps are actually smaller than the areas these animals roamed in 1971.**

Response: Our records show that BLM, Craig District first made a comprehensive survey for wild horses in 1974. White River Resource Area was censused for 3 days in January, 1974 and 5 days in late February, early March, 1974. A subsequent census of the Piceance Basin was made August 14-16, 1974 and of Douglas Creek, August 12 and 13, 1974. We believe that the censuses that were flown were complete and covered the entire potential wild horse range. In the case of the West Douglas Herd Area, we believe that the original mapped wild horse range included some areas that had not historically been inhabited by wild horses.

541. Comment: Withdrawals and Powersites. **The Division of Water Resources comments that the State of Utah has a permit to build a dam on the White River and wishes the permit to remain in effect.**

Response: The White River Resource Management Plan will affect only BLM administered estate within the White River Resource Area of Colorado. Decisions in the RMP will not affect approvals in adjacent states.

542. Comment: Wild Horses. **Page 4-69, last paragraph shows no evidence that horses exert influence on deer (winter ranges). We speculate that deer/elk counts have increased sizably over the past ten years while the horse census has remained constant. How can there be inter-specific competition from horses when their numbers have remained unchanged?**

Response: Inter-specific competition is the use, by different species, of a common resource in limited supply that works to the detriment of one or both species. By merit of coincident range occupation and mutual selection and preference for browse (e.g. rubber rabbitbrush, mountain mahogany, Utah serviceberry) it is reasoned that horses contribute to reduced forage availability on deer winter ranges in a manner similar to that of elk (see third paragraph, second column on page 3-24 of DRMP). The premise that horses exert a competitive influence on deer through forage use is based on the observed and documented traits of deer, elk and horses (i.e. behavioral and distributional) as expressed in the subject paragraph.

The speculation that big game populations have undergone sizable increases over the past decade is inconsistent with Colorado Division of Wildlife's population estimates. The elk population in DAU E-10 (which includes the Douglas and Piceance Creek basins) peaked in 1989 at 5,260 animals. Post-hunt populations in 1995 are estimated to be about 3850 animals (27% reduction since 1989), with a long-term population objectives of 3000 elk (43% reduction since 1989). Over the past decade, DAU D-7 deer populations (including Piceance Basin) were largest in 1988 at 87,300 deer--declining by about 26 percent to 65,000 deer in 1995. Long-term population objectives for deer in this DAU are somewhat higher at 67,500 animals. In contrast, wild horse numbers in the Piceance-East Douglas HMA have steadily increased from 78 in 1985 to 366 in 1995.

543. Comment: Wild Horses. **Where are your objectives in this document outlining your plans to manage for a thriving wild horse herd in compliance with PL 92-195, as amended. In noting the very small amount of space allotted for wild horses in this document which only talks about numbers of horses, removals and zeroing out herd areas, it sends the public a very strong message about your intent NOT to manage for wild horses in your area.**

Response: The objectives for wild horse management are concisely described in Chapter II, Description of the Alternatives, pp. 2-54 and 2-55. Alternative D, the Preferred Alternative concisely prescribes where wild horses will be managed in WRRA - The Piceance/East Douglas HMA and how wild horses will be managed - expand the HMA, AML Range of 95-140 horses, 2100 AUM allocation on 190,130 acres.

544. Comment: Grazing Management. **The stated objective of BLM has been to improve or maintain an acceptable rangeland condition and to adjust vegetation uses to a sustained yield of that vegetation. This objective does not appear to be meet in this document.**

Response: The perception of BLM's stated objective are correct. Criteria for meeting this objective are outlined on pages 2-27 through 2-31 and pages 2-52 through 2-61. The expected changes from these actions are noted on pages 4-32 through 4-38 of the Draft RMP.

545. Comment: Wildlife. **We propose the establishment of core areas in this region. The first, in the Piceance Basin, would benefit black bear, Columbian sharp-tailed grouse, North American wolverine, mountain lion, mule deer and elk. This information is based on habitat requirements outlined in the WRIS reports. Presently, the biggest threat to this region is the proposal of new utility corridors. We recommend that no further utility corridors are established and the three proposed ACECs (East Douglas, S. Cathedral Bluffs, and Soldier Creek) be designated. These ACECs run along the west side of our proposed core area and we therefore recommend that it is eventually restored to core standards. Road closure, the reintroduction of natural processes, and the elimination of weed species would make the southern region of the White River Resource Area a hot spot for a variety of species.**

Response: This position is consistent with Alternative D, BLM's preferred alternative, in which proposed utility corridors (see Map 2-23) do not transgress lands proposed for the establishment of the East Douglas, South Cathedral Bluffs, and Soldier Creek ACECs (see Map 2-19 of DRMP). Please refer to the response provided for comment 560.

546. Comment: Soils. **Alternatives A, B and D do not have any fragile soil preservation in their plans. Although it may not be feasible to shut off the full acreage as stated in Alternative C, it seems that there should be some middle ground between zero and 79,300 acres that could be cut off from use. Because the underlying purpose of Alternative D is to provide a "more balanced ecosystem approach to resource management" it would make more sense to include at least some of the fragile soil areas under protection in this alternative as well.**

Response: NSO-03 acreage in Alternative C in incorrectly printed. The correct amount should be 791,300 acres that would be subject to no surface occupancy. Making this area a NSO restricting surface disturbance would not be very realistic while practicing multiple use management. A compromise for the preferred management was CSU-02 which is a result of intersecting those fragile soils with slopes greater than 35% and CSU-03 which is fragile soils in areas where salinity levels exceed the moderately severe level.

547. Comment: Motorized Travel. **Because the RMP does not designate the actual road and trails which will be closed, I am confused as to how the 410 acres of riparian habitat was decided upon and why there was no inclusion of riparian lands in Alternative D. Once again, I believe a balanced ecosystem approach should include the prevention of motorized vehicle use in at least some of the delicate riparian areas.**

Response: There is no reference of 410 acres of riparian habitat in association with motorized vehicle travel. Motorized vehicle travel would not be allowed in riparian habitats under Alternative D (Table 2-27, page 2-39, Draft RMP/EIS).

548. Comment: Wild Horses. **Although I am in favor of Alternative D for the most part, I believe the Alternative B is a better management plan for the White River wild horse herd. In consideration of the current political climate and large possibility of cuts in funds allotted to the Bureau of Land Management it seems more feasible to keep the numbers of the herd smaller in order to make the management easier, and less expensive. I am assuming that either, or both, the Boxelder Allotment and Pasture C of the Square S Allotment in the Piceance-East Douglas HMA include Spring Creek which is a riparian area with a NON classification. Despite the fact that the wild horses have not been specifically linked to be the cause of the non productive status of the creek, their removal would none the less alleviate at least some of the stress placed on the area.**

Response: Spring Creek is not included in either the Boxelder Allotment or Pasture C of the Square S Allotment in the Piceance - East Douglas HMA. Spring Creek is within the North Piceance Herd Area.

549. Comment: Wild Horses. **Also, there is currently little demand for the adoption of wild horses. Therefore, it makes little sense to use more land and reduce the amount of forage available to other wildlife for the increasing the number of unadoptable horses.**

Response: There is an established demand for the adoption of wild horses. BLM, Colorado currently has a list of 41 potential adopters (approved applications for untamed horses) for wild horses as they become available, following their removal from the range.

550. Comment: Grazing Management. **For instance, there is no mention of how responsible the lessee will be made for the unacceptable state of his land, or at what point will these permits be taken from the lessee due to his unsatisfactory management practices. Although the management costs will undoubtedly rise under all of the alternatives, these costs will hopefully make the long term return from the land much more profitable.**

Response: Enforcement measures to deal with unsatisfactory conditions or improper livestock management are not included in this document because they are contained in regulations (43 Code of Federal Regulations part 4100).

551. Comment: Wildlife. **The applicable area under Alt A has been enlarged in Alt D from 318,420 acres to 613,510 acres. No scientific evidence is cited to support the contention that isolated development activity within even the smaller confines of Alt A, much less the larger confines of Alt D, would have significant deleterious impact upon severe winter range causing losses in excess of natures own method of culling weak animals from the herd.**

Response: The severe winter range acreage figures reflect Colorado Division of Wildlife's mapping of identical habitat features. Severe winter ranges are defined as the area where 90% of the population occurs in the worst 2 winters of 10. The acreage expansion reflects strong increases in the identification and delineation of elk severe winter range at elevations above 6600 feet in the Douglas and Piceance GRAs. The extent and distribution of mule deer severe winter ranges have remained fairly constant. Although implementation of the severe winter range stipulation proposed in Alternative D nearly doubles the land base subject to timing limitations, its influence on oil and gas development must be viewed in the appropriate context. Since September 1988, 10.4% of 410 wells were spudded in this Resource Area during the months of December through April. Given that severe winter range comprises about 38% of established fields, it is quite likely that 2 drilling operations or less would be subject to timing limitations in any given year. The principal purpose of the severe winter range stipulation is to minimize controllable forms of disturbance (i.e. the stipulation is applicable to all permitted land use activities--not just oil and gas) which contribute cumulatively to the aggravation of winter mortality and, more subtly, depression of birth weights and the overall prospects for offspring survival. The observation that isolated oil and gas development within severe winter range does not necessarily contribute deleteriously to animal condition is correct. BLM recognizes that construction activities during the winter months often occur within or in close proximity to preexisting sources of disturbance, and is the primary reason we chose to substantially alter the stipulation's exception and modification provisions. The Area Manager can grant exceptions or modify the stipulation's terms based on the action's anticipated influence on habitat function or animal condition. These provisions also allow opportunities for the application of offsetting or compensatory mitigation. It is important to note that this stipulation will not be applied to leases held by production--BLM cannot modify these valid, existing rights.

Deer severe winter ranges are typically low in elevation with predominantly southerly and westerly exposures--factors which contribute to relatively harsh site conditions. Although these features drastically limit forage production potential, they are most amenable to maintaining body temperatures at least metabolic cost, and minimizing energy expended (i.e. movement through snow) in acquiring forage and gaining access to thermal cover. Big game in Colorado exist during the winter at a nutritional deficit, with fat reserves compensating for net daily losses. Winter conditions impose tremendous energetic demands on big game. Body fat accumulated during the fall and late summer months serves to bridge periods of malnourishment when winter food intake is insufficient to compensate the energetic cost of winter maintenance. Severe winter ranges are viewed as holding areas where deer merely survive, awaiting vegetation growth in spring. These winter ranges are effectively incapable of meeting the nutritional demands for sustained big game populations desired by the public for recreational and economic purposes. Severe (i.e. cold, wet) or prolonged winter conditions jeopardize even basic animal maintenance. Heavy snowpacks precludes use of most herbaceous matter (a highly digestible and high nutrient forage) and limits efficient use of, or access to, available evergreen and deciduous browse (low digestibility, poorer nutrient content), and severe cold increases metabolic costs dramatically. At these times, fat reserves become the fundamental, rather than a supplemental, source of energy. Long periods of malnourishment quickly exhaust stored fat reserves (30 days maximum) at which time detrimental protein catabolism begins with destructive and irreversible weight loss. An animal's stored energy reserves and the ability to drastically minimize energy expenditures through the winter and early spring are critical to the length of time an animal can persist in viable condition on severe winter ranges, and in the case of female animals, whether gestation continues or robust offspring are subsequently born. The severe winter range stipulation addresses this issue by deferring activities that contribute to excessive and premature depletion of energy reserves and/or inefficient use of available forage and cover resources.

552. Comment: Minerals. **We agree with the BLMs recommendation that future developments should be restricted to areas with existing facilities. This will prevent any development into the Piceance Basin, further preserving the habitat of this area.**

Response: BLM considers it unlikely that a viable commercial-scale shale oil industry would be developed in Piceance Basin within the life of this plan (20 years). BLM anticipates that any oil shale activity occurring within plan life would likely be relegated to research and development activities on sites with existing facilities. This document carries forward leasing and management decisions adopted in the 1987 Piceance Basin RMP, making an additional 294,680 acres of federal estate in Piceance Basin available for oil shale and multimineral leasing. Future leasing and/or new lease development would be subject to carrying capacity thresholds, additional environmental analysis, and would be contingent on the diligent development of existing federal lease tracts and private oil shale projects.

553. Comment: Ecosystem Management. **This plan fails to consider biological diversity and ecosystem management concepts. Instead of determining what habitat requirements of naturally occurring species are, and then determining the amount of habitat necessary to protect minimum viable populations of those species, with a network of reserves, limited use areas, and connecting corridors (as BLMs own ecosystem courses teach), this plan makes a priority of allocating virtually the entire resource area for the development of oil and gas, oil shale, coal, and livestock forage, and then mitigating by stipulations that are in force only during exploration and not during production. We urge BLM to design a core reserve system based on the principles described in our June 1, 1994 letter, with surrounding limited use areas and connecting corridors. We believe that for this resource area this would entail analyzing the habitat requirements for deer, elk, mountain lion, sage grouse, and selected species of raptors such as goshawk, ferruginous hawks and bald eagles. This would provide a "course" filter; individual small areas, such as those classified as ACECs, would still need to be protected under a fine filter approach. I refer to the Colorado Natural Heritage Program's listing of the occurrences of rare plants and plant communities. I have been informed that BLM has received this document, and incorporate it as if set out here. Our own efforts to map out habitat requirements lead us to recommend protective management boundaries as set forth on the accompanying map, Figure 1. This biological diversity based approach to ecosystem management is necessary to stop more species from spiralling downward toward extinction; Colorado Division of Wildlife staff tell me that sage grouse may soon have to be listed because of herbicide spraying of sage and other factors. We ask BLM to apply this model to other resource questions, such as land tenure, mineral allocation, and road use and density. We endorse DOWs comments on land tenure. BLM land adjacent to other federal state or private lands should not be disposed of.**

Response: Small parcels of public land adjacent to other agency lands are considered Category II lands. They may be available for transfer to these other agencies through a variety of mechanisms. Preference will be given to these adjacent agencies in the disposal of these parcels, and language to this effect has been added in the Final. However, we may entertain proposals for exchanges with private parties, consulting with adjacent agencies prior to making any final decisions. While many lands supporting special resource values are included as Category II lands, disposal would only take place if it could be shown to be in the public interest, based on relative values, and with full public input.

We take exception to this commentor's opinion that biological diversity, as a resource issue, failed to be considered or integrated with the formulation of BLM's land use and resource management objectives. At this point in time, biological diversity cannot be managed as a traditional resource--it has no relational dimension, there are no reasonably efficient means to measure its less obvious and more influential elements, nor can quantitative guidelines and thresholds be developed to guide multiple-use land management. BLM feels its more important and tangible aspects involve maintaining the functional integrity of managed communities, aligning land use to better complement or mimic natural patterns of system perturbation and renewal, and restoring habitat elements which are known to be in a deteriorated state. Discouraging is the fact that these principles and the mechanics involved in maintaining, restoring and enhancing biological diversity has escaped commentors who insinuate that this BLM staff is ignorant in this regard.

We feel that the following examples, illustrate BLM's commitment to managing the public lands in manner fundamental to sustaining long-term ecological function and enhancing and maintaining biological diversity: 1) strong integration of vegetation manipulation objectives among livestock/wildlife/forestry/watershed disciplines, 2) strong emphasis on riparian management with respect to system maintenance, restoration and improvement, 3) establishment of

specific plant community objectives which emphasize restoration of native plant community composition, 4) aggressive noxious weed control and management, 5) efforts to stabilize the proliferation of roads and trails and moderate the effects of motorized vehicle use on habitats and populations, 6) management attention applied to community age, structure and distribution of forest/woodland and brushland types, 7) initial identification of prescribed natural fire area.

The ability to widely and accurately predict the extent, distribution, and essential elements of habitat necessary to maintain predetermined levels of animal populations or assemblages is not presently attainable. We feel any attempt to synthesize or ascribe minimum viable population levels in such a document would not only be presumptuous, but decidedly dangerous and open to severe repudiation by peer groups. In addition, we would be resistant to managing any wildlife resource at levels threshold to population collapse or on the basis of finite population life-expectancy.

As discussed in responses to comment numbers 562 and 560, we do not believe there are any indications of widespread community impoverishment or decline that have escaped management attention. Current modelling techniques, particularly with respect to present land use practices and patterns in this Resource Area, would provide information of marginal utility in enhancing management guidance or resource use allocation. We believe that current gap analysis efforts are remiss in failing to properly recognize or credit federal, state and private land's contribution to ecosystem function and integrity. We are not faced with pervasive or profound habitat loss or modification (e.g. Pacific states logging, urban sprawl) and we do not feel that it is imperative that reserve and corridor analysis be conducted as a necessary component of this plan. This is not to say that elements of this analysis technique could not or would not be employed during subsequent planning exercises (i.e. Integrated Activity Plans). With the exception of mountain lion (a species who's basic management parallels that of mule deer), the habitat and life history requirements for all species referenced were thoroughly considered and analyzed, and culminated in the development of habitat management objectives and land use prescriptions found on pages 2-58 through 2-75 of the draft document. The purpose and efficacy of wildlife-related stipulations is discussed in the responses to comment number 593.

554. Comment: Wildlife. **I would also say that a high rate of development in an area such as this does not an ecosystem destroy. You only have to look around the city of Denver, and I've lived here for 20 years, there are eagles inside the city of Denver, there are mountain lions inside the city of Denver. There are herds of antelope and deer inside the city of Denver. There are beavers inside the city of Denver. I have a friend who trapped 190 squirrels in a three-year period and released them back to the wild. An argument can even be made that in a developed area with human beings that wildlife can actually flourish, and there can actually even be a greater degree.**

Response: Regardless of nominal visitation by members of peripheral populations, or occupation by species equipped to inhabit fragmented or highly modified habitats, floral and faunal components of such communities are not comparable to intact wildland communities. We are aware that certain species thrive in heavily modified environments, and that undeveloped parcels within heavily developed landscapes can, for at least a short period of time, retain a semblance of natural community order. However, in general, such populations/communities are depauperate and/or represent only relatively few, very generalized species (e.g. "weeds" being an appropriate analogy). Further, we have not made the claim that development would destroy any "ecosystem", rather, that certain land use activities may variously impair wildlife values that through law, policy, or public demand, BLM is attempting to maintain or improve upon (e.g. big game population size and structure are vital to the economic base of Rio Blanco County). We also understand that trade-offs among these and competing land uses (e.g. mineral development) are inescapable. Appropriately, wildlife stipulations are intended to accommodate extractive concerns, while minimizing, where practical, short term influences on important wildlife values and promoting the recovery of habitat function and utility in a reasonable period of time.

555. Comment: Wildlife. **The acreage for woodlands harvest should be reduced because of its affect on raptor and other wildlife habitat.**

Response: Woodland (pinyon-juniper) harvest objectives and their relative influence on associated woodland fauna varies significantly by alternative. Please review "Impacts from Timber and Woodland Management" on pages 4-82 through 4-84, and "Cumulative Impacts on Non-T/E Raptor Management" on pages 4-89 through 4-90 of the draft document. Habitat modification and calculated declines in the effective habitat capacity associated with Alternatives C and D are considered acceptable in a multiple-use management context. The primary goal of the Woodland Management program is to maintain the health and structure of our pinyon/juniper communities. We are becoming more aware of the contribution to ecosystem integrity that this community provides. On the other hand this plant community being a renewable resource has the ability to provide products. In our analysis of impacts to the pinyon/juniper community we found that under all alternatives fire which is a natural function removes more of the pinyon juniper type than any man caused disturbance. Permitted development by oil and gas, ranks second in the removal and fragmentation of the P/J community. In general these uses are unplanable, or prior and existing rights. Taking into consideration these impacts, we reduced the available harvest using a rotation age which would maintain the natural seral levels and stand characteristics on approximately 99% of the entire woodland base and 70% on commercial and suitable woodlands. Also, any manipulation, of any vegetation type, is subject to site specific analysis and mitigation. As stated in the Environmental Consequences, we did not feel that mitigation for wildlife would create any problems (to the woodland management program), because of planned flexibility within the program. We are also meeting local demand for woodland products. Simply we do not believe the program as planned will have adverse impacts on wildlife. We also are aware that the state of our understanding of vegetation communities and wildlife interrelationships is not complete. As new information becomes available we must be able to adapt. I believe we have taken this into consideration and have built-in flexibility for future issues.

556. Comment: Fire Management. **This same discussion notes that a prescribed natural fire (PNF) area would be established in the Piceance Basin. We recommend that a PNF area also be considered for the Blue Mountain GRA, and especially on lands north of Moffat County Road 16. Most fires in this area would tend to progress toward Dinosaur National Monument. Since Dinosaur already has a PNF area inside the south boundary, designation by BLM of an adjacent PNF area would yield opportunities for cooperative management and significant cost savings for both agencies.**

Response: We concur that fire management should be similar across administrative boundaries. The Resource Area staff has been discussing opportunities to expand prescribed natural fire areas, of which, Blue Mountain was recommended. Because of many questions and issues that must be resolved concerning the implementation of PNF areas, it is likely that identification and analysis of additional PNFs will be incorporated with more site-specific planning efforts (i.e. Integrated Activity Plans). This will be accomplished with the understanding that BLM would integrate resource-driven thresholds under PNF management, as sage grouse habitat issues discussed in response to comment number 631 will continue to of concern to BLM.

557. Comment: Wildlife. **There are several different gas pipelines being built and more going through the permitting process. The large exploration for natural gas wells and the gathering pipelines for the producing wells all have an adverse effect on the game in this area.**

Response: As conditioned, particularly under Alternative D, the construction and operation of pipeline facilities represent temporary and relatively minor intrusion on, and modification to, big game habitats. The facilities, in and of themselves, have no significant influence on big game populations in Piceance Basin.

558. Comment: Minerals. **In the Oil and Gas section, you are estimating 1,154 new wells going in over the next 20 years. This number could change drastically depending on the economics of the industry. I believe you should look at creating a maximum of wells per acreage within this plan. Wildlife will not benefit with a well every 10 to 40 acres (as an example). This should be looked at in greater detail, since the associated activity (roads, pads, etc.) with each well has an accumulated effect on wildlife, and habitat.**

Response: A revised Reasonable Foreseeable Development Scenario is included in the final as Appendix D. Well spacing and associated acreage disturbance is part of that document. The analysis in Chapter IV is based on the figures presented in the RFD.

559. Comment: Wildlife. **The BLM has not clearly said that it will protect biological resources like deer and elk migration routes, winter ranges for those animals, riparian corridors, fragile soils, steep slopes, and ACECs during any future leasing processes on lands that are to be open to leasing.**

Response: Appendix B and C contain stipulations and conditions of approval that would be attached to leases and applied at the APD stage. Lease stipulations or preemptive management decisions are not considered necessary for the continued maintenance of big game migration corridors (see response to comment number 560).

560. Comment: Wildlife. **I encourage the BLM to create viable corridors and reserves in response to wildlife needs. I recently saw a road density map of the White River Resource Area and Piceance Basin, and was frustrated in trying to delineate wildlife movement corridors and ecosystem reserves. Road densities in reserves should approach 0 miles/sq. mile in reserves, and should be less than .5 miles/sq. mile in corridors, buffers, and restoration areas. Areas such as Cathedral Bluffs and Pinyon Ridge, should be managed as a reserve for deer, elk and their predators. Continued energy exploration/extraction roads, powerlines, and pipelines create barriers to wildlife movement.**

Response: BLM is mandated, through the Federal Land Policy and Management Act of 1976 (FLPMA), to serve diverse interests and uses. This comment may best be answered by reiterating FLPMA's multiple-use definition (43 USC 1702): "..The term multiple use means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to recreation, range, timber, minerals, watershed, wildlife and fish, and natural, scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output."

Deer and elk in the Douglas Creek watershed are not generally associated with populations summering in the White River National Forest (see page 3-23 of Draft). There is no evidence to suggest that current or projected oil and gas development has potential to significantly disrupt big game migration between summer and winter ranges. Established fields in the Piceance and Douglas GRAs are currently coincident with about one and 11 percent of Piceance summer and winter ranges, respectively. Fields in the Douglas basin coincide with about 23 and 35% of summer and winter ranges, respectively. Even under heavy development scenarios (80-acre well spacing), it is estimated that surface disturbance and occupation from oil and gas related facilities would amount to 12 to 16% of the area within a field. Although oil and gas development can exert considerable influence on seasonally occupied ranges (primarily avoidance and harassment issues), we do not feel the extent or nature of surface use is capable of deterring animal passage. In the unlikely event that serious interest in oil shale or another form of land development of unforeseen magnitude were to surface within this Plan's time frame, legitimate and substantial concern for big game movement would undoubtedly be expressed by BLM and CDOW. Since an extraordinary event of this nature would fall outside the realm of this RMP's scope, impact identification, assessment, and mitigation would necessarily be addressed in subsequent EIS or Integrated Activity Plans.

We feel that BLM lands in this Resource Area represent a semi-natural matrix that, with few exceptions (reflecting past management or use), remains ecologically viable. Strong disruption of soil and vegetation resources and/or processes are believed to be presently confined to a relatively small share of the Resource Area. These areas can be considered manageable inclusions within the broader matrix that, even with projected expansion or increased intensity of surface use, are not expected to jeopardize the function of the whole. These localized hot spots of surface use and the cumulative effects of more extensive land use facilities (e.g. roads) are the same areas where emphasis on minimizing short and long term impacts and/or enhanced restoration is directed within alternative prescription packages within the RMP. We do not envision a need within the timeframes of this plan to set aside specific reserves and corridors, because we do not feel the biological function of the land or organism transfer is impaired to the degree that jeopardizes ecosystem viability. In particular, the integrated vegetation manipulation objectives for forestry, wildlife, livestock,

soil, and water programs offered in Alternatives C and D are thought to be far more consistent with levels and patterns of perturbation under which these systems evolved than what current management allows or prescribes. Additionally, the emphasis on restoring or maintaining plant and aquatic communities and increasing management attention on land uses occurring on soils particularly susceptible to erosion exemplifies BLM's focus on improving management of ecosystem components that are in degraded states or warrant special consideration.

561. Comment: Roads. **Over the years the oil and gas operators have consistently constructed miles and miles of access roads for public use. Nearly every year the roads require additional maintenance after the hunting season allowed by the CDOW since their selection is during the fall stormy period. Not one thin dime of support by the CDOW has been given to the operators.**

Response: We are not aware if CDOW has ever been approached in this matter, but BLM could understand their reluctance in helping to underwrite oil and gas development on public lands, or altering big game season structures. Implementing seasonal access restrictions through a road density reduction program, as proposed in the draft RMP, would seem to help reduce the road maintenance burden borne by industry.

562. Comment: Roads. **The Sierra Club generally believes that far too many acres of our public lands have far too many road miles. The BLMs proposed ban on any off-road travel (except for an area near Rangely) is commendable in the context of the BLMs usual laissez-faire attitude toward ORVs. However, the proposal to allow up to 1.5 miles per square mile of roads in CRITICAL wildlife habitat and up to 3.0 miles per square mile in non-critical habitat is absurd and destructive of both the ecologic and aesthetic character of this landscape.**

Response: We agree that proposed road densities are not ecologically optimal, but realistically, a vehicle access network is imperative in supporting multiple use activities on these lands. We question the basis of your opinion as to the absurdity of our proposed road density objectives. The logic and rationale behind these proposals are outlined on pages 4-62, 4-63, 4-72, 3-24 of the draft. We are aware of roadbeds influence on soil and vegetation damage and their contribution to off-site transport of soils and nutrients via erosion and are striving to reduce unnecessary impacts to associated resources. The ecologic ramification of roads to which you refer may also pertain to barriers which inhibit organism movement or dispersal as a means of genetic interchange or response to changing environmental conditions. We share concern in this regard, unfortunately, it is awkward developing arguments or management strategies addressing this issue without specific knowledge of any organism in this Resource Area that evidences the effects of fragmentation. Based on our knowledge of pertinent literature, there remain confounding factors or issues that require consideration before one can deduce that roads at these densities contribute substantially to ecologic degradation.

The literature we are aware of is unanimous in indicating that roads have an inhibitory effect on organism movement, varying with species, roadbed substrate and width, roadside treatment, and the character of adjacent habitat. Documented effects appear to be most pronounced where the road and roadside swath differ significantly (e.g. ground cover, canopy) from adjacent habitat. The majority of studies have dealt with roads similar to the 3 State or Federal highways that traverse this Resource Area. The few studies that focus on narrow, unimproved or primitive roads have been conducted in plains grassland/agricultural or hardwood forests--associations with structural characteristics and animal assemblages that are dissimilar to those with which we deal. The majority of our road system (outside county roads and mineral access) consists of primitive roads and two-track trails 12 feet or less in width. Additionally, more than 80% of the Resource Area is represented by vegetation types that are inherently patchy and frequently bisected or largely intermingled with barren or sparsely vegetated areas (i.e. greasewood, saltbush, sagebrush, pinyon-juniper and barren/rock).

We agree that genetic isolation and impoverishment via road-induced barriers is a legitimate (but as yet untested) concern, but we are not convinced that characteristic roads at current overall densities (estimated 2-2.5 miles per square mile) constitute a barrier network sufficient to jeopardize population viability or influence population distribution to a degree substantially more effectual than those imposed by inherent or stochastic environmental heterogeneity. By attempting to stabilize or slightly reduce existing road densities across the Area, albeit as a big game management strategy, we contend that the ecological integrity of our upland communities would be maintained. Additionally, our road density goals would prioritize future efforts to reduce road densities in areas where road networks substantially exceed these targets (i.e. expiring oil and gas fields); areas most apt to suffer fragmentation effects. In the event information becomes available that indicates that, land use practices are widely interfering with levels of organism movement necessary to maintain population viability, we would have the opportunity to evaluate such impacts in a detailed manner through supplemental IAP planning efforts or any subsequent travel management plan.

563. Comment: Motorized Travel. **First, a word of thanks for limiting motor vehicles to designated roads and trails. I would suggest that the BLM take this limitation a step further by establishing specific road density limits. This measure will help to protect wildlife. Please cover in detail how the BLM proposes to accomplish this task.**

Response: Road density limitations (i.e. effective reductions to specified density objectives) are proposed as a big game habitat management strategy in Alternatives B, C, and D. We are aware and have reviewed much of the literature to which you refer. We chose to use the "ancestral" habitat effectiveness model (i.e. Perry and Overly, as refined by Thomas et al) in our impact evaluation, because of its simplicity and broad applicability (i.e. effects reduced to the behavioral response of elk to road-related disturbance), as well as its general consistency with our observations and much of the research body. We realize that more refined models have been developed (e.g. Wisdom et al 1986, Lyon 1983), but these works incorporate modifiers that tailor the models to regions and vegetation/habitat types not representative of this Resource Area. Additionally, the fitting of these models to a specific situation requires considerable analysis and ground truthing—an exercise that is beyond the scope of this plan, but may well be used as an evaluation tool during subsequent site specific planning efforts (e.g, Integrated Activity Plans).

It is envisioned that proposed designated road/trail status and effective road density limitations appearing variously in Alternatives B, C and D (page 2-61, 2-87) would be implemented progressively across the Resource Area on a Geographic Reference Area or Integrated Activity Plan scale. Roads and trails designated for specific uses would be signed. Effective road density limits would be achieved via seasonal vehicle restrictions (i.e. while targeted species occupied these ranges)

and, to a more limited degree, abandonment of roadbeds determined unnecessary for legitimate land uses (e.g. livestock and mineral management, recreation, access). The BLM would encourage participation of affected stakeholders in an effort to collectively develop a transportation plan that balances BLM's objectives with those of affected land users. Enforcement of these land use decisions would be the responsibility of BLM law enforcement personnel with cooperation from the Colorado Division of Wildlife and Public Land users. We realize that developing or upgrading public access often, if not invariably, conflicts with one or more values associated with a specific tract of land. Balancing resource management among varied users is always difficult, but please keep in mind that elk management geared toward quality sport hunting is only one of myriad values desired and demanded by the public at large.

564. Comment: General. **There is a lack of information in the Draft on the Socioeconomic, the reintroduction of the Black-Footed Ferret and insufficient mapping regarding accesses and inventory of existing roads and trails within the resource area. If the public and the land manager are to make reasonable decisions about the plan and its consequences this information must be obtained.**

Response: A revised socio-economic analysis has been prepared and is contained in Chapter IV of the final document. In regard to this document's relationship to potential black-footed ferret reintroduction, it is not within the scope of this Plan to develop specific management prescriptions for ferret reintroduction or establishment. The role of the Resource Management Plan is limited to identifying those areas or habitats best suited for management consistent with the conservation and recovery of listed and proposed threatened and endangered species. Specific management prescriptions and strategies pertaining to the reintroduction of black-footed ferrets would ultimately arise through a cooperatively developed and site specific reintroduction and management plan similar to that being developed in the Little Snake Resource Area. The scale at which maps for inclusion in the document are made precludes effective portrayal of roads designated in the plan. A map for areas where closures or designations of specific roads are made in Alternative D is included in the final. Travel route information, consisting of maps, aerial photos, and GIS data, is available in the White River Resource Area Office. While this information has been updated, and is relatively complete, the inventory process is ongoing, because it is virtually impossible to have a totally complete picture of a changing environment, particularly when new roads and trails are being created all the time. Under existing conditions, the inventory will never be totally complete, given unrestricted expansion of travel route systems.

565. Comment: Motorized Travel. **First, I don't really understand the reasoning for designating roads and trails, especially since there is no proof of conflict nor damage. Road density is said to be a problem but that seems to be based on the oil fields and not the whole resource area. I am opposed to any closing of roads or trails. There needs to be a complete road and trail inventory. Furthermore if there would be any closures or a designating process it should be done with public input. Not as the preferred alternative D suggest a in-house BLM administrative decision. The senior citizens and handicapped cannot enjoy going out to picnic or just sight see.**

Response: The scale at which maps for inclusion in the document are made precludes effective portrayal of roads designated in the plan. A map for areas where closures or designations of specific roads are made in Alternative D is included in the final. Travel route information, consisting of maps, aerial photos, and GIS data, is available in the White River Resource Area Office. While this information has been updated, and is relatively complete, the inventory process is ongoing, because it is virtually impossible to have a totally complete picture of a changing environment, particularly when new roads and trails are being created all the time. Under existing conditions, the inventory will never be totally complete, given unrestricted expansion of travel route systems. The concept of equal access, and the principals of the Americans With Disabilities Act is to ensure that recreational opportunities are accessible to everyone, not to ensure that all recreational settings are equal. As written in the Proposed Plan, OHV limitations are consistent with this concept.

It is a popular misconception that BLM intended on denying vehicular access to Public Lands across all or most the Resource Area. In fact, BLM's efforts to implement road-density limitations would be applied principally to areas supporting high road densities and as a means of curbing the continued expansion of roads and trails across Public Lands. Road density objectives (Table 2-40, page 2-61 of draft) applied to general big game ranges (70% of Resource Area) allow, where available, retention of access equivalent to intervals as small as 1/3 mile. Similarly, objectives applied to remaining critical habitats permit access retention equivalent to approximate 1/2 mile intervals. It is difficult to imagine how implementation of access limitations at these levels would have any appreciable affect on opportunities for sight-seeing or picnicking, particularly if special situations or issues are brought forth and identified during subsequent travel management planning efforts. Please refer also to responses to comment numbers 567, 581, and 563. In response to public concern, BLM is proposing to incorporate travel management provisions which would allow consideration of vehicle use in restricted areas by handicapped hunters. Ironically, BLM has responded to several complaints in the last few years by handicapped hunters disgruntled over inappropriate and excessive vehicle use by non-handicapped persons.

566. Comment: Motorized Travel. **I would like to get in more specific detail about the headwaters of Soldier Lake and Cathedral Creek. The reason this area has been lucrative to four wheelers is that we have managed it with no four wheeler access, which has kept the elk in the area. We have gone out of our way to improve the habitat for elk and to keep them in the area, and the BLM, under pressure from the four wheelers, has gone out of their way to bring more four wheelers into the area every year. It is an impossible situation with two forces working against each other. The security of the ranch is threatened because not only can they come in through Lake Creek, they can come in through Cathedral Creek in the back of our place. We have already had problems with break-ins, and this will only accelerate. If the BLM wants to save the elk herd in the Cathedral, Soldier, and Lake Creek Basin, they need to eliminate vehicular traffic in these areas. I would propose that four wheeler traffic be stopped at the slide out area along Cathedral bluffs on the north side where the road has slid out. It is extremely slide prone and unstable. On the Lake Creek end I would propose that the traffic be stopped where the road slid out, about a half mile above Lake Creek, which is within good walking distance of all hunting in there.**

Response: Except for wilderness study areas and emergency situations, formal road closures will be determined through preparation of a travel management plan after completion of the RMP. A coordinated resource management approach will be utilized. Public roads and rights-of-way which were validly appropriated under RS 2477 will not be effected by the RMP. You raise valid concerns that should figure

prominently in any Integrated Activity Plan encompassing the East Douglas Creek area (to be developed subsequent to completion of this Resource Management Plan). We trust that travel management, access, and trespass issues and details can be cooperatively resolved to the satisfaction of most affected land users.

567. Comment: Roads. **As for your proposal to close enough roads to get road density down to a desirable level. Most of the areas I hunt do have too many roads, I can think of quite a few that go nowhere, serve no purpose and would not be missed. But I am concerned, if you have 2 roads accessing an area, one of which crosses a 50 yard stretch of private property, which one are you going to close? Access is a big problem here already, lets don't make it worse.**

Response: Road density reductions are not intended as a guise to abolish public vehicular access on BLM lands, nor enhance opportunities for commercial big game hunting enterprise. The purpose of road density objectives is two-fold, in most cases being a mechanism to stabilize our existing access network (i.e. suppress what land management and wildlife agencies universally recognize as the ongoing and accelerated establishment of vehicular access on public lands), and, where practical, reduce excessive road density in those areas where it contributes to the deterioration of big game habitat utility.

In your example, and assuming all things equal, BLM would readily opt to retain a public thoroughfare, rather than create another controlled access situation with it's own potential set of problems. However, it has been obvious in our public meetings that a road considered superfluous by one public land user, may be of vital concern to another. BLM's challenge will be to rectify these differences of opinion and personal value and still achieve the underlying intent of the road density objectives. Please see other pertinent statements in the response to comment numbers 563 and 560.

568. Comment: Motorized Travel. **There is one area I have to relate to. My husband is an ardent hunter for elk and deer - he is handicapped and it is very difficult for him to walk and with so many roads closed to traffic he has found it difficult to get into the area he wants to hunt. When hunting season covers only 2.5 months I think it should be considered that animals need to be controlled not hunters.**

Response: Provisions will be made in the Proposed Management Plan to allow handicapped hunters additional access. See OHV section Chapter III. It is difficult to respond specifically to your comment. Currently, only 1.3% of this Resource Area's Public Land base with existing road networks is in some way affected by seasonal vehicle restrictions or closures. Block closure in Game Management Unit 10 (a limited unit for both species) involves about 0.4% (6260 acres) of Public Lands in the Resource Area. Relatively few oil and gas access roads have been seasonally closed in Game Management Unit 21 (involving an additional 0.9% of the Resource Area) in an attempt to stabilize (at about 4 miles per square mile) and redistribute road density in heavily developed fields. It should be noted that the big game hunting seasons in Colorado currently extend from about late August until early January--a period of nearly 5 months.

569. Comment: Motorized Travel. **The effect of ORVs on vertebrate population compositions and diversity was measured in Stoddard, Anderson and Johnson Valleys of the Mojave Desert. ORV use causes a significant decrease in reptile and rodent species, individuals, and biomass. The number of individual decreased 45% and 80% respectively. Breeding-bird censuses showed a decrease in diversity, density, and biomass estimates in ORV areas. The results indicate that ORVs disrupt wildlife populations over large areas, and the impact of ORVs on wildlife must be taken into consideration in formulating management plans for ORV use areas. Bury, R. B., R.A. Luckenbach, and S. D. Bursack, 1977. Effects of off-road vehicles on vertebrates in the California Desert. U.S. Fish and Wildlife Service, Washington, D.C. Wildl. Res. Rep. 8, 23 p. People driving ORVs are destroying desert habitats. In moderately use ORV areas, plant life declined 50 percent; terrestrial animal life, 60 percent. In areas where ORVers congregate, plant life is reduced 90 percent and animal life 75 percent. Sheridan, D. 1978. Dirt motorbikes and dune buggies threaten deserts. Smithsonian 9(5):65-75....Stebbins, R. C. 1974. Off-road vehicles and fragile desert. Am. Biol. Teach. 36(4):203-208, 220 and 36(5): 294-304...Luckenbach, R.A., 1978. An analysis of off-road vehicle use on desert avifaunas...Hinckley, B.S., R.M. Iverson, and B. Hallet 1983. Accelerated Water Erosion in ORV-Use Areas. In Environmental Effects of Off-Road Vehicles, Webb, R.H. and H.G. Wilshire, Eds. 1983. Springer-Verlag, New York...**

Response: BLM shares concern for the present and eventual degree, intensity, and effects of OHV use on soil, vegetation and wildlife resources in this Resource Area. At lower elevations and under more arid conditions, the rate of soil formation, as the foundation for all biological activity, is so exceedingly prolonged (i.e. about 1000 years per inch of soil) that the existing soil mantle can, for all practical purposes, be considered a non-renewable resource. Review of the literature led us to many of the same sources this commentor has provided. A large share of these citations pertain to conditions which cannot be readily substituted for those in this Resource Area, most notably, the general hot desert (Mojave) environment and ORV use levels orders of magnitude beyond what we presently or expect to support. However, we acknowledge common factors and processes which remain relevant to this Resource Area (e.g. local soil's erosion susceptibility, effects of soil moisture, slope, and rock content, influence of wheeled vehicle tracks on soil bulk density and strength, soil stability and movement, vegetation, and microfloral elements of the soil). Literature reviews, workshop proceedings, and cooperative planning efforts reviewed in the course of this effort held common themes that are applicable to OHV management in any area: 1. To some degree, a concession to the sacrifice of soil, vegetation, and wildlife values within motorized recreation use areas. In high density use areas, management efforts are generally relegated to minimization of long-term environmental damage. 2. Impact severity is dependent on use intensity and site-specific environmental conditions. 3. Although the generalized effects and processes of soil loss are clearly documented, there has been, and continues to be, a lack of widely representative information on which to evaluate the scope and severity of impacts from more widely dispersed OHV use (i.e. monitoring difficulties, costs). In consideration of BLM's multiple use mandate, the fact that OHV use is considered a legitimate land use activity, and OHV impacts tend to increase directly with intensity of use, it is incumbent of BLM to reconcile judicious OHV use with the simultaneous mandate of preventing undue impairment of the land's productivity or environmental quality. Although we are proposing to ultimately apply "designated" road and trail status to a majority of the Resource Area, we recognize this will be an involved and perhaps lengthy process. Since we do not believe it necessary to suspend all OHV use until full implementation of a transportation plan, we have outlined interim management that is designed to accommodate a range of recreational OHV interests and uses until more site-specific planning is developed. Because BLM has no mechanism at present to control

the degree or repetitiveness of use, it was determined necessary to delineate those areas most susceptible to resource degradation from unregulated OHV use. The following concepts or criteria were considered when we delineated areas which would remain open to off-road vehicle use on a seasonal basis, or alternately, limited to designated roads and trails on a year-round basis: 1. Manageable blocks of land predominantly composed of soils with erodibility factors ("k" factor used in Universal Soil Loss Equation) of 0.37 or higher. High "k" factors indicate soils with properties (e.g. low resistance to deforming, sliding, or failure, susceptible to piping, low soil loss tolerance, severe water/wind erosion hazard) so unfavorable and so difficult to correct or overcome that major reclamation, special designs, or intensive maintenance is required to prevent or repair accelerated erosion. On more resilient soils and those associations with minor inclusions of more highly erodible soils, soil properties may be unfavorable, but such deficiencies can generally be overcome or modified by special planning and design that could be developed and incorporated at the Integrated Activity Plan stage. 2. Clayey, shale-derived soils, which characterize the majority of this Area's soils, are most susceptible to compaction (i.e. reduced infiltration, root penetration, seedling emergence) when wet. Frequent precipitation and saturated soil conditions are most common in this Resource Area from 1 September to 1 May 3. Off-road vehicle use is expected to be most prevalent and intensive on slopes <35%. 4. High percentage of surface rock and heavier vegetative cover limits erosion susceptibility and the formation of pervasive road and trail networks; intermittent use in such areas tends to allow acceptable levels of shorter-term vegetation/microflora recovery. Besides restrictions imposed for special status plant habitat, Areas of Critical Environmental Concern and WSAs (non-discretionary), we propose to restrict access to existing roads and trails in those areas composed predominantly of highly erosive soils ("k" factor equal to or greater than 0.37) on slopes <35%. A good example of such an area is the lower Wolf Creek drainage which, based on vegetation and soil conditions, most closely resembles the character of the Mojave region. In remaining areas, off-road use would be allowed during periods when soils are generally dry and less susceptible to wheeled vehicle damage. Exceptions for retrieval of big game constitute casual, non-repetitive use that does not normally compromise the maintenance of vegetation and soil productivity. We believe this interim management strategy adequately considers and integrates OHV-related effects on wildlife, vegetation, and soils, and provides a reasonable balance among resource conservation concerns and the demand for OHV-derived recreation. Please refer also to response to comment number 562.

570. Comment: Roads. **RMP member used an overlay of road systems to visually show high impact road existence which he admitted was the "high" end of road existence. The visual overlay was of the Coal Oil Basin road system which in my view would be equally as effective had he shown the road system for Denver. The Coal Oil Basin road system is probably the worst case scenario that could be used as an example!**

Response: The overlay to which you refer was not associated with Coal Oil Basin, rather it was the Water Canyon quadrangle, which centers on Big Horse Draw about 8 miles south of Rangely. This particular map was selected because it portrayed a representative road density situation south of Rangely. At a road density of about 3.5 miles per square mile, it represents a high average density when compared to the Resource Area as a whole. It does not approach the 6 to 8 miles per square mile of road found in the heavily developed gas fields of Little Horse Draw or Rangely Oil Field in Coal Oil Basin.

571. Comment: Motorized Travel. **By closing 50%, or whatever percentage of the roads, it seems to me that would be concentrating the vehicles or the amount of people. If it stays the same as it was the year prior to that, you're going to be forcing them into a smaller area and consequently doing more damage to the roads that are open. My opinion is either limiting the amount of hunters to an area.**

Response: It must be understood that BLM's efforts to limit effective road density would be applied principally to areas supporting higher road densities. Even in heavily roaded areas, on average, access would remain available at one-third mile intervals--translating to a widespread inability to remain greater than 300 yards from unrestricted access. BLM does not believe that reducing vehicular access at this level would necessarily lead to increased hunter density in the field. Rather, we are expecting it to better distribute hunters and animals and help enhance hunter enjoyment by relieving pervasive vehicle presence and preventing excessive animal displacement. Although it necessarily follows that use of roads that remain open during the hunting seasons would be elevated by some degree, the case can be made that any attendant increase in road damage or road-related effects could be more effectively and efficiently maintained or remedied if such damage was less widespread.

It is also important to realize that Colorado Division of Wildlife is, like BLM, bound to balance and apportion an array of recreational demands with, among other things, the surrounding communities' hunting-derived economies (e.g. retail and service sectors). Although we agree that significant reductions in hunter participation would tend to achieve the same objectives which BLM is now addressing, because of economic considerations and sport hunting demand, we do not envision large-scale declines in license sales or availability through the life of this plan. Seasonal reductions in vehicular access and use is perhaps the only viable and reasonable means of serving all interests. As a side-note, we also do not believe curtailing hunting opportunity would be in the best interest of the sport at this point in time.

572. Comment: Motorized Travel. **When the BLM was asked about the damage done during hunting season they said they had some but when asked for documentation they responded they didn't have any documentation and thought that road closures and limiting access would improve the hunting.**

Response: At this public meeting, BLM was not prepared to present a representative or complete inventory of vehicle-related resource degradation, nor the monitoring data necessary to establish the rate or extent of road and trail proliferation on public lands. BLM is in the process of documenting examples of road-related concerns. It was and continues to be the experience and professional judgement of the Area's Resource staff that these vehicular access issues are increasingly evident on public lands in this Resource Area. The Area's wildlife staff, as well as regional CDOW biologists and district wildlife managers, maintain their contention that in many areas road limitations would improve the quality of sport hunting to the satisfaction of a majority of the hunting public.

573. Comment: Roads. **Through out this document you have discussed critical habitat for wildlife, weed infestations and closing roads. In this section (access management) you now discuss increasing access. Too many roads and too much access has already driven the wildlife off the public lands and to the deeded. More access will only make this worse. Practically all areas identified can be accessed by foot or horseback.**

Response: As you have noted, BLM recognizes and is attempting to reduce the magnitude of impacts associated with road proliferation and increased vehicle use. However, one of BLM's more fundamental responsibilities is to provide for the public's use and enjoyment of Public Lands, including recreational activities. Although it is true that many areas identified for access development are accessible by foot or horseback, many involve extraordinary effort, commitment of time, and means beyond the reach of the majority of people. Although we realize that developing or upgrading access almost invariably conflicts with one or more values associated with a particular tract of land, BLM must manage the vast majority of Public Lands in a manner consistent with its multiple use status (see response to comment number 560). In most cases, access development would entail providing reasonable and compatible forms of access (including provisions for non-motorized use or other necessary limitations) into larger, less accessible BLM tracts, or those having complicated ingress/egress routes (pages 2-100 and 2-103). We see judicious access development serving an advantageous management role: helping to prevent undesirable big game concentrations on Public Lands and improving the consistency and reliability of sport hunting as a tool to achieve the State's big game harvest objectives.

Displacement of big game from Public Lands to surrounding private lands in the wake of access development is a valid concern that deserves close attention. We trust that issues and details involving travel management, access, trespass, and big game displacement can be cooperatively resolved to the satisfaction of most affected land users during site-specific planning efforts (i.e. Integrated Activity Plans) that will be initiated once this Resource Management Plan is finalized.

574. Comment: Motorized Travel. **Also, on your preferred alternative (D) the idea of road density numbers, 1.5 miles/sq. mile in critical habitat and 3 miles/sq. mile in noncritical areas is not acceptable unless this is applied over all acres of the GRA. In other words if a section of a GRA has a road density that is too high, and road closures are implemented, then another area of the GRA where the road density numbers are low should be allowed to have roads and motorized trails developed to maintain public access. This would be best accomplished by keeping the "Open" designation on the White River Resource Area and allowing the public to develop routes of desired challenge and interest.**

Response: The road density criteria are not intended as an objective to expand road networks to threshold limits across the Resource Area, rather, these limits were meant to be used as broad averages designed to account for a mix of lesser and greater road densities on a local scale (see pages 4-62, 4-63 and 4-72 in draft). BLM does not believe that providing road networks at a density of 3 miles per square mile (i.e. average 1/3 mile intervals between roads) is necessary to maintain adequate public access to public lands. In regards to your comment, reasonable vehicular access to public lands and a road/trail network which satisfies OHV-related interests are issues that BLM views as separate.

It is incumbent of BLM to provide a diversity of land use facilities, or lack thereof, to satisfy the equally diverse interests and values of the American public, and balancing an array of potentially conflicting land use consistent with the land's capability and capacity. In those areas where public access is lacking or inadequate (see page 2-100 in draft), the BLM intends to pursue the development of public access. Designating the entire Area as "open" provides no mechanism for coordinated and systematic access evaluation or development. Your suggestion to allow the public at large to develop an access system which satisfies each individual's special interest would invariably lead to conflict and relegate balanced resource management to a subservient position. BLM could not effectively mediate resource or value conflict nor conduct its basic charge of managing the public resources as prescribed by the Federal Land Policy and Management Act.

575. Comment: Roads. **Is there not a wildlife livestock conflict in this area? Would limiting access allow the elk and deer to come into these areas sooner and stay longer thus causing more range damage?**

Response: Reducing road densities to proposed threshold limits of 1.5 or 3 miles per square mile would be incapable of providing big game refuge that have come to be associated with inappropriate big game distribution or movement patterns. To the contrary, road density reductions would, in many cases, improve the uniformity of animal distribution and forage use--benefitting not only plant vigor and condition, but helping to moderate forage use intensity in localized big game-livestock conflict areas.

576 Comment: Motorized Travel. **During past meetings the BLM has said that they wanted to have all three designations (open, limited, closed) within the resource area. However, if what you proposed today is implemented there will only be limited and closed. Putting a seasonal limitation on the proposed open area would in fact be limiting the area.**

Response: Regardless of the labelling, the important point is whether or not the proposed vehicle access management strategy sufficiently accommodates legitimate land use desires and needs in a multiple use context. The original proposal to designate an open OHV area in Coal Oil Basin was abandoned after legitimate concerns were expressed by organized OHV groups from Craig and Rangely involving: inappropriate size and desirability, concentrated use and resource (soils) damage, public visibility/perception and human safety. BLM received no recommendations for an alternate open area through the course of a prolonged public comment period

577. Comment: Motorized Travel. **I'm concerned about the size of the area that are closed to off-road vehicle travel. I believe that there probably is some area in there that could see some benefit from less off-road traffic, but I think there's a lot of area included in there where the off-road traffic that is happening right now has very little impact, particularly southwest of Rangely. I think there's very little impact in some of those sagebrush areas out there. I guess that's what I would like to see is something in between the close it all and don't close anything, or at least something I can understand.**

Response: The OHV section in the Proposed Management Plan has been changed from what was proposed in the draft. The plan is now considered to be interim until a travel management plan can be completed.

578. Comment: Motorized Travel. **You stated that the BLM was going by studies done on damage during wet seasons. I would like to know which studies you are basing the seasonal closures on so that I may review them and respond to them.**

Response: We have no formal studies on wet season damage. Our assessment of such damage is based on personal knowledge of the resource area on the part of staff members, as well as comments from the public.

579. Comment: Roads. **The RMP/EIS states that it is necessary to limit road densities to protect big game range utility across the White River Resource Area. Chevron is concerned with the statements in Preferred Alternative D that reference a goal of less than 3 miles of road for each square mile of land within the Resource Area...The current road density in the entire Rangely field area is approximately 7 to 8 miles/sq. mile. The field contains over 700 wells. In order to conduct our business in a safe, prudent, and economically efficient manner direct access to those wells is a requirement.**

Response: The road density objectives would have no direct bearing on authorized uses and, more specifically, would not impede continued access or road construction required for oil and gas development and recovery. In fields targeted for road density reductions, it is envisioned that the objective would most often take the form of seasonally restricting (e.g. during the period of animal occupation) general public access on specified roads--similar in design to that currently implemented in the Little Horse Draw gas fields. Access necessary for oil and gas lease activities (i.e. monitoring and maintenance) would not be impaired during this time period. Beyond the drilling stage, routine well inspection activities are not considered unnecessarily disruptive to resident big game, and is an activity to which big game could reasonably be expected to habituate. Road abandonment (i.e. roads considered unnecessary for satisfying multiple-use activities) would not be an option for roads accessing producing wells. In any case, Chevron's Rangely Field properties would not be a target for implementing road density prescriptions. Opportunities for reducing road densities in Coal Oil Basin would be most appropriate as oil recovery dwindles in the future.

580. Comment: Motorized Travel. **You mistakenly conclude that off-road travel disturbs wildlife and horses and would lead to a degradation of their respective habitat. In addition to our own experiences over the years, we are aware of two studies that confirm that motorcycle/ATV travel causes minimal, short term, disturbance to animals. Basically the studies conclude that motorized travel, by its nature, forewarns the animals of the coming intrusion, allowing them to remove themselves without fright. Non-motorized intrusions, such as a man walking, a mountain bike or a man on a horse, all were greatly more disruptive to wildlife.**

Response: Your experience and two studies appear consistent with the relatively large body of literature pertaining to big game harassment. We agree that the individual effects of motorized vehicle contact relative to such activities as cross-country skiing and hiking are generally less, but regardless of advance recognition, animal avoidance, even if manifested only by walking with no overt alarm response, can dramatically elevate both metabolic and locomotive costs and requires an "unbudgeted" energy allocation. As an example, climbing is estimated to increase energy demand by a factor of 12 compared to walking on the level, and walking in 16" of snow increases demand 4 to 5 times that of walking on bare ground. Metabolic activity of a deer standing alert are 4 times that of a deer at rest. The ultimate effects of energy diversion are contingent on animal condition and status, habitat quality, and weather. Since energy diverted to prepare for escape or avoid a contact cannot often be regained in the short term, these expenditures usually occur at the expense of such functions as physiological maintenance and reproduction.

In addition, your analysis tends to focus on the individual event, rather than the cumulative effects of repetitive contact. By nature and given the means, motorized vehicles have the potential to affect far more animals over far greater expanses than non-motorized means. Although this Resource Area does not presently support high density OHV use (outside big game hunting season), events and trends nationwide and in northwest Colorado seems to indicate that such use may elevate quickly in the near future. On the other hand, this Resource Area does not appear to be particularly well suited to high density traditional non-motorized activities (with the exception of hunting).

581. Comment: Roads. **Isn't it a fact that where your documented road density problems are is around oil and gas wells. You should be addressing those problem areas only; rather than closing and designating the whole resource area.**

Response: The Resource Area's highest road densities are unavoidably achieved in heavily developed oil and gas fields, but they are not the only areas that support what we believe to be road densities unnecessarily deleterious to big game habitat utility. BLM's intent was to craft a long-term, widely applicable land use objective that would contribute to the maintenance of wildlife-related values the nation cherishes and on which a good share of northwest Colorado's economic security depends. Our objective is to develop broad land planning guidelines that will help maintain the long term traditions and use of public lands in the White River Resource Area into the future, and to help break the cycle of BLM continually having to react, often inefficiently or ineffectively, to problems only after they occur. It should also be stressed that BLM has no intent of closing the Resource Area to vehicular traffic. Even if you base your view on simultaneous implementation and only for those periods when access limitations were applied (i.e. assuming effective road density reductions will be achieved primarily through seasonal restrictions), public lands within the White River Resource Area would continue to be served at any given time by up to 5,700 miles of vehicular access.

582. Comment: Motorized Travel. **Please explain why Alternative D would be effective enough to enforce a restricted law. I feel that roads built for oil and gas development are more harmful to the environment than OHVs.**

Response: Road density limitations are meant to help stabilize the expanding incursion of human activities on big game seasonal ranges, as a form of disturbance which aggravates and contributes to mortality (or depressed productivity) through excessive and premature depletion of energy reserves and/or inefficient use of available forage and cover. Road density limitations would be achieved largely through seasonal restrictions (i.e. while targeted species occupy these ranges) and, to a lesser extent, abandonment of roadbeds determined unnecessary for legitimate land uses (e.g. livestock and mineral management, recreation, access). In response to public demand, BLM has proposed a provision allowing certain off-road vehicle use in order to retrieve legally acquired big game. Enforcement of these land use decisions would be the responsibility of BLM law enforcement personnel with cooperation from the Colorado Division of Wildlife and Public Land users (refer also to response to comment number 563).

Impacts to big game from vehicle use are based on the fact that hunted populations typically avoid contact with human activity. Disuse of otherwise suitable forage and cover adjacent to sources of disturbance

reduces habitat utility and the capacity of affected acreage in supporting former big game populations. Another important effect of human activity on big game involves additional energy expended through alarm and subsequent avoidance movements, particularly during periods when energetic demand is elevated environmentally (cold/ homeothermy, snow/locomotion and forage access) or physiologically (late gestation and lactation). Extraneous energy expenditures caused by human activity (e.g. flight or increased state of alertness) or reducing opportunities to exploit forage/water sources during these periods diverts or deprives energy stored and potentially assimilated for extended winter nutrition, successful gestation and lactation, and ultimately, production, survival and recruitment. Please refer also to response to comment number 580.

Avoidance-related affects are potentially most severe where the extent and/or availability of habitat resources are limited (i.e. critical summer and severe winter ranges) and during periods when animals are being subjected to strong environmental or physiologic demands. Most sensitive periods involve the late winter/early spring months when nutritional planes are at lowest ebb and animals are simultaneously coping with cold temperatures and the third trimester of pregnancy, and the mid-spring through early summer months during lactation.

Impact levels are dependent on the intensity, frequency, and duration of the activity, location, time of year, species involved, and animal response as modified by experience, topography, or vegetation. It is assumed that avoidance-related disuse, in most situations, accounts for up to 50% of potential forage and cover use within 300' of a road. Road density effects are relatively small at 1.5 miles per square mile or less (about 10% loss of habitat effectiveness), but increase exponentially as road densities increase, such that habitat effectiveness is reduced by about 30% at 3 miles per square mile (see response to comment number 563). Overall road and major trail densities on BLM lands within the Resource Area are estimated to average 2.5 miles per square mile, with densities exceeding 5.0 per square mile in Douglas GRA's oil and gas fields. Effective big game habitat loss associated with average road densities likely falls in the range of 20%, with effective losses probably approaching 30-40% in heavily developed oil and gas fields (draft pages 4-62 and 4-63 (Impacts from Oil and Gas Management) and page 4-72 (Impacts from Motorized Vehicle Management)). Oil and gas access networks are, as you note, of particular concern as they usually remain open to unregulated use throughout the life of the well (30 years) and beyond (see also response to comment number 581). With 98 percent of the Resource Area presently open to unregulated off-road vehicle use, there are no means available to effectively limit the proliferation of primitive roads or trails emanating from established access roads (especially during hunting season). Over time, pioneered trails become more pronounced with continued use and often become suitable for larger vehicles, progressively expanding the extent and frequency of human influences on occupied big game habitats (see response to comment number 572).

583. Comment: Roads. **No mention is made of a plan to reduce wild horse and elk populations which have exceeded objective levels. In fact, it is stated in the DEIS that elk and horse herds are endangering deer populations because they utilize the same forage. This statement seems at odds with the stated justification for the road density goal. What evidence supports the BLMs contention that a road density of 3 miles/sq. mile will protect big game? Multiple use activities on federal lands should not be limited due to poor wildlife management programs.**

Response: CDOW has responded effectively to burgeoning elk populations and changes in seasonal distribution with altered harvest strategies and development of a local Habitat Partnership Program. Table 2-22 (page 2-29 in draft and as revised in the final) contrasts Public Land elk populations prior to (i.e. Alternative B--early 1990's), and after (i.e. Alternatives C and D) development and implementation of CDOW's most current big game population objectives. It is apparent that overall elk populations are in the process of being reduced by about 23% from peak levels achieved during the early 1990's. This pattern is consistent throughout the Resource Area with the exception of DAU E-6 (i.e. affecting 10% of the Resource Area in the Danforth GRA), whose populations will be allowed to expand by about 3 percent. Importantly, those GRAs with coincident horse use have been subject to more pronounced reductions--36% in Piceance and 48% in Douglas.

In the case of wild horses, BLM is proposing to maintain horse populations consistent with the 1981 White River Resource Area Grazing Management Environmental Impact Statement in the short term, with the ultimate attrition of horse use on 269,630 acres in the long term (page 2-55). This proposal would eliminate forage and habitat competition among coincident deer and horse populations on nearly 50% of GMU 21's deer winter range and 14% of it's critical summer habitats (see pages 4-69 through 4-70). In the sense of the word, no mention is made of elk or horses "endangering" deer populations, rather the text states that expanded elk and horse populations are likely having an adverse influence on coincident deer populations. On page 4-69 the text states that it is likely that horses exert influences on deer similar to those of elk. On page 3-24 the text recognizes a concern shared by CDOW and BLM that, by merit of the behavioral traits and foraging strategy of elk, competition for forage and mutually preferred seasonal habitats is likely one of several important factors that may help explain the apparent lack of resiliency in northwest Colorado's deer populations.

Road use affects deer and elk in similar manners, but to different degrees. Again because of behavioral characteristics, elk are normally less tolerant of disruptive influences. Interspecific competition for forage and space and the desired balance among coincident elk and deer populations is a population management problem that is rectified primarily through CDOW's harvest strategy. Road-related effects are primarily a habitat management concern and are more appropriately within the purview of BLM. Road density objectives are aimed at maintaining or improving, where necessary, the productive potential of a herd within a desired population range by reducing extraneous energy demands (reducing controllable forms of harassment) and encouraging the efficient and uniform use of available forage resources (reducing the effects of avoidance). The big game management strategy proposed in Alternative D is designed to complement CDOW's desired balance among deer and elk populations (see also response to comment number 598).

Again, it is too simplistic to state that road density objectives are meant to "protect" big game (see above), their intent is to contribute toward the achievement of a big game population with sustained, high productivity and relatively modest winter carry over. This strategy is designed to provide the desired number of animals for annual sport harvest and reduce the resource commitment necessary to support the total population through the year. This, in turn, increases the opportunity for animals to select more limited or highly preferred forage items and reduces big game's adverse effects on vegetative expression (i.e. suppressed shrub development beneath woodland canopies, forb composition on fall and spring ranges). The 3 miles per square mile objective was chosen as a reasonable figure that accommodates the

overall average road density in the Resource Area with potential for some areas to sustain heavier road networks in the future. This figure compromises certain wildlife values, but based on a body of well-accepted and appropriate literature (pertinent sources available for inspection at the Resource Area office), at levels that BLM considers reasonably balanced with respect to other multiple use activities (maintenance of up to 70% of functional big game habitat utility across a minimum 66% of the Resource Area). Please refer also to response to comment number 563.

584. Comment: Wildlife. **Our observation of the change in wildlife use on the vegetation manipulation areas recently completed on our range tells us manipulation areas should be larger. Wildlife concentrate on these treated areas.**

Response: In the context of plant community management and natural perturbation regimens, planned forage enhancement manipulations have tended, and may continue in some degree, to be larger, less random, and perhaps more frequent than natural disturbance patterns. In the case of woodland communities, available fire history and the evidence available in extant stands (i.e. age class distribution) does not appear to indicate that fire historically involved large continuous parcels at regular intervals, although we recognize that considerable pinyon-juniper encroachment occurs on acreage that was previously maintained in a fire disclimax (e.g. shrub or grassland types).

BLM recognizes its role in providing domestic sources of food and fiber, and its charge to balance and sustain this use against a multitude of other land uses and values, including wildlife habitat and recreational activities. In this vein, BLM's ultimate goal is to emulate, as much as practical, natural disturbance patterns, and in the process, provide the necessary quantity and distribution of livestock forage that will facilitate proper use by all ungulate grazers and complement the recovery of certain degraded systems (e.g. riparian and valley bottoms). This approach would likely involve manipulation designs that are more widely distributed, but involve acreage sufficient to meet livestock forage needs and discourage strong seasonal big game concentrations on individual treatments. Situations with limited management flexibility or with overriding economic constraints may require trade-off decisions, petitioning CDOW to modify local population and harvest objectives, enhancing seasonal public use and access, or implementing supplemental "satellite" manipulations to disperse big game use. Manipulating large expanses of range in a sole attempt to increase livestock forage with design features meant to consciously preclude efficient utilization by big game would, in many cases, be inconsistent with current BLM management policy and objectives.

585. Comment: General. **Alternative A has been a workable plan, and we prefer alternative A over alternative B, C or D. Any other alternative we feel would vastly hinder the recreational opportunities and could adversely affect local businesses that depend upon hunting during the hunting season.**

Response: Big game management objectives, particularly in Alternative's C and D, are specifically designed to help improve herd structure and/or productivity as a means of maintaining or increasing the availability and quality of harvestable animals (refer also to response to comment number 598 and the third paragraph of response to comment number 596). BLM believes that sustained attraction to, and desirability of, this area for big game hunting depends, in part, on public land management that is consistent with maintenance of desired population objectives (established by the State) and complements hunting-based demand and expectation.

586. Comment: Wildlife. **Hunting Seasons are not considered. The impacts on big game, small game, roads, etc. caused by hunting seasons are very significant. They are not considered. Is it not reasonable to apply various requirements in an evenhanded manner?**

Response: Although we cannot disagree that animal harassment and avoidance-response on public lands is intense during the big game seasons, the fact that the more popular seasons occur during that period when big game are least burdened by extraneous environmental or physiological demands mitigates these effects to a certain degree. More at issue is the prominent stature big game hunting commands in the traditional economic structure and stability of northwest Colorado, and the concomitant need to control big game populations consistent with, among others, agricultural forage requirements and vegetative condition and vigor. Recommending drastic reductions in big game hunter participation would be tantamount to severely curtailing oil and gas production or livestock grazing within the Resource Area.

587. Comment: T/E Species. **The draft plan notes several "T&E" species. However, it is unclear whether the required consultation with the Fish and Wildlife Service has been completed with regard to these species. Since the draft materials are in the form of an environmental impact statement, the wildlife component would, by definition, involve impacts upon these species.**

Response: The results of Endangered Species Act consultation on the proposed plan are included in this document as Appendix F.

588. Comment: Reclamation. **Upon well abandonment we are required to recontour to original grade. In light of the forage deficit, it might make sense to look at leaving certain of the well pads flat to catch more water and create more forage area in the Cathedral area. Also rather than recontour to original grade how about recontour for maximum forage. I really don't see the difference between burning or chaining which I assume creates man-made erosion as much as recontouring to grade would.**

Response: Leaving pads and roads in place could, as you suggest, be a viable management option in some situations. On the other hand, depending on the slopes and soils involved, this practice may compromise long term slope stability and lead to undesirable erosional processes. Under most circumstances, it may also be erroneous to assume that forage availability would increase. As an example, assuming exponential decline in a site's production potential with increasing slope, a 200' x 300' well pad on a 20% slope occupies about 2.2 actual surface acres and with cut-and-fill slopes represents about a 2% increase in original surface area for vegetative growth. However, about 38% of the disturbed surface would consist of slopes approaching 45% (cut/fill slopes). Although one might expect to increase area-specific forage production on about 1.4 acres (pad base), a concomitant decrease (at exponential rates) in production and ungulate accessibility would be expected on the remaining 0.8 acre. Net forage production and effective utility an uncontoured parcels might then be expected to be reduced by 20 to 35% compared to the original land. Relatedly, by retaining associated access, it is reasonable to assume that continued vehicular use of the roadbed and the attractiveness of such sites to grazing ungulates (in effect a concentration area) would detract from the site's long term condition and productive yield.

Prescribed burning and chaining does accelerate overland erosion in varying degrees. However, the conditions under which these treatments

are prescribed are selected to minimize short term erosional soil loss and, ultimately, are designed to enhance the site's long term ability to build and retain topsoil (i.e. enhancing the density and vigor of the herbaceous understory).

589. Comment: Riparian. **We ask BLM to manage first for riparian integrity. We urge protection of the White River, and oppose gravel mining along the river. We remain concerned because the draft plan states that 50% of BLM stream fisheries would be lost under large scale oil shale development 4-104, 105. This is intolerable. Oil shale development must not be permitted if any significant reduction in fisheries would result.**

Response: Improvement and restoration of riparian systems is one of the featured management priorities in this RMP. In particular, the federally-administered portions of the White River have been identified both as a high priority riparian system and an Area of Critical Environmental Concern (see response to comment number 655).

BLM's role as a land management agency is clearly multiple use oriented under the Federal Land Policy and Management Act (FLPMA). It is BLM's responsibility to provide not only for public uses in demand (recreational, mineral extraction, and agricultural), but balance renewable and nonrenewable resource use to avoid serious and/or permanent impairment of the land's productivity or environmental quality (refer to response to comment number 560). Development of federal gravel deposits in the White River valley is, and will likely continue to be, a legitimate and economically important land use. BLM believes that gravel mining operations can, in many cases, be designed in a manner compatible with the long-term maintenance of riverine habitats; there also remains the distinct possibility that proper mine designs could increase riparian/wetland extent and contribute to improved channel and floodplain function (page 4-114). BLM has proposed the strengthening of land use prescriptions that help ensure that riverine riparian, channel, and floodplain processes and associated habitat are not impaired (e.g. see CSU-13 on page B-39 and "Impacts from Mineral Materials Management" on pages 4-114 and 4-115). In regard to fisheries deterioration attending potential oil shale development in Piceance Basin, please refer to the responses to comment numbers 643 and 621.

590. Comment: Minerals. **The BLM has not presented any data which furnish a foundation for increasing restrictions on oil and gas exploration and development activities. For example, BLM has chosen to lengthen timing restrictions for eagles and other raptors, grouse, and big game winter range, to name just a few. In some cases, BLM has extended the duration of timing stipulations by as much as 3 months, as in the case of eagles and extended the restricted area by an additional 1/4 mile. There is no information contained in the DEIS to show the need for these increases in restrictions.**

Response: The timing limitation buffer is the same in all alternatives, but the restriction timeframes have been expanded to capture the majority of local nesting activities and allow for vagaries in weather or other environmental factors which influence the timing of nest activity. In application, the actual restriction period (through the use of exceptions and modifications) would not differ from that currently used. The revised period provides the operator advance and more thorough knowledge of timeframes when activities may be deferred.

Stipulations applied to bald eagle roost and nest activities are "generally adequate" in Alternative A versus "relatively risk-free" in Alternatives B, C, and D--a point of contrast consistent with this bird's status as a threatened species under the Endangered Species Act. It should also be noted that Alternatives B through D use buffer radii and timeframes that are consistent with Colorado's state-wide Oil and Gas Environmental Impact Statement published in 1991, which has the obvious benefit of standardizing stipulations across the state. Alternatives C and D use a timeframe 1 month longer than the state-wide Oil and Gas EIS to more accurately portray to operators nesting chronology specific to this Resource Area, however, the actual period of deferral would be identical in either case (see above). Although the timeframes are extended in this case, we feel it would also expedite the permitting process by minimizing supplemental reliance on Endangered Species Act provisions and simplifying consultation procedures with the U.S. Fish and Wildlife Service. We don't understand your referral to a 3-month extension on bald eagle stipulations, but it may involve our inclusion of stipulations specific to nest activity. The existing management plan failed to consider nest site provisions, for at the time we had none. In those few cases where it has been necessary to impose bald eagle nest restrictions, the very same timeframes, as derived through consultation with Colorado Division of Wildlife and U.S. Fish and Wildlife Service, were used. The reasoning behind extending the severe winter range stipulation timeframe is found on page 4-60 under Alternative A (second paragraph). This modification also aligns our stipulations with the rest of Colorado BLM.

BLM recognizes the difficulty in understanding or appreciating the need or intended role of timing limit stipulations. Using big game severe winter range as an example, reluctant acceptance of the principle is understandable, because 1) big game alarm is not necessarily overt, 2) the effects of chronic harassment are subtle and cumulative through the winter, and 3) the ultimate outcome of depleted energy reserves is not evident until early spring as measured by reduced capacity to survive through mid- spring or the bearing of vigorous offspring.

It is doubtful that there exists any reasonable means for assessing the efficacy of big game stipulations on a population basis. It is analogous to the inability of industry to reasonably predict market conditions, production yield, or lease development strategies (access/well placement and densities) in advance (as desired by the wildlife community). It would be virtually impossible to isolate cause and effect or establish classic control/experimental designs due to vagaries and inconsistencies of weather, topography, the influence of other land use practices, and variable forage and animal conditions. Regardless, any specific guidelines generated by valid experimentation would not be broadly representative of other regions or in differing cultural, physical, or biological settings. Any effort to design and conduct an experiment on wild, free-ranging animals (remote sensing and continual surveillance) that would effectively elucidate development-induced influence over a minimum period of time (perhaps 3 years) would be of unprecedented scope and complexity and be of prohibitive cost.

The desire to accurately quantify oil and gas development's influence on herd production or survival will likely never be satisfied completely. Wildlife stipulations reflect logical inference predicated on well founded, consistently affirmed knowledge of big game life history, and the animal's physiological and behavioral requirements. The individual components and influence of harassment (i.e. response to disruptive stimuli) is well documented in the scientific literature and includes: elevated metabolic/energy demands, accelerated depletion of reserves required to bridge unavoidable nutritional deficiencies during the mid to late winter through early spring months, extraneous

demands attending avoidance response divert energy available for reproductive/growth processes, and in extreme cases, simple animal maintenance functions (immune system, homeothermy). For additional information, please refer also to responses to numbers 591, 596, and 652.

591. Comment: Wildlife. **It appears that the wildlife found on public lands will control any activities from December 1 through August 15 in some areas every year. This is a period of 8 1/2 months and is ridiculous! After reviewing the proposed RMP the recommendations of the CDOW must have been copied with little evaluation of their validity or reduction in area. Certainly there are areas in which the winter migration of the mule deer herd is critical habitat but not all the area that is illustrated on the map.**

Response: It is true that wildlife values and associated stipulations form a matrix, and that specific parcels of land serve multiple wildlife functions warranting attention, but the assertion that wildlife stipulations are applied to sufficient acreage, or are implemented in such a way as to impede development is exaggerated. Wildlife Timing Limitation (TL) stipulations vary in space and time and cannot be portrayed accurately in the composite. Contrary to this commentor's perception, typical application of Alternative D's lease stipulations in the near, and at least foreseeable future, would leave an average 71% of the Resource Area unburdened by TL imposition from December 1 through April 30 and 97% of the Resource Area unburdened from May 1 through August 15. Virtually no timing limitations are applicable from mid-August through November (excepting a bald eagle roost TL applicable to one-quarter percent of the Resource Area during late November). When the extent and period of TL stipulations are plotted by month, an average 29% of the Resource Area is subject to TLs from December through April--attributable primarily to big game severe winter range application. In the next period, assumptions are made to typify application in the near and foreseeable future (through plan life), that is, one-third the raptor nest buffers are activated in any given year and the proposed provisional sage grouse nesting area and big game summer range thresholds are not exceeded (i.e. precluding stipulation application). Beginning in May and progressing through mid-

August, an average 3.4% of the Resource Area is subject to TLs. From August 15 through December 1, TLs are generally not applied anywhere in the Resource Area. In the event the future scope of oil and gas development expanded significantly to involve higher elevation critical big game summer habitats and sage grouse nesting areas at levels exceeding the proposed 10% thresholds (e.g. 80-acre spacing throughout south half of Douglas Creek Arch, or >160-acre spacing on Blue Mountain), a maximum application scenario could be developed. In this case, Area-wide TL involvement would increase from 29 to 30% from December through April, and from 3.4 to 22% from May through mid-August. These analyses do not account for the fact that the more extensively applied TLs (i.e. raptor nest, big game winter range, and likely, in practice, the sage grouse nesting area and big game summer range stipulations) are frequently modified in form or excepted to accommodate development, that little oil and gas development occurs from December through April, and leases held in production are not subject to new or revised stipulation application.

It is also true that Colorado Division of Wildlife has generally concurred with most of our recommendations for stipulations and that BLM uses CDOW's wildlife distribution mapping as a basis for applying stipulations. It is incorrect, however, in assuming that BLM assiduously parrots CDOW-derived recommendations. Although many of these stipulations could be considered "standard operating procedure" for land management agencies, the selection, application, and in some cases, new development or modification of stipulations are a product of the White River Resource Area staff.

592. Comment: Wildlife. **In all cases where an arbitrary date is applied for timing restriction associated with stipulations for wildlife or plant populations, the BLM should have the flexibility to alter that date should the resource involved no longer be present.**

Response: Dates BLM uses to protect specific wildlife activities are quite flexible when applied to wildlife-related timing limitations, as provided for in the "exceptions, modifications, and waivers" component of each lease stipulation found in Appendix B.

593. Comment: Wildlife. **Timing limitations and stipulations do not protect wildlife -- these lead to habitat fragmentation and apply only during exploration, not production!**

Response: BLM believes that surface use stipulations, such as timing limitations and no-surface-occupancy, successfully perform in their intended roles, that is, minimizing the physiological demands on big game when environmental demands are heaviest, preventing disruption of reproductive efforts (i.e. raptors), and minimizing displacement of big game from preferred seasonal habitats or areas with important forage or cover resources. We acknowledge that these provisions are incapable of maintaining long term habitat integrity in certain cases, but consider them effective tools in minimizing the most disruptive short term influences of permitted surface disturbing activities. In regards to fragmentation effects of land use activities, see response to comment numbers 562 and 560. In and of itself, the production phase of oil and gas development involves a maximum 1 vehicle trip per day for monitoring and maintenance activities, and, discounting unrestricted use of well access by the public (i.e. the basis for road density restrictions), is considered relatively innocuous (see response to comment number 579).

The bulk of the wildlife issues with which we deal involve species whose needs are fulfilled on a large scale, or whose habitats are widely available. We do not feel that the majority of wildlife species with which we work require inviolate preserves to manage habitat consistent with their needs. This is not to say that we fail to recognize or believe it important to maintain the utility and suitability of habitats in limited supply or particularly susceptible to degradation. There are numerous land use objectives/decisions and a Controlled Surface Use stipulation that address these concerns by: 1) limiting adverse modification or conversion, and 2) requiring that short term surface use is conditioned such that desired vegetation components are reestablished at an accelerated rate or that natural successional processes are not impaired (e.g. CSU-12 (page B-38), big game cover/forage objectives (pages 2-59, 2-60), raptor habitat objectives (page 2-62), grouse habitat objectives (2-66, 2-67)).

594. Comment: Wildlife. **Next some 31,000+ acres of lands have been excluded due to raptor nests or T&E species. Why the limit of up to one mile for raptor nests from February 1 to August 15? Some of these are located in areas which oil and gas potential is low and others are within established oil and gas areas. Again protection of these resources can be accomplished by using other means and allowing the agency the latitude of working under the full multiple use concept rather than just discontinuing any surface use.**

Response: BLM would be interested in discussing alternate strategies for the protection of such values, but we have not encountered other means for satisfactorily dealing with these issues. BLM's ability to gain the voluntary cooperation of operator's in such circumstances (e.g. newly discovered nests not covered by lease stipulation) has not been universal. Latitude to modify restrictions as necessary to fit individual circumstances is provided for in each stipulation's modification, exception, and waiver provisions. The one-mile radius buffer zone applies only to the ferruginous hawk–a relatively localized species that is presently candidate for listing under the Endangered Species Act. It is generally accepted that this hawk, because of it's reported intolerance to nest disturbance and, perhaps more importantly, the very open nature of its sagebrush/saltbush breeding habitat, is especially vulnerable to nest disruption.

It is important to understand that on existing leases, BLM is normally limited to a maximum 60-day deferral of surface use activities that would affect newly discovered or established raptor nests. The nesting sequence of raptors that breed in this Resource Area require, on average, a minimum 87 days to raise a brood (giving no allowance for variability in nest chronology). Since periods when nesting attempts are most vulnerable to nestling mortality or nest abandonment occur both early and late in the nesting sequence, BLM's deferral period is insufficient to successfully assure annual nest success or recruitment of young into the population without the voluntary cooperation of the operators. BLM has not garnered the consistent support of operators for voluntarily enacting wildlife conservation measures.

595. Comment: Wildlife. **Why is the BLM allowing the CDOW or the USFW in the negotiations with the operator for compensation during the off season?**

Response: The Colorado Division of Wildlife has regulatory authority over all wildlife occurring within the State, including lands administered by BLM. Similarly, the U.S. Fish and Wildlife Service has principal statutory responsibility and authority for migratory birds, and species covered by the Endangered Species Act and Eagle Protection Act, among others. BLM is required to assure that fish and wildlife resources are adequately considered in it's multiple-use land management and planning activities and has the related responsibility to inventory, manage and protect fish and wildlife resources on public lands. By and through a number of laws and Memorandums of Understanding, the BLM cooperates and coordinates with these agencies in all resource management and planning activities that would influence wildlife populations or habitats in a manner consistent with the statutory authorities and responsibilities of the respective agencies.

596. Comment: Minerals. **For the next decade or so the business climate in oil and gas for the White River Resource Area will not even approach that found in the early 1980's during the active oil shale days, and yet the proposal is setting forth much more stringent stipulations then were in force at that time. No great calamities to the wildlife, fish, raptors and wild horses have appeared during the last 10-12 years.**

Response: Regardless of the annual drilling rates achieved during these periods, the more relevant aspects of such activity is the cumulative extent of surface disturbance associated with pads, pipelines and access, the expansion of oil and gas development into previously undeveloped areas, and the cumulative increase in well and access density within operating fields over the last, and into the next, 20 years. Although you observe that no "great calamities" have occurred to wildlife resources in this Area over the past decade, it is noteworthy that during this period: 1) the northern goshawk and Colorado River cutthroat trout, among others, gained candidate status for listing under the Endangered Species Act, 2) initial activity for listing of the white-tailed prairie dog and sage grouse may be imminent, 3) concern for breeding populations of burrowing owl, sharp-shinned hawk and Cooper's hawk remain high, and 4) Game Management Unit 21 required a totally specified designation to improve buck ratios and hunt quality.

Relatively high and sustained levels of historic and projected drilling activity in this Resource Area, as well as mounting pressure for public lands to provide expanded and intensified year-round recreation opportunities, increases the potential for widespread involvement of wildlife resources. It is also important to realize that the stipulations proposed in Alternative D, although refined, differ little from the protective recommendations this office has applied to all land use activities over the past 5 to 10 years.

597. Comment: Wildlife. **I prefer alternative A, big game numbers are at record levels now under current management and conditions. I feel that big game management should be left up to the Division of Wildlife. If there is a specific problem, then the DOW should come to the BLM with all the data and proposals. The BLMs job is to manage the land not the wildlife.**

Response: It is admittedly difficult to logically separate population and habitat management, but the Colorado Division of Wildlife is solely responsible for management of big game populations, and the BLM is ultimately responsible for managing the habitat base. Both agencies work in concert through long-standing agreements to coordinate and balance various biological, recreational, and commercial land-use demands that affect big game habitats on the Public Lands.

Big game population objectives which BLM used for analysis in this document were established by the Colorado Division of Wildlife. Population figures used in Alternatives A and B reflect those last used in a similar planning effort (Alternative A, 1981) or the peak period in cumulative deer and elk populations (Alternative B, 1990). Realistically, population objectives used in Alternatives A and B were included as a means of comparing past and potential populations with those currently established by the Colorado Division of Wildlife. BLM believes CDOW's most current big game population objectives are most compatible with current land use objectives and multiple-use demands.

598. Comment: Wildlife. **Big Game Habitat -- Pg 2-57 When the Blue Mountain area was closed off and taken to just a draw area, the Big Game has come back. Consideration should be taken so that you are not limiting the income that this area depends on from outside the state.**

Response: Interfering with the achievement of Colorado Division of Wildlife's big game harvest goals would contradict many of BLM's resource objectives (e.g. watershed condition, livestock and big game forage quality and availability). In fact, the impact analyses are based on the assumption that big game harvest objectives will be routinely met as a means of maintaining desirable levels of ungulate forage use. Further, BLM's big game management objectives, including the road density objectives, are specifically designed to complement CDOW's desire to maintain or increase the number of animals available for harvest and/or improve the age structure or productivity of a particular population. In the event road density restrictions

hindered access necessary to achieve big game harvest objectives, BLM could readily modify access availability in cooperation with the CDOW.

599. Comment: Plant Communities. **I am opposed to lowering the DPC in certain areas just for wildlife habitat. Will the same be done for livestock grazing? Or will these areas for wildlife cover be given at the loss of forage for livestock?**

Response: Selection of a particular Desired Plant Community (DPC) would be determined from site-specific inventories and thorough consideration of various land values and products derived from the land in question. Irrespective of generalized wildlife habitat prescriptions, the chosen DPC would reflect plant community status that best meets coordinated land use objectives, including, but not limited to, livestock forage production, plant community vigor, and watershed condition. It is important to note that a plant community's ecological status is based on aspects of vegetative composition relative to site potential, and that, in many instances, a mid-seral plant community would be expected to provide desirable livestock forage at levels comparable to late seral or potential natural communities. Further, under CDOW's long term population objectives, gross big game forage demands would decline in the Crooked Wash GRA. More appropriately, and considering differential forage selection by increased numbers of elk relative to deer, forage demands for big game under Alternatives C and D should very closely approximate those currently allocated to big game in this GRA. It is important, too, that this document does not change existing allotment-specific livestock allocations.

The overriding objective in plant community management and BLM's efforts to enhance the degree of resource integration is to simultaneously achieve an array of resource objectives consistent with sustained community health. It is BLM's opinion that these big game habitat objectives can be successfully integrated with livestock management objectives without compromising the sustainability or economic stability of individual livestock operations. In the event big game cover or forage objectives cannot be reconciled with coincident values such as livestock forage objectives, or interfere with achieving rangeland health objectives, site-specific adjustment will be necessary to balance values and uses in a multiple-use context. Of course, if these wildlife objectives prove to be consistently unworkable, they will be modified or adjusted as necessary to better achieve or more reasonably balance multiple resource objectives.

600. Comment: Grazing Management. **Livestock is controlled unlike wildlife; when you encourage wildlife, you decrease the vegetation that's available to livestock. What condition will our range lands be in 10 to 20 years from now? Will the rancher who grazes there be gone because there is no range available to him because of the wildlife?**

Response: Although increasing forage availability and habitat utility are important aspects of big game management in this plan, their intent is not to create conditions conducive to increasing big game numbers beyond target levels, rather they are intended to enhance big game productivity and resiliency (i.e. improved animal production, growth, and survival) at prescribed population levels and moderate the effects of ungulate forage use on vegetation condition and community structure. Overall big game forage requirements at Colorado Division of Wildlife's current population objectives exceed that which BLM allocated for big game in 1981 by about 1.6%, which represents about one-half percent of the total forage base presently allocated to livestock, wild horses and big game (please refer also to response to comment number 657). The Proposed Management proposed habitat development guidelines, BLM feels there is ample opportunity to compensate this level of potential forage conflict without altering overall livestock allocations in the Resource Area. As presented in the draft RMP, BLM proposes to retain short and long-term livestock forage allocations developed in the 1980 White River Resource Area Grazing Management Final Environmental Impact Statement under all alternatives.

Big game management objectives, strongly integrated with the livestock management program, would be implemented in a manner that complements proposed rangeland management and livestock forage objectives. It is our contention and intention that rangelands will be in an improved ecological condition over plan life, with sufficient forage capacity to support prescribed numbers of primary grazing users on a sustained basis.

601. Comment: Wildlife. **Consideration should be given to protection of migration corridors by limiting intensive development activities and to protection of winter habitat, much of which is located on private property, either through the negotiation of conservation or wildlife habitat easements or by outright purchase. The latter is probably not possible in view of budget restrictions.**

Response: Although BLM does address the desire to acquire important habitats from willing sellers, these generally involve riparian, fisheries and special status species. Consolidation of important big game habitats is considered a valuable asset when BLM evaluates various land exchange proposals, but substantive acquisition is, as you surmise, beyond the scope of our operating budget. It should be noted that private land holders in northwest Colorado have considerable incentive (i.e. access privileges for big game hunting) to maintain the suitability of their lands for seasonal big game use. Also, please see response to comment number 560 for a discussion pertaining to big game migration corridors.

602. Comment: Wildlife. **These ACECs have not been selected with the mammalian resources of the WRRA in mind, such as "the World's Largest Migratory Deer Herd" which will suffer even more habitat fragmentation and blockade of migratory routes.**

Response: ACEC designations highlight areas where special management focus is necessary to effectively maintain unique resources or land-based processes. BLM does not feel that successful management of mule deer populations, as your only example, is contingent on any discrete parcel of land or habitat component. Deer represent a highly mobile species with rather generalized needs that rely on the widespread availability and utility of suitable seasonal habitats. In regards to your concerns of habitat fragmentation and impaired migration.

603. Comment: Wildlife. **ACECs many of which are designated to protect wildlife habitat, need to have clearly articulated and formulated road density limits. In some cases existing roads and motorized routes should be closed to lessen road densities in these important wildlife habitats.**

Response: ACECs with specifically identified wildlife values include the East Douglas ACEC (Colorado River cutthroat trout), Moosehead Mountain (big game, grouse) and White River ACEC (bald eagle).

Effective road densities of 1.5 miles per square mile are prescribed for the East Douglas ACEC and the general access closure is proposed for retention on Moosehead Mountain. Motorized vehicle use in riparian areas, including the White River ACEC, is to be excluded, where practicable. We feel that these management decisions constitute clearly defined road density objectives. See also the response to comment number 563 which outlines the implementation strategy for proposed road density reductions.

604. Comment: Wildlife. **Chevron applauds the efforts of BLM to preserve and protect native species. However, Chevron takes issue with BLMs proposed reintroduction plan for the black-footed ferret. Chevron has not seen any data which confirms that the black-footed ferret ever populated the White River Resource Area. Regardless, we are particularly opposed to being excluded from the planning, implementation, and management of the reintroduction plan. Chevron's activities at the Rangely Field and in exploring for additional reserves would be impacted by this plan, and conversely, operations could adversely impact the success of reintroduction efforts. Chevron proposes that industry involvement in planning, implementation and management would assist in mitigating any potential interference from oil and gas activities.**

Response: Documentation for the black-footed ferret specimens cited on page 3-34 of the RMP (Meeker and Craig), among others in northwest Colorado, and accounts of the historical distribution of ferret in northwest Colorado can be found in: 1) Armstrong, D.M. 1972. Distribution of mammals in Colorado. Monograph No. 3, Museum of Natural History, Univ. Kansas. 415 pp. 2) Lechleitner, R. R. 1969. Wild mammals of Colorado. Pruett Publishing Co., Boulder, CO. 254 pp. 3) Felger, A. H. 1910. Birds and mammals of northwestern Colorado. Pages 132-146 in Scientific Expedition to Northwestern Colorado in 1909. The University of Colorado Studies, Univ. of Colo., Boulder. Accounts by Felger (1910) and Cary (Cary M. 1911. A biological survey of Colorado. North American Fauna No. 33. U.S. Bureau of Biological Survey, Wash., D.C. 256 pp.) document the historical extent and continuity of prairie dogs in all the White River's major valleys from Buford, Rio Blanco, and Morapos Creek, to the Utah border. It is unlikely, with at least 6 ferret specimens collected in and around Craig and Meeker, that ferrets were not distributed coincident with prairie dogs throughout northwest Colorado.

In regards to your comment concerning participation in black-footed ferret reintroduction planning, and potential disruption of current and future oil and gas development and exploration, please refer to responses to comment numbers 605 and 617. Be assured that BLM will solicit Chevron's participation in all phases of ferret recovery activity in this Resource Area (see response to comment number 615).

605. Comment: Wildlife. **Will the White River Resource Area follow the guide lines set up the Cooperative Management Plan for Black-Footed Ferrets set up in the Little Snake Resource Management Area? Or rather do you intend to have your own plan for the reintroduction of the Black-Footed Ferret? If White River has its own plan did it have a committee with land users and permittees involved with the reintroduction plan?**

Response: Development of a cooperative ferret reintroduction and management plan has not been initiated for this Resource Area. There is every reason to believe that a plan covering the White River Resource Area would be very similar to the Little Snake plan. Its ultimate form would, of course, depend on issues and concerns brought forward by affected stakeholders during coordinated development of the plan.

606. Comment: Wildlife. **Special Status Wildlife. Trail bike and ATV recreation does not normally occur in ferret communities due to their proximity with prairie dog communities. The recreation is already self-restricting and further restrictions should not appear in this document. No information in the literature shown a negative relationship between OHV recreation and the hawk or goshawk. Restrictions based upon supposition should not appear in this document.**

Response: Based on a large body of literature pertaining to OHV effects and management in the States of Utah and California and preferences displayed in neighboring Resource Areas (i.e. Grand Junction and Little Snake), it is apparent that many OHV enthusiasts prefer sparsely vegetated arid-land communities. The proposed black-footed ferret reintroduction areas typify such conditions--its Mancos shale derived soils and 6-inch average annual precipitation supporting a salt-desert community identical to that receiving heavy OHV use north of Interstate 70 near Grand Junction, Colorado. Although the presence of prairie dogs may tend to limit trail bike and ATV use in such areas, as you surmise, proposed road density objectives are intended to reduce the risk of vehicle-caused ferret mortality and stabilize the disruptive influences (e.g. ferret reproductive activities) attending larger 4-wheeled vehicles as well. Please be aware that vehicle use limitations associated with ferret management are preliminary pending development of a cooperative management plan and the actual release of black-footed ferrets (see responses to comment number 615).

Statements which attribute impacts to nesting raptors from OHV use are not based on supposition. It is well established that disruptive activities in close proximity to nesting raptors can cause site abandonment, nest desertion, prolonged in attendance, or abrupt nest departure--all of which can lead to egg or chick mortality, the subsequent failure of annual reproductive efforts and loss of recruitment into the population. BLM does not regard OHV use in close proximity to raptor nesting activities as a non-intrusive, negligibly disruptive form of activity. In any case, there were no OHV use restrictions developed specifically for raptors. Impact evaluations for these and other raptors address the consequences of proposed road density limitations developed principally for big game and black-footed ferret on raptor-related resources (e.g. page 4-87).

607. Comment: Wildlife. **Texaco takes issue with BLMs proposed reintroduction plan for the black-footed ferret, including the use of CSU-11 stipulations in reintroduction areas. Industry will again be expected to pay for the cost of these surveys to determine if this species exists within a particular area that is being permitted. This plan is superimposed over areas in which lessees have old leases with standard terms and conditions. BLM must honor valid existing rights in these areas. It was also implied the RMOGA jointly developed with the BLM the guidelines for implementing this program. While RMOGA commented extensively I do not believe RMOGA ever officially endorsed the reintroduction plan.**

Response: We cannot deny the fact that industry would likely be asked to contribute toward ferret monitoring efforts as a device consistent with multiple-use management philosophy on Public Lands. Although the commentor is correct in recognizing that valid existing rights would be honored on leases pre-dating stipulations developed in this RMP (please refer also to responses to comment numbers 617 and 615). BLM misunderstood the relationship and situation concerning RMOGA's involvement with the ferret management guidelines. We have changed the text to reflect this fact.

608. Comment: Wildlife. **The RMP/EIS states that "under all alternatives, lease provisions and special requirements derived through the Endangered Species Act consultation with the United States Fish and Wildlife Service would be used to avoid or minimize project involvement with occupied prairie dog habitat." Map 2-15 illustrates where the BLM plans to reintroduce black-footed ferrets. One of the areas which the BLM intends to reintroduce ferrets is directly in the middle of the prolific Rangely oil field and surrounding areas. Other areas which the BLM is considering for ferret reintroduction are: T2N,R104,103W; T4N,R100,99,98W; T3N,R100,99,98W. These areas also have significant oil and gas development. The document then states that a recovery plan would be written for the reintroduction areas.**

Response: The commentor may be confusing current prairie dog distribution with Reintroduction Area designations in Map 2-15. This Resource Area has identified the lower Wolf Creek basin, about 16 miles northwest of the Rangely Field's center, as being most suitable for ferret reintroduction. The remaining area in Coyote Basin, some 3 miles west of the Rangely Field, was identified as a logical and contiguous extension of prairie dog habitats associated with a potential ferret recovery area identified in Utah. Concerning the commentor's opinion that these areas support significant oil and gas development: less than 10 producing or shut-in oil and gas wells presently exist within the proposed reintroduction areas. Please refer also to response to comment number 617.

609. Comment: Wildlife. **While IPAMS is in favor of wildlife, we retain concerns that reintroduction under the Endangered Species Act will decrease available lands to future oil and gas leasing in the WRRA. IPAMS recommends that the BLM make it clear in the document that the reintroduction of the black-footed ferret will not impact existing oil and gas operations or future leases. In short, IPAMS believes that the reintroduction of ferrets should occur in a manner that allows both oil and gas and ferrets to coexist in the same area.**

Response: BLM cannot make the assurance that black-footed ferret recovery efforts "will not impact" existing oil and gas operations or future leases--"impact" is a very broad term and an impact's degree and severity must be considered in a multiple use context (for example see response to comment number 607). Similarly, BLM cannot guarantee that federal surface acreage available for oil and gas facility occupation would not be reduced, but in most cases, minor adjustments in facility siting would not be expected to decrease the availability of, or access to, leased minerals. Further, we do not believe it is appropriate to adopt an oil and gas management strategy which subjugates or precludes endangered species recovery on multiple use lands (see response to comment number 615). Although the RMP is the proper forum for land use allocation, we have not proposed the withdrawal of oil and gas leases for purposes of ferret reintroduction, nor have we proposed the use of No Surface Occupancy stipulations. The manner in which the proposed Controlled Surface Use stipulation would be implemented (i.e. in the event ferrets are released in this Resource Area) will depend largely on the successful development of a coordinated ferret "reintroduction and management plan". Existing patterns and intensity of oil and gas development was one of the primary factors considered when BLM delineated potential ferret recovery areas. Presently, less than 10 producing or shut-in oil and gas wells exist within the proposed reintroduction areas, representing less than 1% of like federal wells in Resource Area. The role of this Resource Management Plan is limited to identifying those areas with habitats best suited for management consistent with the conservation and recovery of black-footed ferret. The RMP establishes a foundation for, but does not commit this Resource Area to ferret reintroduction--the decision to release and/or specific land management prescriptions attending reintroduction will be contingent on the consensus-driven development of a ferret "reintroduction and management plan". All affected stakeholders, including oil and gas operators, would be invited to participate fully in the development of such a plan as a means of minimizing disruption of, or adverse modification to, prevailing land use practices. In the interest of successfully implementing endangered species programs in today's political climate (i.e. public acceptance), there is considerable motivation to adopt a ferret management strategy that imposes minimally on prevailing land uses. BLM firmly believes that ferret recovery can progress in a manner compatible with continued oil and gas development at levels commensurate with efficient recovery, but maintain that it is unreasonable to believe that oil and gas development can proceed with no regard to, or consideration of, the ferret's physiological or behavioral needs.

610. Comment: Wildlife. **Reintroduction of black-footed ferret: The area you have proposed for ferret repopulation is not on our lease area, however it is in a proximity that would allow for the natural spread of ferret populations onto our lease area. Alternatives associated with this include minimizing impact on prairie dog habitat. Several of these prairie dog habitats are located in areas which have been permitted for refuse area construction. Our concern here is that, should the ferret be introduced and then migrate into areas slated for construction, the proposed refuse areas would have to be relocated. This would place an undue hardship on our operation since the areas we have chosen for refuse area construction are those best suited economically and physically.**

Response: Proposed management objectives for prairie dog ecosystems outside the reintroduction areas are oriented toward maintaining a habitat complex that could play an important role in ferret recovery efforts and preventing ferret mortality. It is specifically stated that management of prairie dog complexes outside the ferret recovery areas would be subject to valid existing rights. Based on these objectives, we do not anticipate any need to alter established designs for coal refuse disposal areas in Red Wash south of Coal Reef. As we have discussed on earlier occasions, direct involvement of prairie dog habitats may involve the application of minor mitigation strategies to compensate the contribution to incremental habitat loss, but such work would not interfere with project implementation. Assuming the experimental/nonessential status would apply to ferrets reintroduced to this Resource Area, provisions in the Endangered Species Act allow for the physical removal and relocation of ferrets that become established outside identified recovery areas when conflicts with permitted land uses cannot be reconciled.

611. Comment: Wildlife. **I believe if you are going to put the black-footed ferret out in the wild, do so with no new rules, and do not spend anymore money on it. If it makes it with no special help it is suppose to be, if not it was not meant to be.**

Response: By law, federal agencies are bound to assist and participate in the recovery of threatened and endangered species. Although we understand the basis for your opinion, unfortunately, costs are incurred with endangered species planning, propagation, relocation, and monitoring. It is only prudent that the entities involved protect that

investment by aligning localized land use, where practicable, to complement successful establishment of a self-sustaining population. It would also be desirable from the economic standpoint to develop, as efficiently as possible, a number of viable, self-perpetuating populations sufficient to remove the ferret from Endangered Species Act authority and dismiss the continued need for special conservation measures.

612. Comment: Wildlife. **We oppose BLMs identification of potential black-footed ferret habitat which could be used to reintroduce this endangered species. It does not make sense to create a conflict where one does not currently exist. While RMOGA participated in preparation of draft guidelines for coordinating oil and gas and black-footed ferret recovery in designated management areas, we do not support the introduction of listed species in areas which would supersede valid, existing lease rights. In addition, we do not understand why the reintroduction plan would merely "closely conform" with the above mentioned guidance. What changes have been made? On what basis were these changes made?**

Response: Please refer to response to comment number 615. Since BLM cannot retroactively apply new or revised lease stipulations developed in this RMP (i.e. applied to new leases only), the integrity of existing lease terms is maintained. Additionally, BLM has no intention of superseding valid existing rights or substantially interfering with prevailing land uses in the course of any ferret reintroduction effort. It must be understood that a ferret reintroduction and management plan has not been initiated for this Resource Area. BLM merely anticipates that any eventual plan would closely conform with cooperatively derived guidelines or successfully implemented plans developed elsewhere. The ultimate form of a reintroduction plan for the White River Resource Area would manifest local issues and concerns, and would, in all likelihood, contain unique elements and/or dismiss inappropriate or inapplicable aspects of similar plans.

613. Comment: General. **There is a lack of information in the Draft on the Socioeconomic, the reintroduction of the Black-Footed Ferret and insufficient mapping regarding accesses and inventory of existing roads and trails within the resource area. If the public and the land manager are to make reasonable decisions about the plan and its consequences this information must be obtained.**

Response: It is not within the scope of this Plan to develop specific management prescriptions for ferret reintroduction or establishment. The role of the Resource Management Plans limited to identifying those areas or habitats best suited for management consistent with the conservation and recovery of listed and proposed threatened and endangered species. Specific management prescriptions and strategies pertaining to the reintroduction of black-footed ferrets would ultimately arise through a cooperatively developed and site specific reintroduction and management plan similar to that being developed in the Little Snake Resource Area.

614. Comment: Wildlife. **What are the times for future Black-Footed Ferret reintroduction plans?**

Response: The timeframe for ferret release in this Resource Area is uncertain. The earliest possible date for ferret release in the Little Snake Resource Area would be in 1996. In this Resource Area, it is unlikely that a ferret reintroduction plan would be approved prior to finalization of this Resource Management Plan. Based on this assumption, ferrets could possibly be released in the White River Resource Area in 1997 or 1998.

615. Comment: Wildlife. **Black-Footed Ferret introduction can have serious impacts on private landowners, local economies, hunting and recreational OHV users.**

Response: The draft ferret management plan for the Little Snake Resource Area (which will serve as the blueprint for this Resource Area's plan, see comment number 605) lists the following as its primary goal: "Design the black-footed ferret management program to be compatible with existing livestock, oil and gas exploration, and recreation activities so that neither life styles nor income potential are negatively affected." The design of this plan reflects considerable effort at integrating the social and economic concerns of affected publics and stakeholders. Affected landowners would be fully involved in the development of initial management objectives—any subsequent alteration of which would be subject to their approval. The plan explicitly states that ferret reintroduction and potential occupation of private lands would not supersede, or in any way reduce the fundamental rights of private landowners to manage their property and control activities, including those related to the ferret program. Appropriate land use limitations would be developed by a local working group. It must be emphasized that a site-specific plan would be developed locally for each reintroduction site. Traditional forms and levels of hunting activity, including prairie dog shooting, are considered compatible with the continued maintenance of suitable ferret habitat. Localized and temporary activity restrictions might be imposed to limit inappropriate activity in the immediate vicinity of release cages or to prevent significant declines of prairie dogs in the primary recovery area. Hunter education and cooperation would be used to prevent the shooting of ferrets or discourage excessive shooting of prairie dogs in specific towns.

BLM would coordinate with other predominant recreational and industrial users (e.g. coal, oil/gas, public utilities, OHV users) to develop use and management prescriptions within the plan that would minimize disruption of, or adverse modification to, prevailing land use practices. The U.S. Fish and Wildlife Service and the BLM are in the process of gaining stakeholder agreement on the rules necessary to categorize the Yampa and White River drainages as an experimental/ nonessential population area.

The Endangered Species Act of 1973, as amended, declares that all Federal "agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act." BLM is thus mandated by law to assist in the recovery of the black-footed ferret where appropriate. The recovery areas as delineated in the draft RMP meet habitat suitability requirements. This office believes that ferret reintroduction can be accomplished in this Resource Area without substantially interfering with prevailing land uses. On the other hand, broadening the scope and success of ferret recovery efforts would most certainly aid in achieving the ultimate goal of removing the ferret from Endangered Species Act authority.

616. Comment: Wildlife. **The northwest corner of the resource area has significant potential habitat for black-footed ferret habitat according to the DEIS (see page 2-108). It is our opinion that a management plan for the black-footed ferret be established in this region. The suitable habitat falls between a proposed ACEC and recommended WSA, further enlarging habitat. There is also a high density of raptor nests in this region (DEIS, map 3-8). The establishment of the Moosehead ACEC would be significant addition to the existing matrix established by the Skull Creek, Willow Creek, and Bull Canyon WSAs. Proper management of**

this area could potentially create habitat that would support viable populations of a diversity of species. We recommend that existing undeveloped coal reserves are not leased until a management plan is established for the reintroduction of the black-footed ferret and no further utility rights of passage are established.

Response: BLM does envision the development of a cooperative plan for the reintroduction of black-footed ferret. Consolidation of the WSAs and any one of 3 ACECs that lie, more or less, on the periphery of prairie dog habitats would not expand the potential extent of suitable ferret habitat. That area depicting prairie dog distribution on Map 2-15 represents essentially all habitats potentially occupied by prairie dogs in this Resource Area; the ACECs and WSAs do not encompass any potentially suitable habitat. In addition, the commentor's proposed core area composed of Moosehead Mountain, the 3 contiguous WSAs and prairie dog habitats, because each component is relatively small and represent widely disparate vegetation communities, would, in BLM's opinion, only weakly complement one another in a synergistic sense (e.g. area-species relationships, community equilibria), and with prevailing land use, would not be expected to significantly improve the ability of the complex to sustain viable animal populations. It is BLM's opinion that interim Wilderness management guidelines, proposed Moosehead ACEC management objectives and the subsequent black-footed ferret reintroduction management plan (including prairie dog ecosystem management objectives included in this draft) would be adequate to sustain the ecological integrity of each representative community as well as maintain viable populations of associated fauna without special area designation.

Again, it is highly improbable that new coal mines (and even less probable the use of surface methods) would be opened in the Rangely Study Area over the next 20 years for the same reasons discussed in response to comment number 667. Foreseeable is the incremental expansion of Western Fuel's underground operation to the east and north. Underground methods of coal development are normally substantially less disruptive of surface resources than surface methods. Attendant surface facilities tend to be small and their construction and operation amenable to land-use provisions that effectively reduce adverse affects to minor proportions (e.g. first partial paragraph, first column on page 4-94, first partial and first complete paragraphs, second column, page 4-80). Any further leasing and/or development of coal that may adversely affect ferret recovery objectives would necessarily include provisions to safeguard the integrity of prairie dog ecosystems as potential black-footed ferret habitat.

BLM agrees that important wildlife values exist north of Rangely, but we contend that these values can be maintained without excluding other multiple-use activities or those activities involving surface disturbance. In regard to the particular points you mention: 1) designation of the WSAs and Moosehead ACEC would not necessarily lend itself toward the enhancement of habitat quality, but would aid in maintaining these qualities. 2) It is proposed that special area status be conferred to habitats suitable for the reintroduction of black-footed ferret. Recovery area status would provide the land use designation preliminary to ferret reintroduction activities, pending the successful development of a interdisciplinary reintroduction plan. 3) BLM is unaware of any historical evidence of sharp-tailed grouse on Blue Mountain--without supporting documentation, release of this species may be considered a non-native introduction. 4) BLM does not feel that raptor nest density is unusually high in this portion of the Resource Area, although the area does encompass nearly all our burrowing owl and ferruginous hawk nests. 5) excluding utility corridors from the Highway 40 corridor would likely relegate new utilities to the White River corridor, which may not be a particularly desirable option.

617. Comment: Wildlife. **Special Status Wildlife Habitat Management, page 2-71, map 2-15: Proposed black-footed ferret reintroduction areas are also areas of high oil and gas development potential. Again, industry is expected to fund required black-footed ferret surveys in reintroduction areas prior to surface disturbing activities. Reintroduction should take place in areas that do not have high potential for oil and gas development and certainly not in areas of existing lease rights previously granted under standard lease terms.**

Response: Colorado's portion of Coyote Basin, south of Raven Ridge, was identified as a logical and contiguous extension of prairie dog habitats complementing a ferret recovery area delineated in Utah. Oil and gas operators in this area would be fully involved in development of a ferret reintroduction and management plan (likely principally authored by Utah BLM). Assuming that experimental/nonessential status would be conveyed to reintroduced ferret populations, there is every reason to believe that oil and gas resources would continue to be developed at levels commensurate with efficient recovery. One of the principal ferret reintroduction management goals would be to proceed with ferret reintroduction in a manner compatible with existing land use.

There is considerable motivation to design a recovery program which does not impinge on prior existing rights and imposes minimally on an operator's economic return. With advance coordination and planning, it is believed that any oil and gas development activities that are likely to occur in Colorado's portion of Coyote Basin could normally be conditioned to be compatible with ferret management objectives with little financial burden on the operator (e.g. planning for an efficient access network, minor facility siting adjustments, activity deferrals similar to those in current use for raptor protection).

618. Comment: Wildlife. **Historically, deer and other wildlife have thrived in existing producing areas. "Population Control Hunts" are needed yearly.**

Response: Besides regular big game seasons, which are regularly adjusted (i.e. doe and cow) consistent with CDOW's most current population objectives, special "population control" hunts have not been instituted in Game Management Unit 21 (which encompasses our largest and most heavily developed oil and gas areas). It should be noted that this unit is now totally specified for deer—a measure designed to adjust (i.e. reduce) sport hunting pressure as necessary to accomplish certain herd objectives. We recognize that wildlife inhabits producing fields, but also that many species are adversely influenced by such activity depending on variables such as: behavioral tolerance of individual species, the stage and intensity of development, land ownership patterns, and public access situation.

In the case of hunted species, especially those that appear to be thriving as a whole, it may appear unnecessary to apply any form of land use restriction or limitation. However, such measures are designed to maintain herd productivity and recruitment by conditioning, where practicable, those activities that contribute to declines in animal condition, such that the number of animals available for sport hunting are maintained at high levels relative to population size.

619. Comment: Minerals. **Page 4-126 talks about the impact from oil and gas development on Colorado River cut-throat trout habitat and the increased salinity of the water due to increased erosion because of oil and gas development. Oil and gas activity is going to have a negligible effect on increased erosion since so much**

erosion occurs naturally. Trout habitats are generally avoided and where they are disturbed, remediation restores natural habitat.

Response: It is our goal to restore vegetation-derived forms of channel and upland erosion control as well as minimize, as much as practical, the contribution of surface use to erosional processes in main stem and tributary channels and contributing upland watersheds. Although a certain amount of natural erosion will continue to occur, we wish to condition surface uses such that natural forms of erosion are not accelerated or aggravated by our actions. Although established oil and gas fields encompass less than 1% of the BLM cutthroat habitats at this time, we believe development will involve these areas in the future. The terrain in the East Douglas Creek headwaters would dictate that oil and gas developments directly involve these systems. Avoidance would not be desirable in an economic or environmental sense. The Controlled Surface Use stipulation would continue to allow development in these areas, but would ensure that stream conditions would not be significantly impaired in the short term or adversely altered in the long term. Application of this stipulation does not mean that standard remediation efforts that you may apply would need to be altered—it merely requires that they be effective by a defined set of quantitative standards. The recently elevated status of this fish to candidate for listing under the Endangered Species Act warrants these stipulations such that continued habitat improvement can be expected and that the necessity for listing is avoided.

620. Comment: Fisheries. **Similarly, the proposed actions to preserve existing fisheries in Table 2-43 are vague and discretionary.**

Response: It is not within the scope of this Plan to identify specific actions necessary to achieve stated resource objectives—those that appear are examples indicating management intent or direction. What remains important are the stated improvement objectives, which we believe are clear. Flexibility in designing and implementing specific improvement actions is necessary to account for site-specific watershed conditions and the continuing evolution of science pertinent to land management issues.

621. Comment: Fisheries. **The fisheries management section (pg. 2-69) describes objectives and techniques to improve stream fisheries, but in the summary on page S-12, it describes oil shale development leading to the loss of -50% of all stream fisheries, including 35% of Colorado River cutthroat trout fisheries. These are not consistent, and no one program should lead to such a devastating effect on the fishery potential, especially in light of the special concern status of CRNs.**

Response: We understand the apparent inconsistency of this impact analysis. Realistically, if a shale oil industry were to develop, serious degradation of these aquatic habitats would likely be unavoidable. Given current laws and regulations and the paucity of fishery enhancement opportunities available in this Resource Area, these impacts would probably be subject to off-site compensation developed through an EIS process.

622. Comment: Fisheries. **Improvement of fisheries so that 30-40% are in good condition is an inadequate goal. It appears that disturbance associated with oil, gas, shale oil and coal extraction will have a significant effect on stream conditions. Reducing such activities is highly recommended. Fisheries and riparian areas are absolutely essential to a healthy ecosystem, and as such should be given special consideration.**

Response: The fisheries improvement goals were established in the context of what BLM believed could reasonably be accomplished within the 20 year life of the plan. Highest priority would extent to candidate Colorado River cutthroat trout habitats in the East Douglas Creek drainage. These objectives were based on our judgement of the area's vegetation and channel development potential, existing environmental constraints as well as the imminent lag time required for adequate information gathering, public coordination and incremental implementation of actions. This should not be interpreted as discounting similar levels of improvement to remaining fisheries concurrently or in the future.

At this point in time, mineral development does not substantially affect any of the Resource Area's fisheries. Through plan life, however, we feel it imminent that fisheries habitats will be increasingly involved or influenced in the course of natural gas or oil development. The proposed Controlled Surface Use provision and related riparian management objectives are intended to minimize necessary short term disruption of important fishery conditions and ensure that long term improving trends are sustained commensurate with fishery management objectives. We believe it a realistic assumption that oil shale development would ultimately take precedence over the maintenance of these specific fisheries habitats. Assuming the distribution of recoverable coal reserves is reasonably accurate, we feel it is unlikely that coal mining would ever impose impacts on this Resource Area's fisheries.

623. Comment: Fisheries. **Finally, much of the fisheries program as it involves livestock management appears to depend on the presence of allotment management plans. However, as we have pointed out above, few such allotment management plans have been completed and their completion does not appear to be a priority. In this context, things look grim for fisheries.**

Response: BLM intends on developing more site-specific planning documents (e.g. ACEC and Integrated Activity Plans) as a means of identifying and implementing the means to achieve fisheries-related objectives. BLM anticipates that the area warranting highest priority for subsequent IAP effort involves the Douglas GRA, which in Alternative D, encompasses the East Douglas ACEC and accounts for about 50% of the stream fisheries and 90% of the Colorado River cutthroat trout fisheries available in the Resource Area. Allotment Management Plans would continue to be the primary planning medium used in areas that are lower in additional planning priority. Fisheries, riparian and aquatic habitat concerns would be a primary determinant in prioritizing AMP development or revision.

624. Comment: Wildlife. **The woodlands harvest should be reduced to protect raptor habitat. Protection of grouse leks is important; oil shale and coal mining should be restricted in grouse habitat.**

Response: BLM lands now play a very minor role in effectively contributing to the management of sage grouse populations in Piceance Basin. Realistically, if a shale oil industry were to develop in Piceance Basin, long term degradation or loss of grouse habitats would be subject to negotiated off-site compensation developed through an EIS process. This scenario was not discussed in any detail because of the assumption that a large-scale shale oil industry is not foreseeable through Plan life. Similarly, a majority of grouse habitats associated with foreseeable surface method coal development occurs on privately owned surface in the Danforth Hills. Mitigation and/or compensation oriented toward grouse habitats would be subject to negotiated agreements between and among the coal industry, private landowners, BLM, and the Colorado Division of Wildlife.

625. Comment: Wildlife. **On page 2-29, table 2-22, are these our most current big game figures?**

Response: These figures were derived from CDOW information current at the time (March 1992). Because variations in populations and/or desired objectives occur through time and by area, analysis using these figures is considered reasonably accurate. Although most current population/objective information would be used in analysis during more site-specific planning efforts (i.e. IAPs), we will update this analysis using most current CDOW figures. These numbers were derived from the long-term population objectives current in 1991. In the case of summer range, an overall summer range animal density was calculated across the entire DAU. This figure was prorated to BLM surface within the Resource Area's delineated summer ranges. Similarly, and with assistance from the Northwest Regional Office staff, the DAU winter population was broken down into GMU components. Animal use on BLM surface under normal winter and severe winter conditions were calculated using WRIS definitions for Winter Concentration Areas and Severe Winter range. The higher of the two values was used for analysis. These figures and accompanying analyses in the text have been modified to reflect most current DAU long-term population objectives (i.e. 1995).

626. Comment: Wildlife. **No scientific evidence is cited to support any contention that surface occupancy within 10,000 feet of a breeding area will have any deleterious effect on the grouse's mating rituals.**

Response: The no surface occupancy stipulation provides a 1/4-mile (1320 feet) radius buffer around active strutting grounds where breeding occurs. Permitted surface use that occurs outside the breeding period and that would have no residual deleterious effects on subsequent breeding activity would warrant stipulation modification or exception. The buffer to which you refer pertains to suitable nesting habitat within 2 miles of a lek--the area which generally circumscribed 90% of more of nesting female grouse associated with a particular lek.

The stipulation referred to is a timing limitation imposed once 10% of suitable nesting habitat within 2 miles of a lek is adversely influenced during the nesting season. It is generally established that the majority of sage grouse hens nest within 2 miles of the breeding lek. Once this threshold were exceeded, further BLM-permitted activities that would disrupt nesting activities would be deferred during the time which an average 75% of clutches hatch. The full extent of current oil and gas lease provisions allow only 6-7% of nesting attempts to progress through hatch.

627. Comment: Wildlife, Motorized Travel. **It is our information that either in spite of or because of the use of the area for motorized recreation, that the populations of the grouse are increasing at unanticipated rates. Therefore, there would appear to be no reason to limit motorized recreation in order to apply "enhancements" which apparently did not work prior to the time this recreation existed in the area.**

Response: We cannot respond to or substantiate the information to which this commentor refers. Sage grouse, as a featured species for management in this Resource Management Plan, is suffering from widespread population decline--a situation reflected in this Resource Area's grouse populations. Concern has elevated to the point that the Colorado Division of Wildlife has sharply reduced bag and possession limits for sage grouse throughout northwest Colorado this year. BLM is aware of discussions by wildlife professionals throughout occupied sage grouse range concerning the candidacy of sage grouse for Endangered Species Act listing.

628. Comment: Wildlife. **The plan is not clear in showing that young grouse and other upland birds need large amounts of short green grass in order to grow properly through the summer. So we need small acreage of big sagebrush for winter cover. Large acreage of other species of sage for winter feed and large acreage of grass kept short by grazing animals for the benefit of grouse, etc.**

Response: These beliefs concerning sage grouse habitat requirements are not consistent with biological and habitat relationships that have been repeatedly reaffirmed by wildlife professionals over the last 45 years. First and foremost, sage grouse are intimately dependent on the Artemesia sagebrushes for nesting, brooding, and winter cover, as well as a dietary staple from mid-fall through late spring. Sagebrush requirements in this Resource Area are most commonly met by Artemesia tridentata wyomingensis (Wyoming big sagebrush) and Artemesia tridentata vaseyana (mountain big sagebrush). The decline in, and localized extirpation of, continental sage grouse populations closely follows historic and ongoing sagebrush conversion in the western United States. Forbs gain prominence in the adult diet from May through September. Half to three-quarters of the diets of chicks, too, are comprised of forbs. Except for incidental ingestion, grouse do not eat grass.

Optimal nest habitat requires relatively large tracts of sagebrush with a conformation that provides effective horizontal and vertical concealment (i.e. up to 40% canopy cover at up to 30 inch height). Nest success is markedly enhanced (nearly tripled) at sagebrush canopies greater than 20%. Understory herbaceous components, including grasses, complements horizontal nest concealment and improves microclimatic (e.g. temperature, humidity, wind) conditions at the nest site. Herbaceous understories with an effective cover height of 4 to 8 inches has been proposed as optimum, or alternately, that 50% (by weight) of annual herbaceous production be retained through mid-September. Heavy grazing use not only can reduce the availability of forbs as grouse forage, but generally prompts movement of broods to light or moderately utilized ranges. As forbs desiccate within nesting habitats, there is usually a pronounced shift to either higher elevation mountain meadows or irrigated agricultural lands where succulent forbs remain available. Lesser sagebrush cover (15-20%) is favored at this time, since chicks are less prone to predation and brush canopies do not markedly suppress understory expression. The commentor's opinions may be based on observations during this later brood period--where adjacent cover is adequate, riparian sites and more heavily used meadows at higher elevations often support a dense forb component which are sought as forage. In addition, we question whether the photo the commentor graciously included represents a contrast between black and big sagebrush, rather, it appears that both are different subspecies of big sagebrush (Artemesia tridentata), the heavily browsed plants being A. t. wyomingensis (Wyoming big sagebrush--an important big game forage) and the "wolfy" unbrowsed inclusions, A. t. tridentata (basin big sagebrush--rarely utilized by big game in this area).

629. Comment: Wildlife. **Our recommendation for improving grouse nest success and chick survival is to increase the grass-forb component of sagebrush rangeland and retain 50-60% of production as residual cover. Obviously, long-term retention and replacement of sagebrush rangelands are also vital. The primary sage grouse habitat in the White River R.A. is Blue Mountain.**

Response: Concerns addressed in this comment closely parallel issues prompting sage grouse habitat management objectives and land-use provisions established in the Proposed Management Plan.

630. Comment: Wildlife. **The text on p. 3-28 indicates that sage grouse winter on the Yampa Bench in Dinosaur National Monument. Table 3-6 should be amended to depict these areas.**

Response: BLM relied solely on Colorado Division of Wildlife's WRIS database most current at the time for impact analyses. Although minor changes have, and will continue to be made to range delineation and seasonal use designations since that time, we do not feel it would add substantially to impact and resource evaluations. BLM will continue to coordinate with CDOW during scheduled mapping updates to refine, where necessary, WRIS mapping.

631. Comment: Wildlife. **On page 2-107, Table 2-70, you discuss 200 acre burns for grouse nesting. Where did you derive this number, and is it consistent with grouse research?**

Response: The 200-acre wildfire suppress on threshold was a judgement call and not based on any known research findings. The threshold value is meant to minimize the incidence of large-scale wildfire events that would adversely influence the short-term availability of suitable sagebrush habitats for grouse on Blue Mountain. Because of the continuity of sagebrush fuels in this area, we feel there is a relatively strong propensity for extensive wildfires that would drastically modify a large proportion of suitable grouse habitats under conditions of low fuel moisture and strong winds. In the interest of maintaining a measure of stability in this insular grouse population (that stands as a popular sport-hunting area), we felt that by suppressing, where possible, wildfire events that have potential to exceed 200 acres, we could limit the potential for large unplanned fire events. This would increase BLM's reliance on implementing a focused prescribed fire program, but BLM considers this the preferable means of balancing short term habitat requirements of grouse (i.e. reservation of suitable habitat) with the recognized role of fire in maintaining the long term integrity of grouse habitats. Wildfire starts that appear constrained by natural barriers or ambient weather conditions to a potential maximum acreage of 200 acres would be monitored only.

632. Comment: Wildlife. **Also, the grouse habitat portion seems to be one of the more critical plans (considering the status of the grouse), yet there are no inferences to ever changing cattle numbers. It discusses vegetative treatments, alternatives etc. but does not discuss numbers.**

Response: Licensed livestock use (i.e. AUM preference) has remained static in the Blue Mountain area for the last 5 to 10 years. Although adjustments in livestock numbers in any given pasture or during a particular time of year may occur, licensed forage use for the allotment (as measured in animal-unit-months) may not be exceeded. This flexibility is necessary from the operator's and BLM's perspective in order to adjust use commensurate with prevailing conditions (i.e. weather, big game use) for purposes of maintaining or improving plant health and/or composition. Modifications to season or intensity of use and turn out dates can be instituted where current grazing use practices are having a deleterious effect on associated resources, such as sage grouse nest or brood habitat. The options available for grazing use are, of course, dependent on the potential capacity of the allotment. When important resource issues are at stake, it becomes increasingly imperative to make the most efficient use of the allotment's capabilities—a goal often best achieved through vegetation treatments. Vegetation treatment alternatives are necessarily generalized on a plan of this scope. Allotment specific inventory and monitoring of plant community conditions would be analyzed to determine the distribution, extent, and methods of treatment necessary to best meet grazing, soil, water, plant community, and wildlife management objectives.

633. Comment: Wildlife. **On page 2-58, you discuss "animal redistribution or reduction techniques, etc." to obtain the goals. How is BLM planning to accomplish this?**

Response: Animal redistribution applies to both livestock and big game. More favorable forage use distribution can be achieved in a variety of ways, including modifying or supplementing salt placement and water availability, vegetation treatment to modify forage or cover distribution or availability, modifying livestock pasture use or movement patterns through administrative means, fencing or increased emphasis on herding. Animal reduction would be most appropriately applied to big game. If monitoring indicates that plant community conditions (e.g. native plant composition and vigor) are declining in face of licensed livestock use and, for instance, an expanded elk population, and other options to enhance forage availability or production were exhausted, BLM would ask for CDOW's cooperation in adjusting big game population objectives commensurate with the land's sustained capacity.

634. Comment: Wildlife. **Wildlife Habitat enhancement should not be at the cost of existing livestock AUMs. There would not be quantity or quality of wildlife today if not for the livestock industry. Predators, public access, weather, and highways are the cause of the decline in the deer herds not lack of forage.**

Response: Livestock AUM reductions are not proposed as an option to achieve wildlife habitat management objectives. The main thrust of big game habitat enhancement involves improving the design of future vegetation treatments to enhance the distribution of big game cover and forage commensurate with the need for livestock forage development (as well as plant community and soil-related objectives). In response to your opinion that forage is not responsible for influencing big game populations, the absolute quantity of vegetative forage is not at issue. We believe that, particularly in the case of deer, certain forms and types of forage best suited for satisfying an animal's physiological needs are, for various reasons, limited in availability or quantity (for example, see draft pages 3-23 and 24), and that vegetation management is an important element in realizing populations with greater intrinsic productivity and recruitment. We agree that environmental and cultural influences, especially weather, can and do dramatically influence deer populations, but feel there is ample opportunity to apply vegetation management techniques to enhance the availability, quantity, or quality of forages important for the production and development of fawns (i.e. during lactation, gestation), improving animal condition prior to the winter season (i.e. improving forage quality and efficiency of acquisition in fall) and reducing winter energy deficits by prolonging availability of nutritive late winter forage supplies.

635. Comment: Wildlife, Minerals. **NSO-11 through NSO-13 address sage grouse leks. NSO-12 and NSO-13 contain a provision that surface occupancy will not be allowed within a quarter mile of identified lek sites. What is the situation if leks are established within a quarter of a mile of existing operations? If an operator desires to conduct operations, will the proposal be restricted by this quarter of a mile setback? A similarly concern exists with**

TL-16 that would limit a 10% threshold of disturbance within two miles of a sage grouse lek. Again, with the same concern mentioned above, will operators be bound to this requirement in existing fields? If so, this could preclude additional development. A statement should be included that preexisting disturbance prior to the establishment of a lek will not be subject to this requirement.

Response: The quarter-mile NSO around sage grouse leks is designed to account for any anticipated form of permitted surface use, but the way in which this stipulation is implemented depends upon specific project details that cannot be analyzed at this planning level. The exception and modification provisions incorporated with NSO-13, in particular, is designed to accommodate not only instances where sage grouse establish a new lek within 0.25 mile of existing facilities (i.e. obviously a case where the activity does not impair site utility), but new facility construction that would not, or could be conditioned (e.g. facility re-siting, alternate or restricted access, timing limitations) so as to not interfere with this sage grouse function.

Concerning TL-16, in the event existing fields did involve suitable sage grouse nesting habitat, disruptive preexisting surface activities would be weighed against new operations involving additional suitable habitat. BLM feels it would be inconsistent with the intent of the stipulation to discount current activities that adversely affect nesting functions. It must be understood that this stipulation defers, and does not preclude, additional surface use activities, and the provision would not apply to the involvement of inappropriate or unsuitable habitats within the 2-mile radius. This stipulation was designed to be self-regulating, that is, where suitable nesting habitat is scarce, further involvement of remaining suitable habitat would more quickly prompt imposition of timing limitations. On the other hand, where suitable nesting habitat is abundant, considerable development could occur before, or if, timing limitations were imposed. Note, too, the exception and modification language within this stipulation avails opportunities to condition activities consistent with maintenance of sage grouse nesting activities and allows negotiated compensation in instances of unavoidable involvement.

636. Comment: Wildlife. **The plan for Big Game Habitat Management has been somewhat lacking in past documents. However, upon evaluating the Draft RMP, it is presented as a grandiose plan to be accomplished at all costs and at the expense of other resource values which are primary to basic human needs. The RMP provides for Integrated Activity Plans, but this big game habitat management plan appears to override and be an impediment to any attempt at integrating all of the uses under a spirit of harmony and cooperation. Certainly, it can be a mandate, but is that a good management practice? We support a healthy big game herd, but this habitat plan makes the herds appear to be endangered species.**

Response: BLM recognizes that the big game management portion of this plan is involved. The big game habitat prescriptions and vegetation treatment guidelines are intended not only to identify those habitat features that are most important to consider during management analysis, but help document and standardize the procedures this office has used over the past 10 years to integrate big game concerns with that of livestock, woodland, watershed, fire, plant community, and other wildlife management objectives and values.

Wildlife-related objectives and prescriptions are fully intended to be integrated with the management of other resources in a multiple use context. They definitely are not meant to be as overriding commitments or impediments to successful accomplishment of other resource objectives. BLM recognizes that flexibility is key in balancing resources and values in various management situations and landscape patterns, and these guidelines would do nothing towards mandating a site specific policy. We are very aware that no absolutes exist--big game management would continue to be adjusted to fit localized conditions, land use patterns, or the political constraints imposed by law or policy. In the event wildlife objectives cannot be reconciled with coincident values or interfere with achieving other resource objectives, site-specific adjustment will be necessary. If any wildlife objectives prove to be consistently unworkable, they will be modified or adjusted as necessary to better achieve or more reasonably balance multiple resource objectives. The professional ability of the authors of the document responsible for evaluating all resource objectives with respect to their resource would have identified any unworkable objectives associated with wildlife. For example, range and forestry specialists would have been quick to point out impediments or obstacles these guidelines pose in properly implementing program-specific objectives.

In one sense, these guidelines are intended to help economize the use of dwindling BLM budgets. With predefined objectives and advance identification of important habitat features or components, projects can be more easily designed and prioritized to achieve multiple resource objectives with the least expenditures of time and money. All things being equal, it is decidedly inefficient to implement, for example, a livestock forage enhancement project which detracts from big game habitat suitability, when the project could be designed to simultaneously achieve livestock forage objectives while maintaining or improving the long-term capacity of big game habitat. In the worst case, projects conducted without regard to big game objectives may necessitate further work to recover values foregone, with no net benefit in habitat capacity. We believe the management approach incorporated within the Proposed Management Plan, as applied to all potentially affected resources, embodies a true "spirit of cooperation".

637. Comment: Grazing Management. **I believe we need to return to pre-1965 grazing management techniques, not continue with present management. Through proven management, we will be able to attain pre-1965 mule deer population, pre-1965 livestock population, accommodate ever increasing elk numbers, and possibly live with present numbers of large predatory mammals (i.e. lion, bear, coyote). This type of management will also provide food and shelter for rodents, rabbits, grouse, etc., thereby increasing raptors and small mammalian predators (i.e. bobcat fox) and reduce soil loss and salinity, while improving riparian areas and fisheries.**

Response: Because the commentor did not specify those "pre-1965" grazing management techniques that offer the listed advantages, we are not able to respond to this comment. However, it is generally accepted that early grazing practices were primarily responsible for deteriorated range conditions throughout the western states and precipitated enactment of the Taylor Grazing Act. Alternately, we believe improved grazing management over the past 20 years deserves recognition as being principally responsible for the current and considerably improved condition of this Resource Area's rangelands. We understand that grazing methods and practices on public lands can and should be improved upon to ensure the long-term viability of livestock operations and native flora and fauna. The identification and prioritization of such issues will be paramount during site-specific planning efforts (e.g. Integrated Activity Plan) conducted subsequent to this more generalized Resource Management Plan.

638. Comment: Wildlife. **Based upon the limited experience of Cathedral Ranch, LLC, the management of big game requires fewer roads and more fire. In remote canyon pockets we have seen startling results from small fires a year or so after they were contained. Water seeps and forage improve and the game take immediate advantage. We support all limitations on motorized travel and believe the program of immediate response to fire should be carefully evaluated.**

Response: We have taken an initial step in better recognizing and accommodating fire's ecologic role by identifying a 639,574-acre Prescribed Natural Fire (map 3-14). We hope to expand this concept to additional areas once more specific evaluation of issues and identification of resource objectives is conducted through Integrated Activity Plans prepared subsequent to this RMP.

639. Comment: Minerals. **Proposed stipulation TL-29 would prohibit drilling activities during critical summer months if 10 percent of the habitat within an individual game management unit were affected directly or indirectly. MEC questions whether any lessee will be willing to offer to sign a lease with such terms attached unless the extent of the management unit and terms of the 10 percent limitation on "development activity" are clearly defined and strictly limited. A lessee needs to have the ability to determine whether he will be allowed to develop at least up to the limits otherwise applicable under state regulations. (Note the Colorado Oil and Gas Conservation Commission has adopted rules providing for 320 acre spacing for the Park Mountain Field). The proposed stipulation does not provide that clarity.**

Response: Established oil and gas fields are coextensive with 23% of critical deer summer range and 10% of critical elk summer range in the Douglas GRA. In the RMP's impact analysis, and predicated on 80-acre spacing, it is calculated that oil and gas development in established fields alone would be capable of reducing the utility of Game Management Unit 21's critical summer ranges by 10-15% for deer and up to 5% for elk (primarily road/access related impacts, page 4-62 of draft). Elk and deer production activities are widely dispersed across this Resource Area's summer range extent--a situation that defies the identification and mapping of discrete "production areas". Current timing limitation (TL) stipulations directed at birthing and postpartum functions of deer and elk are of such limited scope as to be meaningless. Present production-area TL stipulations apply to 1440 acres, or less than 1% of the critical summer ranges available in the Douglas GRA. The proposed critical summer habitat stipulation provides a vehicle for substantive consideration of the production-oriented activities of big game in this Resource Area, and as such, does represent an expansion of BLM's TL stipulations (i.e. applicable to about 19% of Resource Area's federal estate). Note that BLM has refined the summer range stipulation's applicability by waiving the stipulation for activities below 2250 meters (about 7400 feet). This provision reduces lands subject to the stipulation by about 67,000 acres and is applicable to the lower Evacuation Creek and Rabbit Mountain/Park Mountain country. The stipulation is part of an overall strategy to ensure that the full spectrum of public land use does not significantly degrade big game habitat utility, now or in the future. This stipulation, applicable to all permitted uses, is counterpart to the road-density objectives which are oriented more toward unpermitted land use activities (e.g. recreation).

In practice, and on average, unconditioned oil an gas development at well densities of between 2 and 4 per section would be accommodated prior to TL activation. Generally, active leases underlying critical summer range habitat possess 160-acre (shallower Castlegate or Mancos formation wells) to 320 or 640-acre spacing (deeper Dakota/ Niobrara formations) rules as established by the Colorado Oil and Gas Conservation Commission from 1976 through 1983. It would be inconsistent with BLM policy to contradict the terms and conditions of an existing lease or interfere with the efficient and orderly recovery of oil and gas reserves. To the contrary, this stipulation allows considerable unfettered development prior to TL imposition, latitude to develop wells where impacts to summer range utility are unavoidable (see stipulation's exceptions/modifications on page B-29 of draft), and provides the opportunity to permanently avoid exceeding the TL threshold. Furthermore, where resource conflicts occur, the Area Manager has the responsibility and authority to balance or reapportion big game values against other resource concerns (e.g. soil damage that may attend a late fall or winter operation).

From the wildlife perspective, this stipulation offers an incentive to incorporate reasonable measures that can minimize, offset, or completely avoid incremental deterioration of summer range utility without imposing undue financial burdens on the operator (e.g. production phase access restrictions, efficient field access design, avoiding facility siting in areas or situations that contribute more to, or are more influential on, summer range utility). We cannot envision a circumstance where every reasonable alternative or option to reduce cumulative impacts were exhausted such that this stipulation would prevent the drilling of any individual well. Since activation of the TL is dependent on prevailing land use effects, both permitted and unpermitted, the threshold tolerance would be expected to fluctuate unpredictably over a 10+-year oil and gas lease period. We believe it would undermine effective and equitable implementation of the stipulation to rigidly define the terms of TL imposition at lease issuance. Establishing inflexible, long-standing lease commitments would tend to confer privilege to earlier leases (i.e. impose more severely on more recently acquired leases) and could effectively subordinate other legitimate land uses by making disproportionately heavy demands on those users to counteract cumulative deterioration of big game habitat utility. Binding stipulation terms would also tend to stifle creative and cooperative problem-solving and may preclude potential opportunities for mutually advantageous solutions. Although we understand that consideration of other land use activities is not of paramount concern to a lessee, the BLM is obligated to manage Public Lands under multiple use principles.

640. Comment: Wildlife. **The District like many other area organizations believes that the impetus of this Plan was the listing of several new fauna species as being "Threatened and Endangered", the designation of "Critical Habitat" for the previously listed Colorado squawfish, humpback and boneytail chubs, and razorback sucker by the U.S. Fish and Wildlife Service, and the resultant required Section 7 consultation under the Endangered Species Act. Congress has failed to re-authorize this act for several years now, and no one knows what the re-authorized act will look like. We feel that given the fact that so much of this Plan revolves around Endangered Species issues and concerns, that it would be unwise for the BLM to finalize this Plan at this time without first knowing what this re-authorized act will look like. We simply do not want to see the BLM have to redo this Plan in a year or so to meet the requirements of the re-authorized act.**

Response: Preparation of this document was not driven by endangered species concerns, although it certainly is an integral issue. We recognize that land management policy and regulations change with a certain degree of regularity, but we do not feel it is appropriate to delay RMP

development in anticipation of such change. Those land management decisions and stipulations which pertain to special status species are unlikely to require alteration or recision regardless of the Endangered Species Act's eventual form. BLM anticipates that these species and their habitats will continue to warrant special management emphasis in order to successfully integrate such values with that of other multiple-use values and activities.

641. Comment: Fisheries. **We request BLM to address the effects of designation of the White River as critical habitat for Colorado Squawfish, humpback chub, razorback sucker, and bonytail chub. I find no mention of these species in the draft plan, yet the squawfish and razorback sucker have been found in the White. See USDI Fish & Wildlife Service, Recovery Implementation Plan for Endangered Fish Species in the Upper Colorado River Basin at 16-17 (9/8/94). We also request BLM to determine how to protect the Colorado cutthroat in its waters from whirling disease.**

Response: Impacts associated with the recent designation of the lower White River in Colorado as critical habitat for squawfish were not elaborated on since application of riparian management objectives pertinent to the White River would effectively prevent federal actions from adversely influencing associated habitat. It should be noted that the Colorado squawfish is the only listed fish species documented as inhabiting the White River in Colorado. Only 1 adult and 1 hybrid razorback sucker have been collected from the White River in Utah since the late 1970's. Discounting rare and incidental use of the lower White River (river-mile 0 to 18) near its confluence with the Green (Colorado-Utah border at river-mile 71.8), current information suggests that the razorback sucker is primarily confined to the Yampa and Green Rivers, including the mouths and lower reaches of major tributaries. Although the lower 18 miles of the White River in Utah has been designated critical habitat for razorback sucker, the Recovery Implementation Plan to which the commentor refers contains no management objectives for razorback sucker in Colorado's portion of the White River.

Although fishery introductions are primarily the responsibility of the Colorado Division of Wildlife, the BLM recently provided recommendations to the CDOW concerning those public waters that should be identified as inviolate to fish stocking as a potential vector of whirling disease. The State has adopted measures that prevent the release of diseased fish into waters occupied by Colorado River cutthroat trout.

642. Comment: Motorized Travel. **Trail management practices make any need for restriction of motorized recreation based upon fisheries needs to be nil. We are certainly disappointed in the wording which would apply such restrictions to all floodplains, whatever their designation (annual, 50 year, 100 year etc.). The force of water alone could nullify any attempts at mitigation on many of these areas. This section should not be made applicable to motorized recreation.**

Response: It is BLM's intention to minimize random and destructive vehicle use in riparian/aquatic habitats and confine vehicle traffic to designated roads and trails where cooperative maintenance programs, as suggested by this commentor, could be used to reduce or eliminate localized instances where roads are contributing unnecessarily to slope, bank, and/or channel instability. We do not feel that relegating ourselves to after-the-fact repair or mitigation of destructive incidents is an efficient or responsible means of managing public stream resources. We agree that a vigilant trail maintenance program would be a viable means for protecting fisheries and riparian/wetland resources from unnecessary road-induced influences. However, successful implementation of a trail management program implies that legitimate and desirable access routes have been identified, design features developed, and maintenance responsibilities assigned for a particular site. This level of planning and cooperative participation would be addressed more appropriately during site-specific planning conducted subsequent to this RMP.

643. Comment: Fisheries. **The EIS states impacts on fisheries from oil shale development will result in the permanent loss or severe deterioration of nearly 50% of BLM stream fisheries, including 35% of Colorado River cutthroat trout fisheries. This is a severe impact to a limited resource and should not be allowed to occur. Table 2-43 (page 2-69) outlines actions and criteria for promoting improvement and recovery of current, historic, and potential stream fisheries. Alternative B, C, and D propose various measures and actions to be taken on streams greater than 1/4 mile in length and possessing "reasonable" public access. We believe that length and access criteria should not necessarily apply to streams with Colorado River cutthroat trout.**

Response: BLM felt compelled to include this assessment of potential (but unlikely over plan life) impacts associated with oil shale development because these values had been largely overlooked in previous documents. Although it may appear that BLM is adopting a negligent attitude in this regard, we do not feel it is reasonable to expect that the fisheries resources of the Piceance and Douglas Creek basins would be principals in hindering large-scale oil shale mining in the event viable extraction technologies are developed. Because primary fisheries involvement would entail surface occupation of, and interrupted ground water contributions to these systems, BLM feels it unlikely that any flow compensation or corridor reservation strategy would effectively preserve system integrity.

Management objectives for Colorado River cutthroat trout were developed separately from general stream fisheries objectives. The 0.25 mile/public access criteria established for general fisheries are intended to establish management priority. It would be impractical to apply stream improvement practices to isolated and functionally insignificant BLM stream reaches (e.g. BLM corners in predominantly private bottomlands such as lower Black Sulphur Creek in Piceance Basin), where such management would have no reasonable chance of influencing or overcoming overall stream conditions. Improvements applied in such situations would be even less appropriate where land-locked. No currently occupied cutthroat waters fall into this category.

644. Comment: Fisheries. **On the fisheries, which probably ties into the riparian areas pretty much, I think it's important to proceed with the Alternative C, and I would certainly support that.**

Response: The Proposed Management Plan's fisheries management direction is identical to that of Alternative C, with the single exception of in-stream flow reservation. The Proposed Management Plan proposes to remain within the confines of current water law; Alternative C does not. Expanding beneficial use guidelines is not an issue that BLM cares to broach at this time or through this document.

645. Comment: Wildlife. **More positive attention is given to wildlife and plant resources than an oil and gas industry that provides thousands of jobs and support personnel.**

Response: The attention, or volume of text, pertaining to oil and gas management belies the industry's true status in this Resource Area. By and through the act of mineral leasing the continued development and recovery of oil and gas reserves in an efficient and orderly manner is assured, and is not an issue at stake. The challenge in multiple-use management, and thereby the emphasis, lies in evaluating the needs of, and demands for, a vast array of animals, plants, and their associated habitats and developing an effective management strategy that coordinates and apportions renewable and nonrenewable resource use in a manner which avoids serious and/or permanent impairment of environmental quality or the land's productivity.

646. Comment: Wildlife. **Have stipulations been developed to manage and control wildlife numbers?**

Response: Colorado Division of Wildlife assumes sole authority for the management and control of wildlife numbers on BLM lands within the State.

647. Comment: Wildlife. **Bald eagles are no longer threatened or in danger of extinction, a move has been made to remove them from the list.**

Response: It is correct that bald eagles have recently been down-listed from endangered status, but the eagle remains protected under the provisions of the Endangered Species Act as a threatened species.

648. Comment: Wildlife. **The discussion of Northern Goshawk, p. 3-36, might be amended to note that we have records of the species nesting in both aspen and pinyon-juniper in and near the Blue Mountain GRA.**

Response: An appropriate revision has been made to the text on page 3-36.

649. Comment: Wildlife. **TL-03 contains a requirement that no development activities are allowed within one-quarter mile of identified nest sites from March 1 to July 31 or until fledgling. This timing limitation does not allow for an exception, modification or waiver. Again, as with similar timing limitations stipulations, the exception criteria found in TL-04 should be included with this particular stipulation.**

Response: The stipulations in Alternative A's column (Appendix B) represent current management prescriptions and, by definition, any modification to an existing stipulation would necessarily appear in optional alternatives. The exception, modification, and waiver language found in the Alternative B column are consistent with Colorado BLM's 1991 Oil and Gas Environmental Impact Statement. Exception, modification, and waiver provisions are, in working applications, most clearly defined and flexible in Alternatives C and D and carried forward into the Proposed Management Plan.

650. Comment: Wildlife. **This stipulation increases the burden on the oil and gas lease owner from a 1/2 mile radius around nests (Alt A, TL-06) to a 1 mile radius around nests Alt D. No scientific research is cited for the necessity of a 1/2 mile radius, much less the necessity to increase protection to a full 1 mile radius which is even greater than the 1/2 mile radius accorded Bald Eagle nests.**

Response: Ferruginous hawks, as a species being considered for listing under the Endangered Species Act, warrant elevated levels of protection, not only as a means of preventing continued population decline and avoiding their gaining status as a listed threatened and endangered species, but because of their well documented intolerance of disruption during the nesting season. The 1-mile radius afforded this open-country raptor is consistent with available literature, although we have found that topographic relief and judicious timing can be used to reduce the buffer's radius at times. Regarding your view that these stipulations impose an unnecessary burden on oil and gas operators: we agree that timing limitations can delay initiation of drilling activities, but are unaware of any instance where they deterred drilling. Ferruginous hawk timing limitation buffers encompass about 4.1% of federal estate in the Resource Area. Since only a maximum one-third the nests are occupied in any given year, potential deferral of drilling activities may occur on up to 1.4% of the Area annually. Hawk nesting distribution is relatively confined and is currently coincident with an area that contains 13 producing or shut-in oil and gas wells.

651. Comment: Wildlife. **There is new information concerning peregrine falcons which should be include in the discussion on p. 3-33. Telemetry studies conducted by the Colorado Division of Wildlife in 1994 indicated that peregrines will often hunt more than 15 miles from their eyries. This, together with our observations, suggests that peregrines regularly hunt over areas of the Blue Mountain GRA. The Final RMP should be amended to note these likely hunting territories since the presence of peregrines in the area may influence land management decisions.**

Response: Although we are aware that peregrines are known to venture up to 18 miles from an eyrie during foraging forays, based on limited sightings south of the Monument we tentatively concluded that most hunting activity was confined to the river corridor. Although we do not have information sufficient to alter this view, we have made an appropriate revision to page 3-33 in response to the comment.

652. Comment: Wildlife. **BLM has presented no information that would justify proposed increases in restrictive stipulations. For example, in addition to proposed increases in NSO stipulations for potential T&E species, etc. BLM proposes to expand nesting areas by an additional 1/4 mile for eagles, grouse and other raptors and to extend the duration of timing restrictions by as much as 3 months for protection of raptors and wildlife (big game winter range). These revised stipulations should be returned to their original specifications.**

Response: Special status (e.g. threatened and endangered species) raptor nest NSO buffer radii proposed in Alternatives B, C, and D were expanded by 575 feet (one-ninth of a mile) from 745 feet (Alternative A) to 1320 feet. At the present time and with the exception of the ferruginous hawk, this expanded nest NSO would apply to 3 or 4 nest sites within the Resource Area. Although the current number of ferruginous hawk nests total about 84, these birds regularly construct multiple alternate nests in close proximity to one another, and the actual number of nest complexes affected by NSO stipulations is one-half to one-third this number. This hawk's nesting distribution is relatively confined and is currently coincident with an area that contains 13 producing or shut-in oil and gas wells (about 0.5 percent of this Resource Area's federal producing or shut-in wells). Similarly, standard raptor nest NSO buffer radii were increased by 288 feet (one-twentieth of a mile) from the current 372 feet to 660 feet. NSO protection afforded sage grouse leks was also expanded by one-ninth mile radius.

653. Comment: Wildlife. **Under the guise of wildlife, roads are proposed to be reduced in density to "--- slightly increase the effective utility of big game critical habitats." —It still does not compute with fewer animals. This area needs a great deal of analysis along with a cost/benefit of any planned actions.**

Response: The slight increase in effective habitat utility relates to the influence of current overall road densities versus the expected effects of implementing the proposed road density limitations. The primary intent of this objective is to stabilize the current road network on Public Lands in this Resource Area, and conversely, deter the continued expansion of road density and distribution. If these effects were to be measured against road densities after 10 to 20 years with no regulation, increases in effective habitat utility would be far more substantial.

The differences in big game populations is somewhat irrelevant, because population density would not influence animal distribution nor the proportion of available habitat influenced by road-related effects. With a smaller potential breeding component in the population, it becomes increasingly important for habitat character and utility to complement the herd's reproductive and recruitment potential in order to maintain or increase the availability of harvestable animals (and economic derivatives to the County).

654. Comment: Wildlife. **On page S-6, under Plant Communities, Alternative A, the statement regarding the increase in wildlife numbers is correct for elk, but we believe that deer numbers have decreased since 1981. It would be helpful if the document included a summary of the big game population figures used and the specific sources of the figures. For example, CDOW recently completed data analysis unit (DAU) plans for deer and elk in the White River area; it might be helpful if these were referenced. On page 2-57, fourth paragraph; if calculated big game forage use exceeds prescribed big game forage allocation under all alternatives, why wasn't this issue raised during our DAU planning process?**

Response: This summary text has been modified to better reflect the big game forage use situation. Table 2-22, which summarizes big game populations and forage use requirements by GRA, has also been updated with CDOW's most-current big game population objectives. BLM did address localized instances of excessive dual use in our comments to the DAU plan, however, our concerns were tempered with the understanding that considerable opportunity exists to satisfactorily remedy these instances through applied management. Gross AUM calculations presented in Table 2-22 indicate that increased forage use that would be attributable to CDOW's most current big game population objectives (i.e. about 1150 AUMs) represents about 0.5% of overall forage allocated to predominant grazing users within the Resource Area. The apparent discrepancy among calculated forage use, actual forage use, and prescribed allocations highlights one of the shortcomings of the allocation process. Based on present range condition (e.g. species composition, plant vigor) monitoring and professional judgement, widespread instances of excessive dual use is not apparent in this Resource Area. Some of the confusion stems from the allocation procedure adopted in the 1981 Grazing EIS. Big game were allocated all the forage necessary to sustain CDOW's then current big game population objectives, even though forage capacity may have been higher in particular areas. Much of the forage base that remained un-allocated occurred in areas deemed unsuitable for livestock (e.g. steeper slopes, timbered tracts, lands too distant from water).

655. Comment: Riparian. **Second, the riparian areas along the White River are extremely valuable for many birds such as gray catbirds, blue grosbeaks, northern orioles, and potentially for sandhill cranes and yellow-billed cuckoos. Most of these birds and others, use cottonwood willow stands such as those along the White River and would not be found elsewhere in the resource area. We encourage BLM to allow long-term vegetative growth of riparian communities on these areas and to limit impacts from other uses.**

Response: Although BLM has relatively little management authority along the White River, we recognize its extraordinary values. Throughout the document we have proposed various inter-related objectives that would encourage development of mature deciduous canopies, designate BLM lands within the White River corridor as an Area of Critical Environmental Concern with predominant riparian emphasis, and establish use, protection and reclamation standards.

656. Comment: General. **How can you in good faith, knowing that, even think of regulating the lands such as you proposed in this draft? Actually, I can answer my own question. At the Feb. 4 meeting, when you came to scare the hell out of the citizens of this town, one of your panel members, Ed Hollowed, said it all. He told us that the reason for cutting down on roads out here was to preserve the big game. He said that the roads drive the animals away, and that it was in our best interest to limit them.**

Response: We are sensitive to the fact that our land management decisions and objectives affect many people throughout the nation, and realize that on the regional scale, families and livelihoods are involved. We believe the preferred alternative represents a reasonable and proper multiple-use balance--providing for an array of product-oriented and recreation-based resource use (e.g. minerals, livestock, OHV, big game) and, coequally, managing federal resources in a manner that protects the long-term ecological, environmental and water resource values of public lands for future generation's use. It's important to realize that the land use decisions and resource objectives contained in the preferred alternative are, with few exceptions, very similar in form and function to the management we currently apply on federal lands. We feel much of the reaction generated by this document relates to a fundamental unfamiliarity with the BLM, it's programs, and the mechanics of natural resource management in a multiple-use context.

As a matter of clarification, we certainly did not intend to intimidate anyone at the Rangely public meeting, nor was it apparent. Also, it is unlikely that BLM employees would have used the simplistic phrases, "roads drive the animals away", or "the reason for cutting down on roads out here was to preserve the big game", as is stated. The commentor's interpretation does not properly portray BLM attempts to illustrate the effects of animal avoidance (i.e. the tendency of big game to separate themselves from sources of disturbance), the concomitant disuse of available cover and forage resources in proximity to that source (i.e. effective habitat loss), and the incremental and premature depletion of energy reserves that harassment elicits. The effects of avoidance response is particularly acute in elk, and is well illustrated by elk distribution relative to the refuge offered by Dinosaur National Monument in Game Management Unit 10, inordinately high concentrations of elk in the southeast corner of Piceance Basin where land ownership patterns complicate public access, and large scale influxes of elk to private ranches bordering the White River National Forest as archery activity begins.

It is a common error to extrapolate a limited set of information to characterize the whole. The personal observations of big game to which you refer appear limited to the resident herd of 70 or so pronghorn in Coal Oil Basin--a group of animals that have indeed become accustomed and habituated to Chevron's field operations. Pronghorn, which depend on advance visual detection and speed to elude predators, tend to adopt these characteristics readily in the absence of directed harassment. You will find that this behavior is not typical of pronghorn in the Wolf Creek and Red Wash basins, nor of deer and elk in general. It is interesting to note that Game Management Unit 21, south of Rangely, has recently acquired a totally limited big game hunting status during rifle season. BLM contends that excessive vehicular access on public lands tends to depress not only the land's capacity to sustain a given population of big game, but also it's capacity to satisfy and accommodate a given number of sport hunters--both effects having an important bearing on the economic stability of northwest Colorado. The commentor's opinion that roads and associated human activity have little or no detrimental influence on big game animals stands in stark contrast to an overwhelming body of scientific evidence to the contrary.

657. Comment: Wildlife. **When you encourage wildlife, you decrease vegetation that's available to the livestock that graze in that area. When you change designations and the deer and elk are not harvested. What will happen over a period of 5, 10, 15 years from now is the wildlife will enlarge in numbers and the range will deteriorate and not be able too sustain those wildlife numbers.**

Response: Big game management objectives are specifically designed to improve habitat utility, including the availability and distribution of big game forage and cover. These objectives are not intended to encourage herd growth beyond Colorado Division of Wildlife's (CDOW) long-term big game population objectives, rather they are designed to enhance herd productivity and resiliency (i.e. improved animal production, growth and survival) as a means of maintaining or increasing the availability and quality of harvestable animals at lower overall population levels. Overall big game forage requirements at CDOW's current population objectives exceed that which BLM allocated for big game in 1981 (Alternative A) by about 1.6%, which represents about one-half percent of the total forage base presently allocated to livestock, wild horses and big game. Under current rangeland conditions, we feel it is unlikely that increased forage use attributable to such big game populations would exceed 5% of the total allocated forage base on any individual GRA. Big game management objectives, strongly integrated with the livestock management program, would be implemented in a manner that complements proposed rangeland management and livestock forage objectives. As presented in the draft RMP, livestock forage allocations developed in the 1980 White River Resource Area Grazing Management Final Environmental Impact Statement would remain the same. Interfering with the achievement of CDOW's big game harvest goals would contradict many of BLM's resource management objectives (e.g. watershed condition, livestock and big game forage quality and availability). In fact, the impact analyses assume that big game harvest objectives will be routinely met as a means of maintaining desirable forage use levels. In the event road density restrictions hindered access necessary to achieve big game harvest objectives, BLM could readily modify access availability in cooperation with the CDOW.

658. Comment: Wildlife. **Page S-9 lists many actions to increase/ improve forage, habitat, water, etc. by significant percentage increases. However, the alternatives call for reduced populations of wildlife. This increase in forage, etc. does not equate to decreased wildlife populations. Why increase forage, etc. if there are less animals to support?**

Response: As depicted in Table 2-22, total big game forage requirements are elevated in Alternatives B, C, and D. Although the absolute number of animals is reduced in Alternatives C and D, the relative proportion of elk to deer is increased. However, the main premise behind habitat and forage enhancement is to reduce cumulative (livestock and big game) forage use intensity and moderate the influence of primary grazers on vegetation expression.

659. Comment: Wildlife. **We come to the conclusion that it has been written to favor the position of wildlife, completely overshadowing the multiple use users. If our analysis is even partially correct then another incongruity in the overall RMP 1995 effort surfaces. The favoring of wildlife is not benefitted by establishing people access and campground in Davis Gulch. If anything, the RMP effort merely adds to the already stressed Mule Deer herd by taking another sanctuary from them, albeit a small sanctuary yet a small piece of safe geography for them.**

Response: It was neither intended nor perceived wildlife resources command a position superior to any other resource value. The wildlife management section is admittedly involved, but reflects coverage of a wide variety of species with widely disparate habitat requirements and behavioral/physiological traits pertinent to land use management. We feel wildlife management strategies, as proposed in the preferred alternative, are commensurate with the complexity of and demand for land and resource use in the Resource Area, and are consistent with the wildlife values hosted by northwest Colorado. Wildlife-related objectives and prescriptions were fully intended to be integrated with other resource management issues and values in a multiple use context. In the event wildlife objectives cannot be reconciled with coincident values or interfere with achieving other resource objectives, site-specific adjustment will be necessary. If any wildlife objectives prove to be consistently unworkable, they will be modified or adjusted as necessary to better achieve or more reasonably balance multiple resource objectives.

In regards to the Davis Gulch issue, we feel the term "sanctuary" is rather loosely applied in this situation. To clarify, the 8700 contiguous BLM acres between Fourteenmile Creek, Piceance Creek and Highway 13 possess about 39 miles of roads and trails (equivalent to about 2.9 road miles per square mile). This road network is largely segregated from Rio Blanco County Road 5 (Piceance Creek road) by approximately 500 feet of private land. Because involved private landowners have the opportunity to control vehicular access to and on such public lands, these situations not only serve to limit vehicle and hunter use, but normally operate to retain big game densities in excess of that normally found on vehicle-accessible public lands during the hunting seasons. From the biological standpoint, the Deer/Davis/ Fourteenmile area serves primarily spring/fall transition and general winter range functions for deer, and to our knowledge, supports no prolonged or remarkable concentrations of big game that may warrant special consideration as a refuge.

We realize that developing or upgrading public access often, if not invariably, conflicts with one or more values associated with a specific tract of land. However, the trade-offs between harassment of big game on late fall-early winter ranges and achieving big game harvest objectives are firmly established and well accepted, and aptly

demonstrates land use and resource balance necessary for maintaining overall rangeland health and fulfilling some of BLM's most fundamental multiple use mandates, including recreational and local economic considerations. Further, and from the public perspective, enhancing public land availability and use on this parcel would moderate hunter density and the attendant effects of big game harassment and displacement elsewhere in the Resource Area. General public access provided by a non-motorized "dismount" point would not add to hunting season traffic that presently occurs on this parcel. We do not expect that single-point foot access, essentially centered on a 2-mile by 6-mile rectangle, would be sufficient to broadly alter animal distribution across this relatively large tract of land. Although not expressed, we can foresee legitimate concerns involving displacement of big game from Public Lands to surrounding private lands or site/access point domination by commercial enterprises.

660. Comment: Wildlife. **Have interactions between wildlife and domestic animals been considered in regard to improved forage production due to domestic animals utilizing the forage? Montana Fish, Wildlife and Parks have been a leader in demonstrating that livestock grazing can be used as a tool to enhance wildlife habitat. Have they or someone with similar experience been consulted?**

Response: We are aware of and understand the concepts of using domestic livestock grazing to enhance big game forage utility, quality and availability. Although this management practice is pertinent to big game forage issues addressed in the RMP, it's effective application is contingent on a number of allotment and operator-specific variables. The selection and application of specific management tools to achieve objectives detailed in the RMP are more appropriately addressed in subsequent plans that detail management prescriptions for more discrete parcels of land (e.g. Allotment Management Plan, or Integrated Activity Plan).

661. Comment: Motorized Travel. **Please review your materials relating to OHV recreation and big game animals. The literature *does not find much impact upon such game by motorized* recreational use, even in critical winter range. Contact the Eldorado National Forest for studies relating to mule deer, sound impact and soils impact. Insofar as this section would affect motorize recreation, it should be removed.**

Response: The effect of OHV use on big game is dependent on the intensity, frequency, and patterns of use. We acknowledge that OHV's effects on wildlife and other natural resources are primarily use-dependent. However, the overwhelming majority of literature (a sampling of which is available for inspection at the White River Resource Area office) supports the contention that OHV use, particularly when subject to no control, has a documented history of detrimental impacts to soil, vegetation and wildlife resources.

There are marked differences in the physical and biological environments of the study referenced by the commentor and this Resource Area. These differences must be considered when attempting to apply those study results to this area. There is a great disparity in winter (November through May) weather conditions. Average minimum daily temperature during this period is reported as 37°F in California versus 19°F here; the average maximum daily temperature is 60°F versus 48°F here. It can be inferred from the report that deer in that study area do not contend with persistent snow cover any time during the winter. This difference has important ramifications on an animal's energy management and the consequences of premature energy depletion during the winter. Higher ambient temperatures and lack of snow cover reduce the energy demands associated with the body temperature maintenance and movement through snow. The area also had better availability of preferred forages. Large differences in deer populations exist between the two areas. The California study area supports winter deer densities of about 20 deer per square mile, while winter deer densities throughout much of this resource area average between 40 and 50 deer per square mile. Several GMUs host late winter/early spring densities of 80 to 100 deer per square mile. As stated in this study, one of the reasons the authors considered recreational use of the study area of relatively minor consequences to local deer populations was low animal density and the relatively low incidence of human-deer encounters. Another point which limits comparison of the two areas is the reported response of the study area's deer to intentional disturbance. Several times in the paper it is alluded that the deer's measured response to disturbance was characteristic of unhunted populations. Although hunting occurred (i.e. 1 deer killed during 2-year study), these animals were apparently not pursued in the OHV area at levels sufficient to become sensitized to human presence. The study tested deer response to varying levels of OHV activity on a strictly defined travel route. Predictable sources of disturbance would allow relatively short distance moves to gain acceptable levels of security with little further chance of human encounters. It is interesting to note that this experiment was conducted with a trail/road density of 1.5 miles per square mile--the road density objective we have proposed for use on the most critical big game habitats available in the Resource Area.

It is our opinion that this study was fraught with weaknesses in design, execution, and analysis. Difficulties with the telemetry equipment made it impossible to define daily movements of individual deer or differentiate small scale movement patterns that may have been made in response to OHV activity. Equipment error and small sample sizes were repeatedly acknowledged to explain highly variable and conflicting data. Regardless, the study tends to confirm an animal avoidance response. Deer tended to remain about 100 yards from trails and 300+ yards from roads, and with the exception of 1 telemetered deer, core activity areas (areas where deer spent the majority of their time) tended not to incorporate the established OHV route. On average, their data suggests a trend toward reduced or more confined deer activity at higher levels of recreation use, reasonably implying that deer may have been increasingly relegated to cover types during recreational activity. The only clear point made by this study was that OHV activity did not force deer to vacate winter home ranges. This conclusion is consistent with abundant evidence showing that deer display remarkably strong fidelity to traditional seasonal ranges. The final conclusion of the study that "Low and moderate levels of OHV use should not have significant deleterious effects on deer in the Rock Creek OHV area if current use patterns are maintained" must be viewed in light of the following: 1. use was confined primarily to weekends, 2. OHV use was prohibited on the 22,000 acre area for 25 to 40% of the OHV-use period (October-May), which largely coincides with seasonal deer use (November-May), 3. all OHV use in the OHV area was restricted to designated roads and trails. Other conclusions and recommendations of the report that, Energy expenditures associated with avoidance and harassment could be significant to pregnant does, and that high frequency/high intensity OHV use should be removed from critical winter range or other high quality deer habitats, are largely consistent with, and tend to support, BLM's analysis and recommended travel management prescriptions. Please refer also to responses to comment numbers 580 and 582.

662. Comment: Wildlife. **I seriously question the accuracy of the data as published. In my area, which I am very familiar with, the map shows that I have elk summer range with critical habitat. Actually in the summer there are very few elk in this area and it sure isn't critical habitat by any means. The elk are all east of what is depicted on the map, on higher ground. Just the opposite on the elk winter range map, it shows that my area is not winter habitat when in fact winter is when the elk are most numerous. The map depicting mule deer winter and summer habitat is not correct either.**

Response: Big game range delineations and definitions used in this document were derived solely from Colorado Division of Wildlife's mapping system. It must be understood that in any extensive mapping effort generalizations and localized anomalies will occur. Additionally, BLM chose to further simplify CDOW's mapping in order to gain text clarity. In this case, summer range is confined to the Citadel Plateau, extending south at higher elevations to the upper end of Colorow Mountain. Because of its scarcity, all ranges meeting summer range criteria in DAUE-6 are considered critical habitat by CDOW. Summer range is defined as that part of the home range that is not considered winter range, including what has traditionally been known as spring and fall ranges. Seasonal use areas are designated as critical habitat when losses to that activity area would adversely affect the species. With the exception of the isolated summer range parcel, all surrounding lands in Crooked Wash, Indian Valley, Strawberry Creek, and Colorow Mountain are considered winter range, which is defined as that part of the home range where 90 percent of the individuals are located from December 15 to April 30 during the average five winters of ten.

663. Comment: Wildlife. **This stipulation creates a burden on the oil and gas lease owner for protection for species of raptors which are not T/E and for which there is no scientific evidence that protection is necessary.**

Response: Timing limitations imposed for the protection of general raptor nest activities encompass about four percent of federal estate within the Resource Area, and are widely dispersed through the Area. Under the reasonable assumption that one-third the nests are occupied in any given year, potential deferral of drilling activity could occur on up to 1.3% of the Resource Area annually.

Proposed timing limitation buffers are dimensionally identical to those in current use, but the stipulation's modifications, exceptions and waivers, which have been refined in practice to avoid unnecessary restriction of drilling activity, are documented and better defined. Minor adjustments in pad location are often sufficient to avoid substantial nest site disruption (e.g. allowing for topographic/ vegetative screening to prevent line-of-sight communication with nest, or providing separation sufficient to reduce alarm or avoidance responses during less critical portions of nesting sequence) and preclude the need for imposing the entire timing limitation window. This strategy has worked well over the last 18 or more years and we have no evidence suggesting that this form of raptor nest protection constitutes an unnecessarily burdensome constraint in a multiple-use context. It is well established that disruptive activities in close proximity to nesting raptors may cause site abandonment, nest desertion, prolonged in attendance, or abrupt nest departure--all of which can lead to egg or chick mortality and the subsequent loss of annual recruitment.

Raptors, as a group, are normally relatively rare components of any given faunal assemblage. Their dominant position in community hierarchies as a top predator, low reproductive potential, and often very narrow preference for foraging and nesting habitats are relevant to many of it's species experiencing (or being susceptible to) precipitous population declines or chronic continent-wide population depression. Besides those species covered by federal law (5), all but 6 of the remaining and more common breeding raptors in the Resource Area are recognized as species of special concern by the Colorado Natural Heritage Program. BLM not only has an implicit responsibility to contribute to the conservation of species vulnerable to population decline, but must abide by any applicable State and federal laws. Provisions of the Migratory Bird Treaty Act and Colorado Revised Statutes expressly forbids the killing (by any means or manner) and harassment of all raptors (including unfledged young and eggs) that nest within the Resource Area.

664. Comment: Wildlife. **Item #12: Regulations pertaining to special status wildlife and other protected species should be addressed only in regard to public lands. There is a perception that the sections regarding special status wildlife and protected species is directed to also include management practices on private property.**

Response: All of BLM's land management objectives and decisions are meant to apply only to BLM surface estate; Appendix B stipulations are pertinent only to federal actions on BLM-administered lands. We agree that reference to these facts are sporadic in the Special Status Species sections and we will revise our text to avoid any further confusion.

665. Comment: T/E Plants. **Threatened and Endangered Plant Management Alternative C: This issue has raised objections from motorized vehicle users. However, there are not that many areas subject to threatened and endangered plant management. I can see an exception for off road vehicle use to haul out big game.**

Response: In response to public demand, BLM has proposed a provision allowing certain off-road vehicle use in order to retrieve legally acquired big game as defined by the Colorado Division of Wildlife (i.e. deer, elk, pronghorn, bear, mountain lion).

666. Comment: Wildlife. **Special status wildlife looks pretty good under Alternative C. I think it's important to pursue some of those proposals.**

Response: With one minor exception, the Proposed Management Plan is identical with respect to special status species management proposed in Alternative C. This exception applies to Colorado River cutthroat trout.

667. Comment: Wildlife. **The third proposed core area is in the northeast portion of the resource area. High concentrations of raptor habitat and potential Columbian sharp-tailed grouse habitat make this area a concern. The establishment of the Windy Gulch and Black Mountain WSAs and the Black's Gulch ACEC would form a core to which could eventually be added the area to the east currently being mined for coal. We recommend that coal development be reduced to a minimum in these areas.**

Response: The high proportion of split estate in the Danforth Hills Coal Study area strictly limits management options available to BLM. In that portion of Danforth Study Area suitable for surface

development, BLM administers less than about 30 percent of the surface, and little of that represents habitat suitable for sharp-tailed grouse (about 1000 acres in scattered parcels predominantly east of Highway 13). Although we understand the core area concept, the WSA's and ACEC to which this commentor refers would not contribute substantially to the integrity of habitats or viability of animal populations subject to surface coal development, as the two areas represent widely disparate communities (i.e. mountain shrub/aspen versus pinyon-juniper/sagebrush). In addition, the potential for the federal government to acquire interspersed private lands in this area is so remote as to be moot.

As a point of clarification, there is no current coal mine activity in the northeast corner of this Resource Area. Two small underground mines along Highway 13 were closed and many of the attached leases relinquished for economic reasons. Primarily because of economic constraints and the capability of existing area mines (in Craig area) to increase production to meet foreseeable demand, BLM feels it is unlikely that any new mine activity would occur in this Resource Area over the next 20 years.

668. Comment: Wildlife. **The Raptor, Grouse and Fisheries Habitat Management plans appear to be super restrictive to many of the other uses. If approved as presented they will become rigid, unalterable mandates that place undue hardship on other resources.**

Response: Management objectives proposed for grouse, raptor, and fisheries were designed to be implemented in a manner that would be widely compatible with, or complementary to, other resource objectives identified in Alternative D. Notable impacts or contradictions among land use objectives would have been identified in impact analyses found in Chapter IV. Proposed wildlife objectives and land use prescriptions outline important habitat-related features or components that are presently considered and addressed during interdisciplinary planning for vegetation treatments and/or manipulations, and largely detail and document thought processes that have accompanied resource analyses in this Resource Area for the past 5-10 years. There is no reason to believe that proposed habitat objectives would be any more rigid or unalterable than BLM's past land use decisions. To the contrary, the wildlife objectives are regularly qualified (e.g ..would to the extent possible, ..reduce to acceptable levels, ..where practicable, ..where compatible with other resources, ..where appropriate, ..where unavoidable or desirable) to convey the notion that flexibility is not only inescapable, but necessary when managing lands in a multiple-use context and under various management constraints imposed by law, regulation, policy or practicality.

669. Comment: Wildlife. **Map 3-3 depicts mule deer winter ranges. Based on over 20 years of data, we recommend that the area on the west end of the Yampa Bench presently classified as severe winter range might better be characterized as "severe winter range/critical habitat." Marking studies suggest that this particular area is the winter range for most of the mule deer which summer north of Moffat County Road 16.**

Response: This useful information would be best forwarded to the Colorado Division of Wildlife for use in updating their WRIS mapping effort. It would be inappropriate for BLM to revise WRIS information without the concurrence of the CDOW. Regardless of ultimate mapping revisions, BLM's management objective's and/or land use provisions would not extend to, nor affect lands administered by the National Park Service on the Yampa Bench.

670. Comment: Wildlife. **These losses (fawn crop) occurred not because of livestock grazing, not because of OHV use, rather the loss occurred because the DOW allowed the deer population to build up above the carrying capacity of the range. To restrict these areas and not harvest the wildlife and only control the livestock grazing; this will happen again. Wildlife has to be managed.**

Response: Heavy fawn mortality was experienced during the winter of 1983-84 because of extreme and prolonged cold and heavy snows. Relatively high levels of fawn mortality would have occurred in this situation regardless of the population's status with respect to the range's potential "carrying capacity". Although your opinion is based on an elementary big game management principle, it cannot be extrapolated to mean that a population sized commensurate with range capacity will be capable of withstanding severe environmental conditions without significant mortality in the first-year age class (at a minimum). Road density limitations are meant to help stabilize the expanding incursion of human activities on big game seasonal ranges, as a form of disturbance which aggravates and contributes to mortality through excessive and premature depletion of energy reserves and/or inefficient use of available forage and cover resources. Road density limitations would not be implemented in a manner that interferes with the achievement of Colorado Division of Wildlife's harvest objectives. Additionally, and considering the vagaries of animal distribution, hunter participation, weather, etc.. BLM believes that sport harvest strategies developed by the Colorado Division of Wildlife have demonstrated effective regulation of big game populations consistent with long-term population objectives. CDOW has also been responsive to local recreational and natural resource concerns in the adjustment or modification of sport strategies, and harvest and population objectives.

671. Comment: Wildlife. **Has the impact on wildlife numbers from the following factors been considered (predator numbers, public access, weather, etc.)? These factors need to be addressed. We feel that habitat improvement is often possible without adjusting livestock numbers. Consider the following management options; increase controlled burns, brush beating herbicide, water development, etc.**

Response: BLM agrees that wildlife habitat objectives can be largely achieved without reducing AUM preferences--apparent in our proposed retention of forage allocations developed in the 1980 Grazing EIS. The implementation of vegetation manipulations and construction of range facilities as tools for achieving various wildlife, livestock, plant community and watershed objectives is an integral component of this Plan. The desired extent and general distribution of vegetation treatments is detailed in Table 2-19, and water development objectives for wildlife are expressed on page 2-59 of the draft. Although weather undoubtedly subordinates most environmental and cultural effects on big game populations, both in immediacy and extent, the only management option available to BLM is to ensure that habitat conditions do not retard the inherent fertility of the species.

Similarly, the effects of predation are, from BLM's perspective, an environmental variable beyond our immediate authority or control. BLM's management role is generally limited to conditioning land uses as much as practical to complement effective use of big game's inherent predator defense strategies and interrupting consistent reinforcement of any particular prey search pattern employed by a predator. More specifically, this involves: 1) ensuring that suitable habitat conditions remain available on an extensive scale to encourage

wide dispersal of females with young and allow selection of habitats best suited to predator avoidance (i.e. prevent concentrated use of preferred habitats and necessitating increased use of suboptimal habitats where predators are increasingly successful), 2) managing grazing use in preferred habitats to provide ground cover of sufficient density and height to serve as effective hiding medium for young animals, and 3) minimizing disruptive land uses that tend to prolong separation of the dam and young.

672. Comment: Motorized Travel. **Please address what hunting seasons you are referring to when you allow people to leave trails to retrieve game. Are we talking only big game, or could a hunter drive off the trail to pick up a rabbit shot 1,000 yards from the trail?**

Response: The proposed provision allowing off-road vehicle use in order to retrieve legally acquired game would be limited to big game as defined by the Colorado Division of Wildlife (i.e. deer, elk, pronghorn, bear and mountain lion).

673. Comment: Wildlife. **The White River Resource area comprises vital habitat for game and nongame species. Coal leasing is a significant threat to raptors. Due to the insufficient data on tree and cavity nesting birds, a failure to adequately protect riparian areas, pinyon/juniper woodlands, aspen forest, Douglas-fir and spruce-fir forests, and active prairie dog towns would be arbitrary and capricious. According to the EIS, "The less common woodland habitats (e.g., spruce-fir, aspen, and riparian) are relatively small and dispersed, but support inordinately high raptor breeding densities" (emphasis added) (3-27). According to conservation biology, it appears that a reduction of habitat has force woodland-dependent raptors into small isolated habitats. Therefore species such as the red-tailed hawk, Cooper's hawk, Sharp-shinned hawk, Northern goshawk, Northern harrier, American kestrel, Swainson's hawk, Great horned owl, Long-eared owl, Short-eared owl, Saw-Whet owl, Pygmy owl, Screech owl, and Flammulated owl are in serious threat. This "inordinately high" density will not be sustain for very long and the RMP fails to address this issue. A management Plan must prioritize protecting the habitat of species in jeopardy before continuing mineral extraction if it is to comply with federal standards.**

Response: BLM agrees that forest-dwelling raptors would be subject to long-term habitat degradation in the event surface coal mining occurred in the Danforth Hills Study Area (page 4-80). Although BLM does not anticipate additional surface mine activity in this Resource Area through plan life, we recognize and address the potential for what would likely be unavoidable impacts to the raptor group. It must be recognized that the Danforth Study Area is predominantly private surface with federal minerals. In the case of most forest-dwelling raptors, the BLM is not in a position to supersede private land initiatives and would normally defer most surface use and post-mine land use decisions to the surface owner and State of Colorado. With the exception of those species specifically addressed in the Coal Unsuitability Criteria (43 CFR3461.1), including: 1) federally or state-listed threatened and endangered species, 2) bald and golden eagle nest, roost or concentration areas, 3) falcon nest sites, 4) migratory birds of high federal interest on a regional or national level (jointly determined by USFWS and BLM as the ferruginous hawk), 5) and State-resident fish and wildlife of high interest (jointly determined by CDOW and BLM as several species of big game and grouse), There is no ready mechanism for designating an area as unsuitable for surface mining. With the possible exception of northern goshawk, none of the raptors the commentor lists currently possess status which would warrant unsuitability designation. Although BLM shares the commentor's concern in sustaining viable woodland communities, we have no information which indicates that raptor populations listed by the commentor are in imminent peril. Six of the species are included in Colorado's Natural Heritage Program's "Rare and Imperiled Animals, Plants, and Natural Communities" publication (May 1995), but Colorado's populations are considered secure. This is not to say that these wildlife values would be ignored at the mine plan stage; efforts would be made in consultation with the leaseholder, private landowner, USFWS and CDOW to minimize and/or mitigate, where practicable, adverse, long term influences on woodland dependent fauna. Additionally, in the event of additional surface mine activity, it is highly improbable that all federal leases would be developed simultaneously. Given this scenario, it is unlikely that the full extent of habitat loss (e.g. maximum of about 9000 acres of aspen habitats) would be sufficient to jeopardize regional raptor populations. In this example, the aspen base (which does not represent the total habitat base for most species) in the Piceance and Danforth GRAs and the adjacent Blanco District of the White River National Forest (excluding Wilderness Area) comprises over 149,000 acres. It is incorrect to assume that habitat fragmentation and diminution is responsible for the current distribution of favored raptor breeding habitats (e.g. aspen, spruce-fir). BLM's forested lands in this Resource Area, due to edaphic and microclimatic features, are naturally confined to relatively small, dispersed sites.

BLM feels that this RMP has significantly enhanced value-recognition and sustainable management applied to all woodland, forest and riparian habitats and prairie dog ecosystems within the Resource Area. The effects of proposed woodland and timber management on raptors and their prey base (primarily non-game birds) are presented in Cumulative Impacts on Non-T/E Raptor Management (page 4-90). This section specifically addresses aspen and spruce-fir raptor habitats on Public Lands, and concludes that projected modification of these types through plan life is not expected to depress habitat capacity for associated species. Coal development was not included in this figure, because BLM's mineral specialists feel it is unlikely that additional surface coal mining would occur over plan life.

674. Comment: Wildlife. **Of particular concern to MEC are Alternative D's timing limitations for operations in the deer and elk critical summer range (TL-29), a significant expansion of currently applicable timing limits. The proposed limitations from May 15 through August 15 do not afford enough time to prepare for the complete drilling operations before adverse weather closes down activities. MEC recommends that BLM implement only the current restrictions associated with deer and elk production areas.**

Response: In fact, all access questions or stipulations are required on a case by case scenario and are based upon wildlife surveys at the requested time of exploration and the weather conditions then.

Established oil and gas fields are coextensive with 23% of critical deer summer range and 10% of critical elk summer range in the Douglas GRA. In the RMP's impact analysis, and predicated on 80-acre spacing, it is calculated that oil and gas development in established fields alone would be capable of reducing the utility of Game Management Unit 21's critical summer ranges by 10-15% for deer and up to five percent for elk. Elk and deer production activities are widely dispersed across this Resource Area's summer range extent--

a situation that defies the identification and mapping of discrete "production areas". Current timing limitation (TL) stipulations directed at birthing and postpartum functions of deer and elk are of such limited scope as to be meaningless. Present production-area TL stipulations apply to 1440 acres, or less than one percent of the critical summer ranges available in the Douglas GRA. The proposed critical summer habitat stipulation provides a vehicle for substantive consideration of the production-oriented activities of big game in this Resource Area, and as such, does represent an expansion of BLM's TL stipulations (i.e. applicable to about 19% of Resource Area's federal estate). Note that BLM has refined the summer range stipulation's applicability by waiving the stipulation for activities below 2250 meters (about 7400 feet). This provision reduces lands subject to the stipulation by about 67,000 acres and is applicable to the lower Evacuation Creek and Rabbit Mountain/Park Mountain country.

The stipulation is part of an overall strategy to ensure that the full spectrum of public land use does not significantly degrade big game habitat utility, now or in the future. This stipulation, applicable to all permitted uses, is counterpart to the road-density objectives which are oriented more toward unpermitted land use activities (e.g. recreation). In practice, and on average, unconditioned oil an gas development at well densities of between 2 and 4 per section would be accommodated prior to TL activation. It is inconsistent with BLM policy to contradict the terms and conditions of an existing lease or interfere with the efficient and orderly recovery of oil and gas reserves. To the contrary, this stipulation allows considerable development prior to TL imposition, latitude to develop wells where impacts to summer range utility are unavoidable and provides the opportunity to permanently avoid exceeding the TL threshold. From the wildlife perspective, this stipulation offers an incentive to incorporate reasonable measures that can minimize, offset, or completely avoid incremental deterioration of summer range utility without imposing undue financial burdens on the operator. Since activation of the TL is dependent on prevailing land use effects, both permitted and unpermitted, the threshold tolerance would be expected to fluctuate unpredictably over a 10+ year oil and gas lease period. We believe it would undermine effective and equitable implementation of the stipulation to rigidly define the terms of TL imposition at lease issuance. Establishing inflexible, long-standing lease commitments would tend to confer privilege to earlier leases and could affect other legitimate land uses by making disproportionately heavy demands on those users to counteract cumulative deterioration of big game habitat utility. Binding stipulation terms would also tend to stifle creative and cooperative problem-solving and may preclude potential opportunities for mutually advantageous solutions.

675. Comment: Wildlife. The Piceance Creek Basin, at one time, was some of the Colorado's best hunting but now there are very few deer or elk left to hunt. We believe the declining hunting in this area is the direct result of poor management by the Colorado Department of Wildlife and the Bureau of Land Management: i.e. allowing hunting six (6) months out of a year, over harvesting after bad winters, more lions, coyotes and pressure from humans has depleted the deer and elk herds on this piece of property. The hunting was better and the animals more prevalent when we did not have 4 wheel-drive vehicles, snow machines or all terrain vehicles. It stands to reason that it would be advantageous to both the animal populations as well as the land owners to restrict access to some areas. As it is, the only public access in this area is on foot or horseback and we would like it to remain that way.

Response: BLM shares your concern for the effects of vehicle use on big game. Actually, opportunities for legal public foot access to the approximate 8700 contiguous BLM acres between Fourteenmile Creek, Piceance Creek and Highway 13 is confined to about 8 sites where RBC 5 intersects BLM land. Combined, these sites traverse about 1.5 miles of BLM surface. At least 5 of these potential access areas represent points where BLM corners intersect RBC 5--an intimidating access situation to most conscientious hunters. Use of these points requires a rare degree of map interpretation skill, and is an access situation often merely avoided since it invites unpleasant delays and dispute between hunters and adjacent landowners.

Regardless of orienting skills, only one or two of these access points possess roadside conditions conducive to safe parking or pull-off (e.g. due to highway fencing, slopes, borrow ditches), and these are limited to 1 or 2 vehicles. In most cases, these access points front slopes or drainages of extreme grade and intermittent rock outcrops that pose a daunting barrier to most hunters wishing to access BLM lands above the Deer, Davis and Fourteenmile drainages. BLM has asserted that it does not intend to develop vehicular access from an off-highway parking site at Davis Gulch--it merely would like to develop a reasonable and safe opportunity for foot and horseback access to a considerably sized parcel of public lands.

MOFFAT COUNTY

29 March 95

Ms. Joann Graham
White River Resource Area
P.O. Box 928
Meeker, CO 81641

RE: Comments on BLM White River Resource Area RMP

Dear Joann:

Thank you very much for taking the time and exposing yourself to additional work by holding the meeting here in Craig on March 21. I believe the time was well spent and applaud you on your willingness to meet with representatives from the OHV groups to resolve some of the issues and concerns that they have with the proposed plan.

Please consider the following comments from the Moffat County Commissioners as the RMP is further revised:

1. We are in opposition to the preferred alternative (D) which has been selected in that it appears to be very restrictive as to the use of the land in general. We support the past efforts of the BLM and you, its employees, in the management of the public lands in this area under the old "Land of many Uses" (multiple use) and suggest that you retain this management philosophy by adopting Alternative "A" as the preferred alternative.

2. There seems to be a tremendous increase of lands in the area labeled as "no surface occupancy", due in large part, to the attempt to protect a couple of plants. While we are in agreement that these plants should be protected, we do not see the need for such a radical change in designation of so large an area. IF in fact, these plants DO exist in this broad of an area, it would appear that there may be a sufficient amount of them that they would not justify the T&E designation. While the production of oil and gas in Moffat County (at least in this area) appears to be somewhat remote at best, we would be opposed to efforts to prohibit the exploration and development of this area in the future.

3. We agree with the OHV community that there appears to be an excessive amount of this area which is closed to off-road vehicles, and possibly , to other recreation users as well. My involvement with the OHV community, in general, has shown me that they, as a whole, are a very responsible group who are as interested in preserving the environment for future generations as is the BLM, Sierra Club, etc. Meet with them - listen to their concerns - allow them to be a part of this process - and I believe, you will find them to be strong allies and supporters of your plan.

4. Finally, we are TOTALLY opposed to the inclusion of ANY additional Moffat County lands into a Wilderness Area Designation. We oppose the continued study of the Bull Canyon, Willow Creek and Skull Creek areas for Wilderness Designation. *These areas are ALREADY, in the most practical sense, wilderness areas, and do* not need the additional restrictions which would burden them if they are so designated. Continue your present management practices - if some of these areas contain any sensitive matter (plant, animal or land), than manage those areas as they need to be managed, but don't go to the over-kill of designating every area as Wilderness, just because that's the popular wave sweeping the environmental community in this generation.

We encourage you to take action as was discussed at the meeting on March 21, whereby you would arrange to have meetings with all the user groups involved with the area and that you would postpone your final RMP on this project until such time as all of the parties have reached an agreement.

Again, thank you for your interest and we appreciate being involved in your on-going plans for this area.

Sincerely,

Chuck Sis
County Commissioner

CS/cks

COMMISSIONERS

221 West Victory Way
Craig, Colorado 81625
(303) 824-5517

Joe Janosec
District 1

Chuck Sis
District 2

T. "Wright" Dickinson
District 3

BOARD OF COUNTY COMMISSIONERS

RIO BLANCO COUNTY COURTHOUSE
POST OFFICE BOX 599
MEEKER, COLORADO 81641

March 30, 1995

Joann Graham
Bureau of Land Management
P.O. Box 928
Meeker, CO 81641

RECEIVED
1995 MAR 29 PM 12:56
BUREAU OF LAND MANAGEMENT
MEEKER, COLORADO 81641

Re: White River Resource Area Draft Resource Management Plan

Dear Ms. Graham:

Given recent local input from industry, organizations, and private citizens on the White River Resource Area's draft Resource Management Plan (RMP), we would like to begin our comments by stating our desire to have the RMP comment deadline delayed by approximately one year. We understand that, should the current comment deadline remain in place, there would nevertheless be an approximate one-year period of time prior to final approval of the RMP during which the BLM would be working to continue to meet with local entities to "fine-tune" the document and attempt to further address their concerns. However, there are now so many concerns with the draft version, in particular the absence of an economic impact analysis, that we honestly believe they cannot all be addressed adequately in a short period of time.

In addition we would also point out the following Federal actions scheduled for later in 1995 which will have an ultimate affect on the RMP:

1. Reauthorization of the Endangered Species Act. We are hopeful that distinctions will come be made between endangered species and those which are, by nature's own decree, rare. As Senator Mark Hatfield told a group of Colorado County Commissioners, "I was one of the original sponsors of the Endangered Species Act, but I do not recognize it today."
2. Implementation of Rangeland Reform.
3. Reauthorization of the Clean Water Act.

Given this pending action, as well as our concerns with some of the items listed below, we feel a comment deadline extension is essential.

Prior to itemizing our broad concerns with the RMP, we would first like to thank the BLM for the work and effort they have put into the development of the draft over the past 4-5 years. We are especially appreciative for the early opportunities for input which some groups and organizations took advantage of and feel the staff of the White River Agency should be highly commended for

JOE P. COLLINS KIM A. COOK DONALD L. DAVIS
MEEKER [303] 878-9601 • FAX [303] 878-8760 ••• RANGELY [303] 878-9087 • FAX [303] 878-8211

the work accomplished in addressing such a large scale publication. BLM followed the rules for the process. However, there are many groups whose livelihood is directly tied to the final form of the RMP who have not addressed this draft document during the comment period. While we cannot justify their noninvolvement, we understand the difficulty in responding to a technical, in-depth, exhaustive document such as the RMP draft. Hence, the need for a comment deadline extension to provide an addition to the numerous opportunities area citizens have already been involved in.

Below are specific concerns we have with the draft RMP:

1. Economic Impact Concerns: Rio Blanco County has approximately 2.2 million acres, of which 73 percent (1,584,000) are federally owned and administered. The BLM administers 62 percent (1,144,000) of the total land area of Rio Blanco County. As a result, the management of these public lands will have a large impact on the economic base, lifestyle and stability of our communities. Of primary concern to us is the shallow, virtually non-existant RMP comments on the economic impacts it would have on Rio Blanco County. To simply write it will have no economic impacts ignores the far-reaching effects implementation of the RMP will have on our county.

The White River Resource Management Area is unusually rich in energy and mineral deposits. This area presently contains the largest petroleum field and third largest gas field in Colorado. In addition, a large coal mine and nahcolite mine also presently operates on BLM lands in this area. The petroleum, natural gas, coal, oil shale and nahcolite reserves of this area, which are largely located on BLM lands, have national significance and the development or lack of development of these resources will have a profound effect on the local economy.

There is a strong interdependence between the various elements of Rio Blanco County's economic base. Agriculture, recreation, wildlife, mining and oil and gas development have proven to be compatible with good management. In many cases, these elements are not only compatible but complementary. Elk and deer, for example, depend on the irrigated agricultural field, stock ponds and range improvements for food and water during certain times of the year. Recreation such as hunting provides an important source of income to help keep the area economically viable. Mining and oil and gas development has also proven compatible with agriculture and recreation and provides high wage jobs, a strong tax base, and economic diversity and stability to our communities. All of these elements depend on and interact with our public lands. Management which promotes maximum efficiency of roads, utility corridors, phasing of development, range improvements, and the use of other proven techniques would allow all of the elements of our economic base to prosper.

Rio Blanco County is concerned that the multiple use concept, which has served public lands so well in the past, is being replaced by singular uses in this plan by the greatly expanded "no surface occupancy" provisions of this document. Large areas containing important reserves of natural

gas, nahcolite, oil shale, etc., are preempted from development because of the "possible" presence of a Dudley Bluff or Twin Bluff Bladderpod, for example. The RMP should be modified to promote multiple use by utilizing mechanisms to allow development in sensitive areas while still protecting those unique aspects of the area.

2. Water Rights: The BLM should continue to claim water rights under current Colorado water laws as proposed in the RMP. Management of water rights should be developed with all current users in mind to further the multiple use concept of our resources. Management alternatives (pages 2-1 through 2-8) should emphasize flexibility and voluntary rather than mandatory requirements and should promote incentives for users.

3. Utility Corridors: The proposed major utility corridors (Map 2-23/Alternative D) identified in the RMP suggests that major utility corridors be located in the larger valleys of the Piceance Basin. These valleys are largely privately owned, contain the major rivers, streams and springs of the region, and are typically the most productive and valuable lands of the local ranches and are extremely important to the agricultural base of Rio Blanco County.

The construction of pipelines and powerlines in these narrow valleys have caused disproportionate social, economic, and environmental impacts to these lands in the past. These valleys are typically flood irrigated across the entire valley and the water table is at the ground surface in many areas during times of flood irrigation. Production from these irrigated fields is reduced substantially, often for several years, each time a pipeline or powerline crosses a field. These areas also require numerous stream and irrigation ditch crossings and have the greatest potential to impact springs, wells, water quality and riparian areas. We realize that geographic location and topography requires that utilities cross and sometimes follow these valleys. However, major utility corridors should be located on non-irrigated lands and away from the major irrigated valleys to the maximum extent possible.

4. Excess Stipulations: We believe there is more than one way to prevent the development of natural resources on public lands. One would be the outright prohibition of the development which would be the case if the No Surface Occupancy provisions were followed without exception. Another more subtle method is by placing so many stipulations or approval as to make the project uneconomical. The former is of concern because the decisions as to exceptions will not be made by the BLM people closest to the area, but at the state or national level. The second entails industries having to do studies that should properly be funded by the federal government if they must be done at all.

5. Biodiversity and Ecosystem Management: The draft RMP contains numerous references to biodiversity and ecosystem management. While at first glance those two terms would hopefully contain elements (by definition) that many would agree with, they are nevertheless somewhat new and "experimental" terms. They are very flexible concepts which can be used to defend virtually any and every decision or action, no matter how extreme (in either direction) they might be.

Allowing the use of those terms without some type of clear definition or standard is akin to signing a blank check--not often a wise thing to do.

In closing, we would note that once again the concept of custom and culture has been presented to the Rio Blanco County Commissioners as an alternative to this proposed document. We much prefer to believe that somewhere in the administrative arm of the Federal Government the concepts of multiple use and common sense are still alive and well. Failing that, we will have to rely on our congressional delegation to keep these concepts alive. In conclusion, we respectfully request that the BLM seriously consider a one-year extension of the RMP comment deadline and conduct a thorough analysis of the economic impacts the implementation of the draft RMP would have on Rio Blanco County, as well as allowing adequate time for review of the analysis by Rio Blanco County entities upon its completion.

Sincerely,

Board of County Commissioners
Rio Blanco County

Joe F Collins
Chairman Pro-tem

State Representative
RUSSELL GEORGE
1300 E. 7th Street
Rifle, Colorado 81650
Home: 625-3778
Capitol: 866-2945

COLORADO
HOUSE OF REPRESENTATIVES
STATE CAPITOL
DENVER
80203

Member:
Judiciary Committee
Local Government Committee

March 17, 1995

Ms. Joann Graham
U.S. Department of the Interior
P.O. Box 928
Meeker, CO 81641

Re: Draft White River Resource Management Plan

Dear Ms. Graham:

After a review of the draft plan, I am concerned about the many inconsistencies contained within the various options and recommendations.

I am very disturbed by the apparent plan to close access and roads at some future time without full and adequate public discussion within a process that is responsive to the public input.

While I appreciate the plan's emphasis on wildlife protection, especially for our at-risk mule-deer herd, it seems odd to me that the plan is seeking to open up areas of public and private lands that are presently habitat and sanctuary.

With many other areas of public land available for opening to the public, I cannot understand why pressure is being put on ranching operations in certain areas. This seems to be an unnecessary attack on ranching interests as legitimate multiple use options.

I am not satisfied that the plan contains adequate provisions for dealing with noxious weeds in all areas. This must take precedence over other activities until this problem is under control.

There are many other problems with the plan that have been articulated to you by other communities and individuals. I need not repeat them here but urge you to seriously consider these legitimate expressions of concern.

I see no reasonable choice at this time other than to encourage adoption of Alternative A--leaving the resource area in status quo until the job can be done right.

Sincerely yours,

RUSSELL GEORGE

Not paid for at taxpayer expense.

TOWN OF RANGELY
300 EAST MAIN STREET
RANGELY, COLORADO 81648
(303) 675-8470
FAX # (303) 675-8256

March 9, 1995

Joann Graham, RMP Team Leader
Bureau of Land Management
White River Resource Area
P.O. Box 928
Meeker, CO 81641

Dear Ms. Graham,

The Town of Rangely is formally requesting that the BLM extend the public comment period presently in effect on the White River Resource Area Resource Management Plan proposal from the existing end date of March 31, 1995 to March 31, 1996.

The prime reason of this request is that we feel that the BLM has not adequately addressed the issue of economic impact to our community. Our economy is primarily based on public land uses such as ranching, energy development, and tourism/recreation. Anything that is detrimental to these activities negatively impacts the economy of this community. The one year extension would allow the BLM, perhaps in conjunction with other entities, to perform a comprehensive economic impact assessment.

In addition, the Endangered Species Act reauthorization and the Range Land Reform will both affect this RMP document. Common sense dictates that a one year extension will allow those changes to be incorporated without requiring an amendment to a document recently promulgated.

In the event that an extension is not forthcoming, the Town of Rangely has no choice but to support Alternative A, leaving regulations as they exist.

Sincerely yours,

TOWN OF RANGELY

Frances Green

Frances Green
Mayor

Department of Energy
Western Area Power Administration
P.O. Box 11606
Salt Lake City, UT 84147-0606

Ms. Joann Graham
Bureau of Land Management
P.O. Box 928
Meeker, CO 81641

Dear Ms. Graham:

Western Area Power Administration (Western) provides the following comments on the White River Resource Area Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS).

Western is concerned that stipulations regarding noxious weed management are impractical as stated. Table 2-23 on page 2-32 for Alternative D, the preferred alternative, states that "All construction equipment and vehicles would be cleaned prior to entering BLM weed-free zones" and "All authorized users of disturbed areas will be required to inventory for noxious weeds in both the spring and fall."

The cleaning of all construction vehicles entering weed-free zones is impractical. Mr. Rusty Roberts of your office said in a conversation with Gene Iley of this office that this statement was intended for "permitted activities" only (e.g., construction projects) and is targeted at dirt moving equipment rather than trucks. The RMP/EIS should be revised to reflect Mr. Roberts' statement. Also, we do not see the need for an inventory in both the spring and fall for disturbed areas. Mr. Roberts said this was primarily meant as before and after inventories involving construction projects. The RMP/EIS should be revised to specifically state this.

We suggest you approach the management of noxious weeds as a public affairs issue. Raising public awareness about noxious weeds and specifically sharing information with those that may unwittingly transport and/or propagate them (i.e., construction companies, off-highway vehicle users, those maintaining right-of-ways, farmers, ranchers, etc.) would be effective tools in noxious weed control.

Thank you for your consideration of our comments. If there are any questions, please telephone Gene Iley at (801) 524-5656.

Sincerely,

Dave Sabo
Manager, Environmental
and Public Affairs

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RUSSELL GEORGE
1300 E. 7th Street
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80203

Vice Chairman:
Local Government Committee
Member:
Agriculture, Livestock and
Natural Resources Committee

April 5, 1995

Ms. Joann Graham,
Bureau of Land Management
White River Resource Area
P.O. Box 928
Meeker, CO 81641

Dear Ms. Graham:

I have recently reviewed the March 9, 1995 letter of Frances Green, Mayor of Rangely, suggesting a one year extension of the public comment period on the White River Resource Area Resource Management Plan.

This is a sound request which I join in urging you to follow. Thank you for your consideration.

Sincerely,

Russell George

RG/mcb

STATE OF COLORADO
Roy Romer, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

Perry D. Olson, Director
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Denver, Colorado 80216
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Northwest Region
711 Independent Avenue
Grand Junction, CO 81505-7125
303-248-7175

For Wildlife–
For People

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1995 APR 13 AM 9:59
BUREAU OF LAND MANAGEMENT
MEEKER, CO. DISTRICT

April 11, 1995

Ms. Joann Graham, RMP Team Leader
Bureau of Land Management
White River Resource Area
POB 948
Meeker, CO 81641

Dear Ms. Graham:

We have reviewed the Draft Resource Area Management Plan and Environmental Impact Statement published in October of last year. I have some general comments and statements in this letter; more specific comments, suggestions and questions are included in the attached pages. CDOW Area 6 personnel in the Meeker and Rangely areas and regional staff analyzed the document.

Generally, we believe Alternatives C and D will have the fewest negative impacts on wildlife in the White River Resource Area. In the following instances, we find Alternatives C preferable to D for wildlife:

1. Oil and Gas Stipulations and Conditions of Approval
2. Soils Stipulations
3. Coal Leasing
4. Big Game
5. Grouse
6. Recreation
7. Motorized Vehicle Travel
9. Land Use Authorizations

In one instance, Wild Horses, Alternative B is more favorable to wildlife.

The Colorado Division of Wildlife strongly supports the following actions in Alternatives C and D:

1. *Restriction of motorized vehicle travel to designated roads and trails.* Since 90% of the resource area is heavily roaded as it is, we do not believe that restricting motorized travel to roads and trails unduly inconveniences anyone. There are few areas where a person would have to walk more than two miles from one road to another. In much of the resource area, walking a mile or less would get you to another road. The virtual absence of any designated foot or horse-only trails in the western part resource area verifies this. Virtually every ridge and valley is roaded. We see no need for off-road motorized travel. It will only lead to more roads. We believe motorized travel should be restricted to designated roads and trails only to 1) protect soils and vegetation from erosion; 2) protect wildlife and wildlife habitat; and 3) to provide higher quality hunting opportunities. We receive many complaints from hunters who have hiked into an area only to have motorized vehicles moving into areas and driving away game. Increasing use of off-highway vehicles reduces quality hunting experiences and hinders meeting harvest objectives.

2. *Improved management of riparian areas.* Riparian areas are vitally important to the majority of wildli species at least seasonally, if not year-round. The single most important action that can be taken to promo healthy ecosystems is to restore properly functioning riparian systems. Properly functioning riparian are provide more, cleaner water that benefits wildlife and people. Soil erosion can be limited and reduced, lessenin sedimentation and channel instability downstream. Healthy, self-perpetuating riparian vegetation (such a cottonwood and willow) contributes to the native biodiversity of both the aquatic and terrestrial ecosystems i and next to rivers and streams.

Healthy riparian systems will be the best indicators of how successful we are at managing on an ecosystem basi If we begin to see increases in the numbers of yellow warblers, nesting pairs of greater sandhill cranes, and miles of stream occupied by Colorado River cutthroat trout, progress is being made.

3. *Application of No Surface Occupancy Stipulations to sensitive wildlife habitats, fragile soils, raptor nest sites, etc.* From our standpoint, covering these types of issues with stipulations is preferable to "Conditions o Approval" (COA's), which have no legal basis for BLM to enforce.

We have many specific comments and concerns that are addressed in the attachment to this letter. Some of these concerns are oil and gas leasing and associated activities; utility corridors; land tenure; riparian area classification; direct effects of various actions on big game, sage grouse and other wildlife; road and area closures; mineral material mining; oil shale activity; domestic livestock grazing; and wild horses.

While some aspects of Alternative C are more favorable to Alternative D as noted above, we believe either represents a major step forward in the wise management of lands in the White River Resource Area. If you hav any questions or points of clarification regarding our comments, please contact John Toolen in this office at 24 7178 x192.

Sincerely,

Robert H. Caskey
Regional Manager

RHC:JFT/jt

xc: Prenzlow
Clark
Ellenberger
Sealing
Toolen
Norman

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS AND RECREATION

Michael O. Leavitt
Governor
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Utah Field House of Natural History
235 East Main Street
Vernal, Utah 84078-2806
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March 7, 1995

Robert W. Schneider, Acting District Manager
Bureau of Land Management
Craig District Office
455 Emerson Street
Craig, Colorado 81625

Dear Mr. Schneider:

Enclosed is some information regarding the accessment of paleontological resources for the White River Resource Area Draft Management Plan. We have prepared a table that lists the formations of northeastern Utah and northwestern Colorado. There may be some members missing, but the overall sensitivity of the formations is included. Sensitivity 1 means a critical evaluation of the unit is necessary (literature search and 100% field survey) for areas of ground disturbance. Sensitivity 2 means that the formation is important paleontologically, but most of the fossils are well known. A literature search and spot-checking should be done before and during ground disturbance. Sensitivity 3 indicates a very low likelihood of finding fossils. Where the sensitivity number is in parentheses, this indicates that important fossils are found but they are very rare. This would generally mean that spot checking should be done, but not necessarily a full 100% pedestrian survey. With any of these, however, the construction crew must contact appropriate officials if vertebrate fossils are encountered during their work. Further information on the sensitivity criteria is included in the included report on monitoring and mitigation.

Sensitivity of a formation or its members is relatively easy to determine. Numerous publications have been produced on your area as well as surrounding regions. Compilation of much of that published data has allowed us to produce the included table. However, we are aware that as research continues and fossils are discovered, the sensitivities may change

We are concerned about the requirements for paleontological review prior to ground breaking activity in your area. Any formation that has known sensitive fossil resources (ascertained during a literature and museum search) should be carefully evaluated in the field prior to impact. Just because there are no known sites in the area does not mean that the resource isn't there. For example, dinosaur bone and significant plant fossils were found along the Dragon Trail section of Northwest Pipeline that was in an area listed by your people as unproductive. In fact the section of the pipeline west of Dragon Trail was constructed in 1993 with no evaluation or monitoring for fossils. Who knows what was lost?

As we are largely aware of the paleontological literature on most of these formations, the most important aspect of resource protection is the identification of sites. At this time regional surveys are not feasible, but field surveys associated with development are a viable option. Along a pipeline right-of-way a paleontologist can survey a 100 foot swath of sensitive formation one to four miles per day depending on the terrain. If more than just paleontological information is collected (e.g. stratigraphy, sedimentology, and depositional environments), compilation of the data and modelling might allow some predictability for determining rich fossiliferous zones. However, on-site identification will remain the ultimate determining factor for protection and preservation of the resource.

It is very important to recognize that the Colorado Plateau, including your area, is extremely sensitive paleontologically. In fact, geologic maps suggest that more than 50% of your resource area is comprised of paleontologically sensitive units. Few places in the world have the wonderful nonrenewable resource that we have here. We need to protect and study it, not allow it to be destroyed in the name of economic progress.

We are also including the "Statement of Ethics" from the Society of Vertebrate Paleontology as well as their recommendations for "Assessment and mitigation of adverse impacts to nonrenewable paleontological resources: Standard guidelines." These have been established within this past year and may be valuable to you in your evaluation of these resources.

Sincerely,

Alden H. Hamblin, Manager
Sue Ann Bilbey, Ph.D., Curator
Utah Field House of Natural
History State Park
235 East Main
Vernal, Utah 84078
(801)789-3799

cc: Mike Selle, Meeker BLM
Harley Armstrong, BLM Colorado State Paleontologist

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO
ATTENTION OF

February 7, 1995

Regulatory Branch

Mr. Robert Schneider, Acting District Manager
Bureau of Land Management
White River Resource Area
Post Office Box 928
Meeker, Colorado 81641

Dear Mr. Schneider:

I am commenting on the Draft Resource Management Plan and Environmental Impact Statement for the White River Resource Area. The U.S. Army Corps of Engineers has been authorized by Congress to administer Section 404 of the Clean Water Act. Our concern is that your resource management plan consider the effects of projects on the aquatic environment.

We were pleased to note that Section 404 of the Clean Water Act was mentioned in your Draft Resource Management Plan as one of the items of compliance required for impacts to surface waters. Please note that all waters of the United States are jurisdictional under Section 404 of the Clean Water Act. Waters of the United States include all surface waters, wetlands, and impoundments. Anyone engaged in most construction activities in waters of the United States or including adjacent and isolated wetlands must secure a Department of the Army permit before construction is initiated. All Projects must avoid impacts to the aquatic environment if practicable, minimize such impacts if unavoidable and compensate for unavoidable impacts.

Wetlands are special aquatic sites which can be determined according to the 1987 Corps of Engineers Wetlands Delineation Manual. Department of the Army permit applications must have wetland delineations included if a project will impact wetlands. For non-water dependent activities wetlands, there is a presumption that less damaging alternatives are available unless the applicant can satisfactorily demonstrate otherwise.

I am enclosing an information paper which outlines the Corps of Engineers Regulatory Program. If you have any questions about the specifics of the program, or would like more information, please contact Mr. Nicholas A. Mezei of this office at the address below or telephone number (303) 243-1199.

Sincerely,

Grady L. McNure
Chief, Western Colorado Regulatory Office
402 Rood Avenue, Room 142
Grand Junction, Colorado 81501-2563

Enclosure

STATE OF COLORADO
Roy Romer, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

Perry D. Olson, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192

REFER TO

For Wildlife – For People

February 7, 1995

B. Curtis Smith
Bureau of Land Management
White River Resource Area
P.O. Box 928
Meeker, CO 81641

RE: Draft RMP/EIS

Dear Mr. Smith,

Overall, I would concur with the selection of Alternative D as the preferred choice. I have a couple of comments I would like to include for discussion and implementation within the plan.

In the Oil and Gas section, you are estimating 1,154 new wells going in over the next 20 years. This number could change drastically depending on the economics of the industry. I believe you should look at creating a maximum of wells per acreage within this plan. Wildlife will not benefit with a well every 10 to 40 acres. Some will not tolerate or survive at all. They may be able to withstand development (in certain areas) with a well every 100 acres (as an example). This should be looked at in greater detail, since the associated activity (roads, pads, etc.) with each well has an accumulated effect on wildlife, and the habitat.

You also discuss the use of non-native species of plants for reclamation purposes. I believe this is the wrong direction to go for any reclamation projects. They may be more competitive, but they will affect the landscape over time in a negative manner.

The fisheries management section (pg.2-69) describes objectives and techniques to improve stream fisheries, but in the summary on page s-12, it describes oil shale development leading to the loss of >50% of all stream fisheries, including 35% of Colorado River cutthroat trout fisheries. These are not consistent, and no one program should lead to such a devastating effect on the fishery potential, especially in light of the special concern status of CRN's.

On page 2-29, table 2-22, are these our most current big game figures?

On page 2-107, table 2-70, you discuss 200 acre burns for grouse nesting. Where did you derive this number, and is it consistent with grouse research? Also, the grouse habitat portion seems to be one of the more critical plans (considering the status of the grouse), yet there are no inferences to ever changing cattle numbers. It discusses vegetative treatments, alternatives etc. but does not discuss numbers. Treatments to vegetation are very expensive, and are not always beneficial. I would ask that if AUM permits change hands (Base properties sold etc.), that each of these be looked at to benefit wildlife also. This may include changing AUM numbers.

On page 2-58, you discuss "animal redistribution or reduction techniques, etc." to obtain the goals. How is BLM planning to accomplish this?

I would also like to support all restrictions on off-road vehicles and limiting road densities. This will be a large benefit to the wildlife resource.

Thank you for the opportunity to comment. If you have any question, please feel free to call me at (303) 878-4493, or write to: Box 1181, Meeker, CO 81641.

Sincerely,

Dan Prenzlow
Area Wildlife Manager

cc: R. Harthan
B. DeVergie
J. Toolen

State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY

Michael O. Leavitt, Governor
Dianne R. Nielson, Ph.D., Executive Director
Russell A. Roberts, Director

150 North 1950 West
P.O. Box 144820
Salt Lake City, Utah 84114-4820
(801) 536-4000
(801) 536-4099 Fax
(801) 538-4414 T.D.D.

January 3, 1995

DAQE-1103-94

Robert W. Schneider
Bureau of Land Management
White River Resource Area
P. O. Box 928
Meeker, Colorado 81641

Re: White River Resource Area Draft Resource Management Plan and Environmental Impact Statement

Dear Mr. Schneider:

The Utah Department of Environmental Quality, Division of Air Quality, has reviewed the referenced document. We appreciate this opportunity to comment and voice our concerns.

Chapter 04 of the referenced document states that the BLM would request the State of Colorado to analyze visibility impairment impacts for all projects proposed near Dinosaur National Monument (page 4-1). Dinosaur National Monument is located in Utah and Colorado, so the statement in the document should apply only to sources that are located in Colorado. Sources that locate in Utah which may impact the visibility in Dinosaur National Monument, a Federal Class II Prevention of Significant Deterioration (PSD) area, will be evaluated by the Utah Division of Air Quality. Utah Air Conservation Rules (UACR) require that major new sources and major modifications evaluate visibility impacts in accordance with PSD rules. Our concern is that proposed new minor sources locating in Utah would be required by this document to demonstrate to the State of Colorado that no impairment of visibility is expected which is beyond the scope of the current Utah regulations (UACR).

Thank you for keeping the Division of Air Quality informed of these projects. If you have any questions on our comments or need further clarification, please contact Mike Strong at (801) 536-4232.

Sincerely,

Russell A. Roberts
Executive Secretary
Utah Air Quality Board

RAR:MS:dn

cc: Colorado Dept of Health
Air Pollution Control Division
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

4201 East Arkansas Avenue
Denver, Colorado 80222
(303) 757-9011

January 3, 1995

B. Curtis Smith
Bureau of Land Management
White River Resource Area
P.O. Box 928
Meeker, Colorado 81641

Dear Mr. Smith:

The Colorado Department of Transportation (CDOT) has completed its review of the Draft Environmental Impact Statement and Draft Resource Management Plan for the White River Resource Area and has the following comments.

The document does not include any reference to transportation or any discussion of impacts on the public roadways and highways caused by the various resource area alternatives and traffic generating activities. We feel transportation and transportation safety on roadways serving the White River Resource Area is a significant issue which should be included and addressed in the Environmental Impact Statement. This is especially important because of impacts caused by ever increasing numbers of resource area users in both recreational and commercial activities.

Also, in the Contact/Distribution List in Chapter 5, please change Department of Highways to Colorado Department of Transportation. We became a Department of Transportation in 1991.

Thank you for the opportunity to provide comments on this document.

Very truly yours,

Kenneth M. Gambrill
Manager
Office of Environmental Services

REG/hs

cc: Larry Abbott, Region 3

STATE OF COLORADO

COLORADO STATE PARKS
Colorado Natural Areas Program

1313 Sherman Street, Room 618
Denver, Colorado 80203
Phone (303) 866-3437
FAX (303) 866-3206

February 3, 1995

Robert W. Schneider
Acting District Manager
Bureau of Land Management
White River Resource Area
P.O. Box 928
Meeker, Colorado 81641

Dear Mr. Schneider:

Thank you for the opportunity to comment on the White River Resource Area Management Plan. We found the report to be a thorough and comprehensive consideration of important issues facing this unique region.

We were especially impressed with a number of the recommendations in the preferred alternative that will maintain or enhance the quality of BLM lands in the White River area. We strongly support these actions outlined in the preferred alternative:

1. Designation of five weed-free zones and limiting vehicles to designated roads and trails throughout.

2. Protection of sensitive threatened and endangered plants by limiting vehicles to existing roads and trails and by NSO designations for all known and potential habitat.

3. Maintenance of plant communities by reducing pinyon-juniper, timber, and riparian acreage available for harvest.

4. Mineral withdrawals for proposed ACECs.

5. Improvement of 75% of riparian acreage and recommending ACEC status for several high quality riparian areas.

6. Ecological site inventories for all rangelands and grazable woodland plant communities.

Our concerns with the DEIS relate to recommendations in three specific areas: (1) road density, (2) the use of native and non-native plant species in reclamation, and (3) grazing in rare plant habitat.

Road density. The target road density reduction (4-14) to 1.5 miles/square mile in critical wildlife habitat and 3 miles/square mile elsewhere will still result in a highly fragmented landscape in sensitive areas. A reduction in density to less than 1.0 mile/square mile in sensitive areas including ACECs, RVAs, and critical wildlife habitat would be preferable. A lower road density is more appropriate in light of the stated concern with roads allowing the establishment and spread of noxious weeds and other exotic plant species.

Reclamation plantings. The assumptions made regarding the use of non-native plants for reclamation (4-30) require careful consideration. The statement that "non-native plants do not pose any significant threat of expanding onto and replacing native species in untreated areas" can not be accepted without supporting evidence. In fact, research has shown that non-natives can and do replace natives (Holechеck et al., 1981). In addition, the claimed benefits of non-natives are not valid in light of recent research:

1. Non-native reclamation species do not necessarily compete better than native species with non-native annual weeds. Site conditions (e.g. moisture, nitrogen levels) and reclamation monitoring may have more influence on reclamation plant establishment than innate "competitive abilities" (Chambers 1989, McLendon and Redente 1992, Smith and Chambers 1993). When non-natives are better competitors, they may out-compete native species as well as non-native annual weeds, resulting in permanent changes to the structure and composition of plant communities. Non-natives also have the potential to compete with and reduce the vigor of threatened, endangered, or sensitive plants and should be avoided in these habitats. Native plant species have been shown to compete well with exotic annuals under nitrogen-depleted soil conditions (McLendon and Redente 1991, 1992).

2. No plant species are known that decrease the spread of noxious weeds. These plants are considered noxious because they may out-compete natives and non-native plant species in disturbed and intact communities.

3.(a) Non-native species generally are not the ecological and functional equivalents of the native species they replace. Many of the commonly-used reclamation species are cool-season grasses, whereas the natives they replace (e.g., basin wildrye, blue grama, galleta) are largely warm-season grasses. Thus, lower quality forage is available to livestock and wildlife later in the growing season in areas

dominated by exotic cool-season grasses.

(b) Many of the non-native grasses listed on pp. A15-16 are rhizomatous and are not functionally or ecologically equivalent for reclamation of areas that naturally support bunch grasses.

(c) Native rodents, insects, birds and microfauna are not adapted to use exotics.

4.(a) Exotics such as crested wheatgrass and smooth brome are often less palatable to livestock than native bunch grasses. The season of use and the health of the ecosystem are more relevant factors to use to determine the tolerance of range for intense grazing use.

(b) Intense grazing pressure is not a desirable use for any rangeland in the semi-desert White River Resource Area. Such use has negative impacts which affect not only grazed plants but also soils, water quality, and ecosystem resiliency.

Only locally gathered, native plant species should be used in reclaiming disturbed areas in ACECs and RVAs.

Rangeland Management. The best management practices for grazing (A-11) should include special provisions for grazing in threatened, endangered, and sensitive plant habitats. Such provisions could address grazing intensity, resting periods, seasonal use, and monitoring of effects as related to the specific plants of concern.

We appreciate the opportunity to comment on this draft management plan and hope these comments will be helpful. We look forward to continuing to cooperate with you in the conservation of sensitive plants, plant communities and habitats on the White River Resource Area.

Sincerely,

James D. Von Loh, Administrator
Colorado Natural Areas Program

Enclosure: Literature cited

cc: Steve Norris, Executive Director's Office
Tom Easley, Division of Parks and Outdoor Recreation
Chris Pague, Colorado National Heritage Program

Lynne N. Koga, CPA
Office Director
Brad T. Barber
State Planning Coordinator
Rod D. Miller
Committee Chairman
John A. Harja
Executive Director

116 State Capitol
Salt Lake City, Utah 84114
Phone (801) 538-1027
Fax (801) 538-1547

GOVERNOR'S OFFICE OF PLANNING AND BUDGET
Resource Development Coordinating Committee

February 10, 1995

Joann Graham Project Manager
Bureau of Land Management
White River Resource Area
P.O. Box 928
Meeker, CO 81641

SUBJECT: White River Resource Area RMP and EIS
State Identifier Number: UT941028-040

Dear Ms. Graham:

The Resource Development Coordinating Committee (RDCC), representing the State of Utah has reviewed this proposal.

The Division of Wildlife Resources wishes to emphasize the importance of the White River to threatened and endangered species of the Colorado River drainage. The Division of Water Resources on behalf of the State of Utah has a permit to build a dam on the White River and wishes the permit to remain in effect.

The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this proposal to the Utah State Clearinghouse at the above address or call Carolyn Wright at (801)538-1535, Nancy Keate (801)538-1548 or John Harja at (801) 538-1559.

Sincerely,

Brad T. Barber
State Planning Coordinator

BTB/ar

RESOLUTION
(SERIES OF 1995)

A RESOLUTION OF THE DINOSAUR TOWN BOARD OF TRUSTEES, DINOSAUR, COLORADO. RECOGNIZING THE NEEDS OF ECONOMIC IMPACT TO ALL SMALL COMMUNITIES IN WESTERN COLORADO.

WHEREAS, the Town Board of Trustees desires to encourage the Bureau of Land Management, White River Resource area and;

WHEREAS, the Town Board of Trustees is formally requesting the BLM to carefully consider the economic impact of these small communities and;

WHEREAS, public land should be made available to the public for recreation and hunting and;

WHEREAS, this should be a decision made by the voters of Western Colorado, as to the closure of public roads on BLM land and;

WHEREAS, closure of Moose Head Mountain area to motorized vehicle travel has denied access to long time senior citizens and disabled persons and also closed the most popular area for hunting access.

NOW THEREFORE BE IT RESOLVED BY THE TOWN BOARD OF TRUSTEES OF THE TOWN OF DINOSAUR, COLORADO AS FOLLOWS:

That the Town Board of Trustees go on record opposing the limited access proposed by BLM and hereby support Alternative A, leaving regulations as existing.

Mayor, Town of Dinosaur

ATTEST:

Town Clerk, Town of Dinosaur

FILED

APPENDIX B
SURFACE STIPULATIONS APPLICABLE TO ALL SURFACE DISTURBING ACTIVITIES

INTRODUCTION

This appendix lists the surface stipulations and affected acreage referred to throughout the PRMP. Where applicable, these stipulations would be applied to all surface disturbing activities associated with land use authorizations, permits, and leases issued on BLM administered lands. Private landowner concerns and objectives would be considered before enforcing a stipulation on split estate lands.

The stipulations identified in this Appendix were developed in the White River Resource Area Umbrella Oil and Gas Environmental Assessment and this PRMP. The stipulations were standardized to conform with the Colorado Oil and Gas Leasing and Development Environmental Impact Statement (BLM 1991).

EXCEPTIONS, MODIFICATIONS, AND WAIVERS

Most surface stipulations can be excepted, modified, or waived by the Area Manager if the decision is documented through an environmental analysis. An exception would suspend the stipulation on a one time basis. Modifications would temporarily or permanently change the language or provision of a stipulation. Waivers are utilized to permanently exempt the stipulation due to changed circumstances.

DESCRIPTIONS OF SURFACE STIPULATIONS

Surface stipulations consist of **NO SURFACE OCCUPANCY, TIMING LIMITATIONS, AND CONTROLLED SURFACE USE.** A no surface occupancy stipulation is intended to close an area to surface disturbance and to the placement of facilities. Timing limitation stipulations limit the types of activities that can occur during specific months of the year. Controlled surface use stipulations require that special development plans are submitted and approved before authorization is granted.

LEASE NOTICES

A lease notice provides information about a resource that is present that may limit activity or cause special operational planning to occur. Lease notices alert prospective lessees about possible limitations or restrictions that are applicable under existing laws, lease terms, regulations, or operational orders.

APPLICATION OF SURFACE STIPULATIONS AND NOTICES

A stipulation code has been assigned to each surface stipulation and lease notice listed in this Appendix. Legal descriptions have been developed for each stipulation code. For activities other than oil and gas leasing, applicable stipulations will be attached to use authorizations at the Resource Area. The stipulation codes and legal descriptions will be placed in a computer data base in the Colorado State Office (CSO). CSO personnel will utilize the data base to attach applicable stipulations or notices to new oil and gas lease parcels that will be sold at auction.

The following tables provide a definition of the stipulations and the acreage affected. They also identify the conditions under which exceptions, modifications, or waivers would apply. Table B-1 describes the No Surface Occupancy stipulations. Table B-2 lists the timing limitations, and Table B-3 identifies the requirements of the Controlled Surface Use Stipulations.

Table B-1 Proposed Management No Surface Occupancy Stipulations

Stip Code	Protected Resource	Acres Affected	Stipulation Description
NSO-01	Landslide Areas	35,710	**Landslide Areas**. Identified soils are considered unstable and subject to slumping and mass movement. Surface occupancy will not be allowed in such areas delineated from USDA SCS Order III Soil Surveys. **EXCEPTION**: The Area Manager may authorize surface occupancy if an environmental analysis finds the nature of the proposed action could be conditioned so as not to impair the stability of the landslide aras. An exception may also be granted if a more detailed soil survey, i.e., Order I, conducted by a qualified soil scientist, finds the soil properties associated with the proposed action are not susceptible to slumping and mass movement. **MODIFICATION**: Site specific modifications may be granted by the Area Manager pending determination that a portion of the soil units meet the following conditions: 1. Inclusions within the soil unit where slopes are less than 35 percent. 2. A more detailed survey identifies and delineates wet areas and sloping rock formations, and the proposed action is designed to avoid those areas. 3. The proposed action utilizes land treatments and soil stabilization practices that will demonstrate a high probability of reducing soil loss and preventing degradation of water quality. 4. The proposed action would not cause slumping or mass movement as demonstrated through engineering and design criteria. **WAIVER**: None
NSO-02	Raptor Nests -T/E, Candidate T/E and BLM Sensitive Species	10,350	**Special Status Raptors.** This area encompasses the nests of special status raptors, including listed, proposed, or candidate species for listing under the Endangered Species Act and BLM sensitive species. Surface occupancy is not allowed within 1/4 mile of the identified nests. **EXCEPTION:** An exception may be granted by the Area Manager, if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act), to interrupt active nesting attempts and/or cause short or long term adverse modification of suitable nest site characteristics. An exception may also be granted by the Area Manager if it is determined that the nature or conduct of the proposed or conditioned activity would not impair the function or utility of the nest site for current or subsequent nest activities or occupancy. **MODIFICATION**: Site specific modifications to the NSO area may be granted by the Area Manager pending determination that a portion of the NSO area is not essential to nest site functions or utility; or that the nature or conduct of the activity, as proposed or conditioned, would not impair the function or utility of the nest site for current or subsequent nest activities or occupancy. The stipulation may also be modified if the proponent, BLM, and where necessary, other affected interests, negotiate compensation that satisfactorily offsets anticipated impacts to candidate and BLM sensitive raptor breeding activities and/or habitats. Modifications could also occur if sufficient information is provided that supports the contention that the action would not contribute to the suppression of breeding population densities or the population's production or recruitment regime from a Geographic Reference Area perspective. If a species status is downgraded, or delisted, the NSO buffer area may be modified to an appropriate level. **WAIVER**: A waiver may be granted if the species becomes extinct or if site conditions change such that there is no reasonable likelihood of occupation for a subsequent minimum period of 10 years.
NSO-03	Raptor Nests - Other than Special Status Raptors	20,900	**Other Raptors**. This area encompasses raptor nests of other than special status raptor species. Surface Occupancy is not allowed within 1/8 mile of identified nests. **EXCEPTION**: An exception may be granted by the Area Manager if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act), to interrupt active nesting attempts and/or cause short or long term adverse modification of suitable nest site characteristics. The Area Manager may also grant an exception if an environmental analysis finds that the nature or conduct of the action, as proposed or conditioned, would not impair the function or utility of the nest site for current or subsequent nest activities or occupancy. **MODIFICATION**: Site specific modifications to the NSO area may be granted by the Area Manager pending determination that a portion of the NSO area is not essential to nest site functions or utility; or that the nature or conduct of the activity, as proposed or conditioned, would not impair the function or utility of the nest site for current or subsequent nest activities or occupancy. The stipulation may also be modified if the proponent, BLM, and where necessary, other affected interests, negotiate compensation that satisfactorily offsets anticipated impacts to candidate raptor breeding activities and/or habitats. Modifications could also occur if sufficient information is provided that supports the contention that the action would not contribute to the suppression of breeding population densities or the population's production or recruitment regime from a Geographic Reference Area perspective. **WAIVER**: A waiver may be granted by the Area Manager if documentation shows the nest site has been abandoned for a minimum of 3 years; or that the site conditions, including surrounding nest habitat, have changed such that there is no reasonable likelihood of site occupation for a subsequent minimum period of 10 years.

Stip Code	Protected Resource	Acres Affected	Stipulation Description
NSO-04	Sage grouse leks	5,490	**Sage Grouse Leks**. This area encompasses sage grouse leks. Surface Occupancy is not allowed within 1/4 mile of identified lek sites. **EXCEPTION:** An exception may be granted by the Area Manager if an environmental analysis determines that the action, as proposed or conditioned, would not impair the function or utility of the site for current or subsequent reproductive display, including daytime loafing/staging activities. **MODIFICATION:** The NSO area may be modified in extent, or substituted with a timing limitation, by the Area Manager if an environmental analysis finds that a portion of the NSO area is nonessential to site utility or function, or that the proposed action could be conditioned so as not to impair the function or utility of the site for current or subsequent reproductive display, including daytime loafing/staging activities. The stipulation may also be modified if the proponent, BLM, CDOW, and where necessary, other affected interests, negotiate compensation that satisfactorily offsets anticipated impacts to sage grouse breeding activities and/or habitats. **WAIVER**: This stipulation may be waived if, in cooperation with the Colorado Division of Wildlife, it is determined that the site has been permanently abandoned or unoccupied for a minimum of 5 years; site conditions have changed such that there is no reasonable likelihood of site occupation for a subsequent minimum period of 10 year.
NSO-05	Bald Eagle Roost/Con-centration Area	830	**Bald Eagle Roosts**. This area encompasses bald eagle nocturnal roosts and/or concentration areas. Surface occupation is not allowed within 1/4 mile of designated features. **EXCEPTION:** An exception may be granted by the Area Manager if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act), to interrupt roosting activities and/or cause short or long term adverse modification of suitable roost site characteristics. The Area Manager may also grant an exception if an environmental analysis indicates that the nature or conduct of the action, as proposed or conditioned, would not impair the function or utility of the site for current or subsequent roosting activities or occupancy. **MODIFICATIONS**: The NSO may be modified by the Area Manager if an environmental analysis indicates that a portion of the area is nonessential to roost site function or utility; or that the proposed action could be conditioned to not impair the function or utility of the site for current or subsequent roosting activities or occupancy. The stipulation may also be modified commensurate with changes in specie status. **WAIVER**: The stipulation may be waive if the species becomes extinct or if the site has failed to support roosting activities over a minimum three year period. A waiver may also apply if the area has changed such that there is no reasonable likelihood of site occupation for a subsequent minimum period of 10 years.
NSO-06	*Designated ACECs* - Dudley Bluffs (1,630 acres) - Yanks Gulch/ Upper Grease-wood Creek (2,680 acres)- Lower Grease-wood Creek (210 acres) - Raven Ridge (2,090 acres) - South Cathedral Bluffs (320 acres) -Deer Gulch (1810	8,740 acres	**ACECs**. These ACECs contain vertebrate and/or invertebrate fossils of high scientific value or possess plant species that are listed as T/E, candidates for listing, BLM sensitive, State of Colorado plant species of concern, or remnant vegetation associations. Surface occupancy or disturbance will not be allowed within the boundaries of the ACEC. **EXCEPTION**: The Area Manager may grant an exception to this stipulation if, after an on the ground plant inventory is conducted, an environmental analysis indicates that the nature or conduct of the action, as proposed or conditioned, would not directly or indirectly affect the identified important values of the ACEC. **MODIFICATION:** None. **WAIVER**: None.

Stip Code	Protected Resource	Acres Affected	Stipulation Description
NSO-06 *continued*	*Proposed ACECs*- Ryan Gulch (1,440 acres)-South Cathedral Bluffs Addition (1,010 acres)Raven Ridge Addition (2,890 acres)-Blacks Gulch (800 acres)-Coal Draw (1,840 acres)-Moosehead (8,940 acres)-Duck Creek (3430 Acres)	20,350 Acres	ACECs. These ACECs contain vertebrate and/or invertebrate fossils of high scientific value or possess plant species that are listed as T/E, candidates for listing, BLM sensitive, State of Colorado plant species of concern, or remnant vegetation associations. Surface occupancy or disturbance will not be allowed within the boundaries of the ACEC. **EXCEPTION**: The Area Manager may grant an exception to this stipulation if, after an on the ground plant inventory is conducted, an environmental analysis indicates that the nature or conduct of the action, as proposed or conditioned, would not directly or indirectly affect the identified important values of the ACEC. **MODIFICATION:** None. **WAIVER**: None.
NSO-7	Duck Creek Wickiup Site	3	**DUCK CREEK WICKIUP SITE**. This site is listed on the National Register of Historic Places. Surface occupancy is not allowed within this site. **EXCEPTION**: None. **MODIFICATION:** None. **WAIVER:** None.
NSO-8	Known and Potential Habitat for Listed and Candidate T/E Plant Species	46,840	**Known and Potential Habitat of Listed and Candidate T/E Plant Species**. This area contains T/E plants, candidate T/E plants, or potential habitat for these plants. No surface occupancy will be allowed on mapped populations of these plants. **EXCEPTION:** The Area Manager may grant an exception if an inventory and subsequent environmental analysis indicates that the nature or conduct of the action, as proposed or conditioned, would not directly or indirectly affect plant populations. **MODIFICATION:** None. **WAIVER**: None.
NSO-9	BLM Sensitive Plants and Remnant Vegetation Associations (RVA)	4,520	**SENSITIVE PLANTS AND REMNANT VEGETATION ASSOCIATIONS.** This area contains BLM sensitive plants and remnant vegetation associations. Surface occupation will not be allowed within known populations of these plants. **EXCEPTION**: The Area Manager may grant an exception if an inventory and subsequent environmental analysis indicates that the nature or conduct of the action, as proposed or conditioned, would not directly or indirectly affect plant populations. An exception may also be applied if the NSO would hinder or preclude the exercise of valid existing rights. Under that circumstance, protection of the plants would be afforded through Conditions of Approval, that would require reclamation of disturbed areas to include utilizing native seed mixes in RVAs, and reproducing sensitive species via transplant or some other means in areas containing sensitive species. **MODIFICATION:** None. **WAIVER:** None.
NSO-10	Oak Ridge State Wildlife Area	9,300	**OAK RIDGE STATE WILDLIFE AREA.** This area involves federal lands within the perimeter of the Oak Ridge State Wildlife Area. Surface occupancy is not allowed within the designated area. **EXCEPTION**: The Area Manager may grant an exception, in consultation with the Colorado Division of Wildlife, if an environmental analysis finds that the proposed action could be conditioned to be compatible with the wildlife values and public uses associated with the area. **MODIFICATION**: None. **WAIVER**: None.

Table B-2 Proposed Management Controlled Surface Use Stipulations

Stip Code	Protected Resource	Affected Acreage	Stipulation Description
CSU-1	Fragile Soils on Slopes > 35% and Saline Soils Derived from Mancos Shale	536,260	**Fragile Soils on Slopes Greater Than 35 Percent and Saline Soils.** Surface disturbing activities will be allowed in these areas only after an engineered construction/reclamation plan is submitted by the operator and approved by the Area Manager. The following items must be addressed in the plan: 1) How soil productivity will be restored; 2) How surface runoff will be treated to avoid accelerated erosion such as riling, gullying, piping, and mass wasting. **EXCEPTION:** An exception may be granted by the Area Manager if an environmental analysis of the proposed action identifies that the scale of the operation would not result in any long term decrease in site productivity or increased erosion. An exception may also be granted by the Area Manager if a more detailed soil survey determines that soil properties associated with the disturbance do not meet fragile soil criteria. **MODIFICATION:** None. **WAIVER:** None.
CSU-2	*Proposed ACECs* White River Riparian (950 acres) Coal Oil Rim (3,210 acres), Oil Spring Mountain (18,260 acres) East Douglas Creek (47,610 acres)	70,030	**Proposed ACECs.** These ACECs are known to contain, or have potential to contain, T/E plants or plants that are candidates for listing as T/E, State of Colorado plant species of concern, BLM sensitive plants, remnant vegetation associations, and/or unique plant communities. A plant inventory will be conducted prior to approving any surface disturbing activities within the ACEC boundaries. Surface disturbance will not be allowed within mapped locations of these plants. The presence of the above listed plants would require relocating surface disturbance or facilities more than 200 meters. The timing required for conducting the plant inventories may require deferring activities longer that 60 days. **EXCEPTION:** This stipulation may be excepted by the Area Manager if an environmental analysis of the proposed action indicates that the plants of concern would not be affected. **MODIFICATION:** None. **WAIVER:** None.
CSU-3	Ferret Reintroduction Area	53,830	**Black-Footed Ferret Reintroduction Area.** This is a controlled surface use area for promoting the reestablishment and development of a self-sustaining black-footed ferret population. Prior to authorizing activities in this area, the Area Manager will confer or consult with the USFWS as required by Section 7 of the Endangered Species Act. Depending on the scope of the proposed action, a plan of development may be required that demonstrates how the proposed activities would be conducted or conditioned to: 1) avoid the direct or indirect loss of black-footed ferrets; or 2) avoid affecting the capability of the site to achieve reestablishment objectives. The Area Manager may impose land use measures and limitations derived from a site specific ferret reintroduction and management plan. The measures and limitations would be designed to avoid, or reduce to acceptable levels, the short and long term adverse affects on ferret survival, behavior, reproductive activities, and/or the area's capacity to sustain ferret population objectives. Examples of measures and limitations include: 1) relocation of surface activities more than 200 meters; 2) deferring activities longer than 60 days; 3) limiting access to designated roads and trails; 4) modifications to project design to discourage raptor perching and prohibit the disruption of certain or all prairie dog burrow systems; 5) limit surface disturbance to certain seasons and times of day; 6) require participation in ferret surveys and/or efforts to offset loses of, or expand suitable prairie dog habitats to compensate for unavoidable habitat loss or adverse habitat modification. **EXCEPTION:** The Area Manager may authorize surface disturbance or use within these areas if an environmental analysis, and associated biological assessment, finds that the activity as proposed of conditioned, would not adversely influence ferret recovery, or conflict with the ferret reintroduction and management plan. **MODIFICATION:** The Area Manager may modify the terms of the CSU if the proposed action is shown to be compatible with ferret recovery goals and/or, the ferret reintroduction and management plan. **WAIVER:** The Area Manager may grant a waiver if extirpation of wild, free roaming ferret populations culminates in the discontinuance of the species recovery program, or local reintroduction efforts are otherwise abandoned.

Stip Code	Protected Resource	Affected Acreage	Stipulation Description
CSU-4	Aspen, Serviceberry, and Chokecherry Communities	61,540	**Blue Mountain Deciduous Browse/Aspen Communities.** This is a controlled surface use area in order to maintain the distribution, condition, and functional capacity of deciduous browse and aspen communities integral to high priority big game and blue grouse habitats. Prior to authorizing activities in this area, the proponent/applicant would be required to submit a plan of development that would demonstrate that: 1) involvement of aspen, serviceberry, and chokecherry associations have been avoided to the extent possible; 2) special reclamation measures or design features would promote accelerated recovery or establishment of desirable plant community components; 3) the potential or capacity of the area to support viable, self sustaining aspen, serviceberry, and chokecherry communities has not been diminished; 4) involvement of community derived values are mitigated through project life commensurate with projected impacts. Surface disturbance or occupation within aspen, serviceberry ,and chokecherry communities may be prohibited. **EXCEPTION:** The Area Manager may authorize actions within this area, without a plan of development, if an environmental analysis indicates that the proposed action would not involve or adversely affect the desirable attributes of the deciduous browse/aspen communities, or their wildlife related functions. Surface disturbance and occupation may also be authorized if established impacts to community derived habitat values would be compensated or offset to the satisfaction of the Area Manager. **MODIFICATION:** Integral with exception and stipulation. **WAIVER**: None.
CSU-5	Bald Eagle Nest, Roost, and Perch Habitat	6,720	**Bald Eagle Nest, Roost, and Perch Substrate**. This is a controlled surface use area for maintaining the long term suitability, utility and development opportunities for specialized habitat features involving nest, roost,and perch substrate on federal lands. Prior to authorizing surface disturbance within this area, and pending conferral or consultation with the USFWS as required by the Endangered Species Act, the Area Manager may require the proponent/applicant to submit a plan of development that would demonstrate that: 1) involvement of cottonwood stands or cottonwood regeneration areas have been avoided to the extent practicable; 2) special reclamation measures or design features are incorporated that would accelerate recovery and/or reestablishment of affected cottonwood communities; 3) the pre-development potential of affected floodplains to develop or support riverine cottonwood communities has not been diminished; and 4) the current/future utility of such cottonwood substrate for bald eagle use would not be impaired. **EXCEPTION**: The Area Manager may grant an exception to this stipulation if an environmental analysis indicates that the proposed or conditioned activities would not affect the long term suitability or utility of habitat features or diminish opportunities for natural floodplain functions. Surface disturbance and occupation may also be authorized in the event that established impacts to habitat values would be compensated or offset to the satisfaction of the BLM in consultation with USFWS and CDOW. **MODIFICATION:** Integral with exception and stipulation. **WAIVER**: None.
CSU-6	Colorado River Cutthroat Trout Habitat	67,830	**Colorado River Cutthroat Trout Habitat**. This is a controlled surface use area for protecting aquatic habitats occupied by candidate populations of Colorado River cutthroat trout. Prior to authorizing surface disturbance of occupied stream reaches or within watersheds contributing to occupied habitats, the Area Manager may require the proponent/applicant to submit a plan of development that would demonstrate that the proposed action would not: 1) increase stream gradient; 2) result in a net increase in sediment contribution; 3) decrease stream channel sinuosity; 4) increase the channel width to depth ratio; 5) increase water temperature; 6) decrease vegetation derived stream shading; and 7) degrade existing water quality parameters, including specific conductance, turbidity, organic/inorganic contaminant levels, and dissolved oxygen in occupied reaches or contributing perennial or intermittent tributaries. If approvals are granted and development results in these standards being exceeded, additional measures would be required to correct the deficiencies. The proponent may be required to monitor stream/channel responses throughout the life of the project. **EXCEPTION:** The Area Manager may authorize surface disturbance in these areas if an environmental analysis indicates that the project would have no adverse influence on identified stream characteristics. **MODIFICATION:** Short term transgressions of the stream characteristics listed above may be allowed if the Area Manager determines, through environmental analysis, that short term deviations will have no adverse consequences on affected channel reaches beyond the construction phase of the project. **WAIVER**: In the event the population status of Colorado River cutthroat trout warrants downgrading, this stipulation may be replaced by less stringent criteria.

Stip Code	Protected Resource	Affected Acreage	Stipulation Description
CSU-7	Canyon Pintado National Historic District	16,040	**Canyon Pintado National Historic District.** This is a controlled surface use area for the protection of cultural resources. The Area Manager may approve actions within this area if an environmental analysis and inventory indicates that the proposed action is compatible with the intent of the Historic District, and can comply with Historic District cultural resource protection requirements. All proposed actions will be reviewed for conflicts with known archaeological or historical resources. In areas of conflicts, a pedestrian inventory of the proposed project area will be completed by a qualified archaeologist using standards specified by the BLM. The Area Manager may require that a qualified archaeologist be present to monitor operations during surface disturbing activities. If archaeological resources are located during the inventory, the proposed action will be relocated to avoid and protect the cultural values. Proposed actions that produce vibrations will be located a distance far enough away from rock art or structural features to allow full attenuation of the vibration before it gets to the resource of concern. All inventories are required to be submitted to the BLM in report form and are subject to review by the Colorado State Historic Preservation Office and the Advisory Council on Historic Preservation prior to approval of the proposed action. Surface Occupation may not be allowed to occur in order to protect cultural resources. **EXCEPTION**: None. **MODIFICATION**: None. **WAIVER:** None.
CSU-8	Coal Mine	8,146	**Permitted Coal Mine.** This area is included in the approved permit area for the Deserado Coal Mine. The oil and gas lessee must reach agreement with the federal coal lessee on the placement of wells or surface facilities within the coal mine permit area. Surface occupation may not be allowed within the mine permit area. **EXCEPTION**: The Area Manager may grant an exception to this stipulation if the coal lessee and the oil and gas lessee have reached an agreement as to the location of well(s) and surface facilities. **MODIFICATION:** None. **WAIVER**: The Area Manager may waive this stipulation if the coal mining operation is abandoned.
CSU-9	Cultural Resources	22,510	**Texas-Missouri-and Evacuation Creek Cultural Resource Concentration Area.** This area contains a high potential for the occurance of cultural resources. In the event archaeological or historical resources are located during the inventory process, the proposed action will be relocated to avoid and protect the cultrual values. The extent of relocation will be dependent upon the nature and extent of the proposal and the type of cultural resources involved. Relocation may involve moving surface disturbing activities a distance greater than 200 meters to adequately avoid the resource of concern. Proposed actions that would result in the production of supersonic, sonic, or low frequency subsonic vibrations shall be located a distance far enough from rock art or architectural features to allow full attenuation of the vibrations. **EXCEPTION:** The Area Manager may grant an exception to this stipulation, if though an environmental analysis and consultation with the Colorado SHPO and ACHP, it is determined that other acceptable mitigation can be developed to protect or preserve sites and data. **MODIFICATION:** None. **WAIVER:** None.

Table B-3 Proposed Management Timing Limitation Stipulations

Stip Code	Protected Resource	Affected Acreage	Stipulation Description
TL-01	Raptor Nesting Sites (Listed, Proposed, and Candidate T/E and BLM Sensitive Except Bald Eagle and Ferruginous Hawks)	1,510	**Special Status Raptors Other Than Bald Eagles and Ferruginous Hawks**. This area encompasses the nests of threatened, endangered, or candidate raptors. No development activities are allowed within 1/2 mile of identified nest sites from February 1 through August 15, or until fledgling and dispersal of young. (Development activities allowed from August 1 through January 31). **EXCEPTION:** An exception may be granted to these dates by the Area Manager, if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act) to harass, harm, wound, or kill in the context of active nesting attempts. An exception can also be granted if an environmental analysis of the proposed action indicates that nature or conduct of the activity could be conditioned so as not to impair the utility of nest for current or subsequent nesting activity or occupancy. The Area Manager may also grant an exception if the nest is unattended or remains unoccupied by May 15 of the project year. **MODIFICATION:** The Area Manager may modify the size of the stipulation area if an environmental analysis indicates that a portion of the area is nonessential to nest utility or function, or that the proposed action could be conditioned so as not to impair the utility of the nest site for current or subsequent nest activities or occupation. The stipulation may also be modified if the proponent, BLM, and where necessary, other affected interests, negotiate compensation that satisfactorily offsets anticipated impacts to candidate and BLM sensitive raptor breeding activities and/or habitats. Modifications could also occur if sufficient information is provided that supports the contention that the action would not contribute to the suppression of breeding population densities or the population's production or recruitment regime from a Geographic Reference Area perspective. If a species status is downgraded, or if a species is delisted, the size of the TL area may be reduced. **WAIVER**: A waiver may be granted if the species becomes extinct or there is no reasonable likelihood of site occupation over a minimum 10 year period.
TL-02	Bald Eagle Nests	250	**Bald Eagle Nests**. This area encompasses bald eagle nests. No development is allowed within 1/2 mile of identified nests from December 15 through July 15, or until fledgling and dispersal of young. (Development activities allowed from July 16 through December 14). **EXCEPTION**: An exception may be granted to these dates by the Area Manager, if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act) to harass, harm, wound, or kill in the context of active nesting attempts. An exception can also be granted if an environmental analysis of the proposed action indicates that nature or conduct of the activity could be conditioned so as not to impair the utility of nest for current or subsequent nesting activity or occupancy. The Area Manager may also grant an exception if the nest is unattended or remains unoccupied by May 15 of the project year. **MODIFICATION:** The Area Manager may modify the size of the stipulation area if an environmental analysis indicates that a portion of the area is nonessential to nest utility or function, or that the proposed action could be conditioned so as not to impair the utility of the nest site for current or subsequent nest activities or occupation. If the species status is downgraded, or if the species is delisted, the size of the TL area may be reduced. **WAIVER**: A waiver may be granted if the nest has remained unoccupied for a minimum of three years or conditions have changed such that there is no reasonable likelihood of site occupation over a minimum 10 year period.
TL-03	Ferruginous Hawks	73,880	**Ferruginous Hawks**. This area encompasses the nests of ferruginous hawks which are candidates for listing under the Endangered Species Act. No development is allowed within one (1) mile of identified nests from February 1 through August 15, or until fledgling and dispersal of young. (Development activities allowed from August 16 through January 31). **EXCEPTION:** An exception may be granted to these dates by the Area Manager, if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act) to harass, harm, wound, or kill in the context of active nesting attempts. An exception can also be granted if an environmental analysis of the proposed action indicates that nature or conduct of the activity could be conditioned so as not to impair the utility of nest for current or subsequent nesting activity or occupancy. The Area Manager may also grant an exception if the nest is unattended or remains unoccupied by May 15 of the project year. **MODIFICATION:** The Area Manager may modify the size of the stipulation area if an environmental analysis indicates that a portion of the area is nonessential to nest utility or function, or that the proposed action could be conditioned so as not to impair the utility of the nest site for current or subsequent nest activities or occupation. The stipulation may also be modified if the proponent, BLM, and where necessary, other affected interests, negotiate compensation that satisfactorily offsets anticipated impacts to raptor breeding activities and/or habitats. Modifications could also occur if sufficient information is provided that supports the contention that the action would not contribute to the suppression of breeding population densities or the population's production or recruitment regime from a Geographic Reference Area perspective. If the species status is downgraded, or if the species is delisted, the size of the TL area may be reduced. **WAIVER**: A waiver may be granted if the nest has remained unoccupied for a minimum of three years or conditions have changed such that there is no reasonable likelihood of site occupation over a minimum 10 year period.

Stip Code	Protected Resource	Affected Acreage	Stipulation Description
TL-04	Raptor Nests (Other than T/E and Candidate T/E Species)	72,680	**Other Raptors.** This area encompasses the nests of raptors that are other than threatened, endangered, or candidate species. No development activities are allowed within 1/4 mile of identified nests from February 1 through August 15, or until fledgling and dispersal of young. (Development allowed from August 16 through January 31). **EXCEPTION:** An exception may be granted to these dates by the Area Manager, if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act) to harass, harm, wound, or kill in the context of active nesting attempts. An exception can also be granted if an environmental analysis of the proposed action indicates that nature or conduct of the activity could be conditioned so as not to impair the utility of nest for current or subsequent nesting activity or occupancy. The Area Manager may also grant an exception if the nest is unattended or remains unoccupied by May 15 of the project year. **MODIFICATION:** The Area Manager may modify the size of the stipulation area if an environmental analysis indicates that a portion of the area is nonessential to nest utility or function, or that the proposed action could be conditioned so as not to impair the utility of the nest site for current or subsequent nest activities or occupation. The stipulation may also be modified if the proponent, BLM, and where necessary, other affected interests, negotiate compensation that satisfactorily offsets anticipated impacts to raptor breeding activities and/or habitats. Modifications could also occur if sufficient information is provided that supports the contention that the action would not contribute to the suppression of breeding population densities or the population's production or recruitment regime from a Geographic Reference Area perspective. **WAIVER:** A waiver may be granted if the nest has remained unoccupied for a minimum of three years or conditions have changed such that there is no reasonable likelihood of site occupation over a minimum 10 year period.
TL-05	Bald Eagle Roost or Concentration Areas	4,590	**Bald Eagle Winter Roosts and Concentration Areas.** This area encompasses bald eagle winter roosts and concentration areas. No development is allowed within 1/2 mile of identified sites from November 15 through April 15. (Development allowed from April 16 through November 14). **EXCEPTION:** An exception may be granted to these dates by the Area Manager, if authorization is obtained from the USFWS (through applicable provisions of the Endangered Species Act, Eagle Protection Act, or Migratory Bird Treaty Act) to harass, harm, wound, or kill in the context of ongoing roosting activities and/or short or long term adverse modification of suitable roost site characteristics. An exception can also be granted if an environmental analysis of the proposed action indicates that nature or conduct of the activity could be conditioned so as not to impair the utility of the site for current or subsequent roosting activities or occupancy. An exception may also be granted if forms of compensation are satisfactorily negotiated (through Section 7 Consultation) which fully offset losses associated with project implementation. **MODIFICATION:** The Area Manager may modify the size of the stipulation area or timeframes if an environmental analysis indicates that a portion of the area is nonessential to roost site function and utility, or that the proposed action could be conditioned so as not to impair the utility of the roost site for current or subsequent roosting activities or occupancy. **WAIVER**: A waiver may be granted if the species becomes extinct, the site has failed to support roosting activities over a minimum 3 year period, or if the site conditions have changed such that there is no reasonable likelihood of site occupation over a minimum 10 year period.
TL-06	Sage Grouse Nest Habitat	152,510	**Sage Grouse Nesting Habitat.** This area encompasses suitable sage grouse nesting habitat associated with individual leks. This stipulation will not take effect until direct and indirect impacts to suitable nesting cover exceeds 10 percent of the habitat available within 2 miles of identified leks. Further development, after this threshold has been exceeded, will not be allowed from April 15 through July 7. (Development can occur until 10 per cent of the habitat associated with a lek is impacted, from then on, additional activity can occur from July 8 through April 14). **EXCEPTION**: The Area Manager may grant an exception if an environmental analysis and consultation with the CDOW indicates that the proposed action could be conditioned so as not to affect nest attendance, egg/chick survival, or nesting success. An exception could also be granted if the proponent, BLM, and CDOW negotiate compensation that would satisfactorily offset the anticipated losses of nesting habitat or nesting activities. Actions designed to enhance the long term utility or availability of suitable nest habitat may be excepted. **MODIFICATION:** The Area Manager may modify the size of the TL area if an environmental analysis indicates that the proposed action could be conditioned so as not to affect nest attendance, egg/chick survival, or nesting success. Timeframes may be modified if operations could be conditioned to allow a minimum of 70 percent of nesting attempts to progress through hatch. **WAIVER**: This stipulation may be waived if CDOW determines that the described lands are incapable of serving the long term requirements of sage grouse nesting habitat and that these ranges no longer warrant consideration as components of sage grouse nesting habitat.

Stip Code	Protected Resource	Affected Acreage	Stipulation Description
TL-07	Elk Production Areas	12,690	**Elk Production Area**. This area encompasses an elk production area. No development is allowed from May 15 through June 30 (Development can occur from July 1 through May 14). **EXCEPTION:** The Area Manager may grant an exception if an environmental analysis indicates that the propose action can be conditioned so as not to interfere with habitat function or compromise animal condition within the project vicinity. An exception may also be granted if the proponent, BLM, and CDOW negotiate compensation that would satisfactorily offset anticipated impacts to elk production or habitat condition. An exception may also be granted for actions intended to enhance the long term utility or availability of suitable habitat. **MODIFICATION**: The Area Manager may modify the size and timeframes of this stipulation if CDOW monitoring information indicates that current animal use patterns are inconsistent with dates established for animal occupation. Modifications could be authorized if the proposed action could be conditioned so as not to interfere with critical habitat function or compromise animal condition. A modification may also be approved if the proponent, BLM, and CDOW agree to compensation that satisfactorily offset detrimental impacts to elk production or habitat condition. **WAIVER**: This stipulation may be waived if CDOW determines that the area is no longer utilized by elk for production purposes.
TL-08	Big Game Severe Winter Range	613,510	**Big Game Severe Winter Range**. This area encompasses big game severe winter range. No development activity is allowed from December 1 through April 30 (Development is allowed from May 1 through November 30). **EXCEPTION:** The Area Manager may grant an exception if an environmental analysis indicates that the proposed action could be conditioned so as not to interfere with habitat function or compromise animal condition within the project vicinity. An exception may also be granted if the proponent, BLM, and CDOW negotiate compensation that would satisfactorily offset anticipated impacts to big game winter activities or habitat condition. Under mild winter conditions, when prevailing habitat or weather conditions allow early dispersal of animals from all or portions of a project area, an exception may be granted to suspend the last 60 days of this seasonal limitation. Severity of winter will be determined on the basis of snow depth, snow crusting, daily mean temperatures, and whether animals were concentrated on the winter range during the winter months. Exceptions may also be granted for actions specifically intended to enhance the long term utility or availability of suitable habitat. **MODIFICATION**: The Area Manager may modify the size and timeframes of this stipulation if CDOW monitoring information indicates that current animal use patterns are inconsistent with dates established for animal occupation. Modifications may also be authorized if the proposed action could be conditioned so as not to interfere with habitat function or compromise animal condition. In addition, if the proponent, BLM, and CDOW agree to habitat compensation that satisfactorily offsets detrimental impacts to activity or habitat condition. **WAIVER:** This stipulation may be waived if the CDOW determines that all or specific portions of the area no longer satisfy this functional capacity.
TL-09	Deer/Elk Summer Range	337,284	**Deer and Elk Summer Range**. This area is located within deer and elk summer ranges, which due to limited extent, are considered critical habitat within appropriate CDOW Game Management Units. This stipulation will not take effect until direct and indirect impacts to suitable summer range habitats exceed 10 percent of that available within the individual Game Management Units. When this threshold has been reached, no further development activity will be allowed from May 15 through August 15 (Development is allowed until 10 percent of individual GMU summer habitat has been affected, then additional development is allowed from August 16 through May 14). **EXCEPTION:** The Area Manager may grant an exception if an environmental analysis indicates that the proposed action could be conditioned to have no additional influence on the utility or suitability of summer range habitats. An exception may also be granted if the proponent, BLM, and CDOW negotiate compensation that would satisfactorily offset anticipated impacts to summer range function or habitat. Exceptions may also be granted for actions specifically intended to enhance the long term utility or availability of suitable habitat. **MODIFICATION**: The Area Manager may modify the size and timeframes of this stipulation if CDOW monitoring information indicates that current animal use patterns are inconsistent with dates established for animal occupation. Modifications may also be authorized if the proposed action could be conditioned to have no additional influence on the utility or suitability of summer range habitats. **WAIVER**: This stipulation may be waived if the CDOW determines that all or specific portions of the area no longer satisfy this functional capacity or that these summer ranges no longer merit critical habitat status. Waivers will also be applied to delineated summer range occurring below 2,250 meters (7,350 feet) in elevation.

Stip Code	Protected Resource	Affected Acreage	Stipulation Description
TL-10	Sage Grouse Crucial Winter Habitat	0	**Sage Grouse Winter Concentration Areas.** This area encompasses sagebrush habitats that are occupied by wintering concentrations of grouse, or represent the only habitats that remain available for use during periods of heavy snowpack. No development activity will be allowed between December 16 and March 15. The Colorado Division of Wildlife (CDOW) has indicated that these features exist on public lands within the White River Resource Area but have not yet delineated specific areas that will be subject to this timing restriction. Specific **Exception, Modification**, and **Waiver** language will be developed in cooperation with the CDOW after the affected areas have been delineated.
TL-11	Pronghorn Production Areas	0	**Pronghorn Production Areas**. This area is located within a pronghorn production area. No development activity is allowed within this area between May 1 and June 30. The Colorado Division of Wildlife (CDOW) has indicated that these features exist on public lands within the White River Resource Area but have not yet delineated specific areas that will be subject to this timing restriction. Specific **Exception, Modification**, and **Waiver** language will be developed in cooperation with the CDOW after the affected areas have been delineated.

Table B-4 Lease Notices

Notice code	Resource of Concern	Applicable Area	Notice Description
LN-1	Prairie Dog Towns	Mapped areas	**Prairie Dog Towns**. Lands within this lease parcel involve prairie dog ecosystems that constitute potential habitat for wild or reintroduced populations of the federally endangered black-footed ferret. Conservation and recovery efforts for the black-footed ferret are authorized by the Endangered Species Act of 1973 (as amended). The successful lessee may be required to perform special conservation measures prior to and during lease development. These measures may include one or more of the following: 1. Performing site-specific habitat analysis and/or participating in ferret surveys. 2. Participating in the preparation of a surface use plan of operations with BLM, USFWS, and CDOW, which integrates and coordinates long term lease development with measures necessary to minimize adverse impacts to black-footed ferrets or their habitat. 3. Abiding by special daily and seasonal activity restrictions on construction, drilling, product transport, and service activities. 4. Incorporating special modifications to facility siting, design, construction, and operation. 5. Providing in-kind compensation for habitat loss and/or displacement (e.g, special on-site rehabilitation/ revegetation measures or off-site habitat enhancement).
LN-2	Paleontological Resources	Wasatch, Uinta, DeBeque, Upper Mesa Verde, Green River, and other formations containing scientifically significant fossil localities.	**Paleontological Values**. This lease encompass a Class I paleontological area and has the potential to contain important fossils. Prior to authorizing surface disturbing activities, the BLM will make a preliminary determination as to whether potential exists for the presence of fossil material. If potential exists for the presence of valuable fossils, the area will be required to have a Class I paleontological survey completed. Mapped fossil sites will be protected by applying the appropriate mitigation to the use authorization. Mitigation may involve the relocation of disturbance in excess of 200 meters, or excavation and recording of the fossil remains. Certain areas may require the presence of a qualified paleontologist to monitor operations during surface disturbing activities. BLM will determine the disposition of any fossils discovered and excavated.
LN-3	Wild Horse Habitat	Herd Management Areas	**Wild Horse Habitat.** This lease parcel encompass a portion of a wild horse herd management area. In order to protect wild horses within this area, intensive development activities may be delayed for a specified 60 day period within the spring foaling period between March 1 and June 15. The lessee may be required to perform special conservation measures within this area including: 1) Habitat improvement projects in adjacent areas if development displaces wild horses from critical habitat; 2) Disturbed watering areas would be replaced with an equal source of water, having equal utility; 3) Activity/improvements would provide for unrestricted movement of wild horses between summer and winter ranges.

APPENDIX C
CONDITIONS OF APPROVAL
(BEST MANAGEMENT PRACTICES)

This Appendix lists the Conditions of Approval (COA) that have been developed over a number of years, usually through environmental documentation, that have been proven to mitigate impacts from surface disturbing activities. These COAs were identified as Best Management Practices in the DRMP. However, that terminology caused confusion among the various public land users. Many of these COAs are already included by applicants in their request for authorization approvals. This practice will often speed up the authorization review process. If an applicable COA, or other mitigation that will accomplish the desired goal, is not included in an application, BLM resource specialists will utilize the applicable conditions presented here to help mitigate impacts. These conditions will apply, where appropriate, to all use authorizations, including BLM initiated projects. Approved projects will be monitored to determine the effectiveness of the COA in accomplishing the desired goal. Applicants can suggest alternate conditions that could accomplish the same result.

ALL SURFACE DISTURBING ACTIVITIES

1. No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies.
2. Surface disturbing activities would be required to avoid riparian/ wetland habitat.
3. Locate and maintain sanitation facilities according to state regulations.
4. When preparing the site, all suitable topsoil should be stripped from the surface of the location and stockpiled for reclamation once the location is abandoned. When topsoil is stockpiled on slopes exceeding five percent, construct a berm or trench below the stockpile.
5. Sedimentation shall be diverted and/or run through catchment basins in order to protect surface waters.
6. All sediment control structures or disposal pits, will be designed to contain a 100-year, 6-hour storm event. Storage volumes within these structures will have a design life of 25 years.
7. All trees removed in the process of construction shall be purchased from the Bureau of Land Management. The trees shall be cut with a maximum stump height of six inches and disposed of by one of the following methods:
   a. Trees must be cut before being dozed off the area of disturbance. Trees shall be cut into four-foot lengths, down to four inches in diameter and placed along the edge of the disturbance.
   b. Purchased trees may be removed from federal land for resale or private use. Limbs may be scattered off the area of disturbance but not dozed off.
   c. Chipped and scattered.
8. All activity shall cease when soils or road surfaces become saturated to a depth of three inches unless otherwise approved by the Authorized officer.
9. There shall be no mud blading of roads. Vehicles may be towed through the mud provided they stay within the original roadway.
10. Special design and reclamation measures may be required to protect scenic and natural landscape values. These design and measures may include transplanting trees and shrubs, mulching and fertilizing disturbed areas, use of low profile permanent facilities, and painting to minimize visual contrasts. Surface disturbing activities may be moved up to 200 meters to avoid sensitive areas or to reduce the visual affects of the proposal. These measures would be applied to the following VRM Class II and III areas: Canyon Pintado National Historic District; Highways 13, 40, 64, and 139 corridors; viewsheds in the Blue Mountain/ Moosehead GRA; White River Corridor; Douglas and Baxter Pass divide; Cathedral Bluffs; and VRM Class II areas around Meeker. These measures may also be applied to other areas on a case by case basis.
11. All above ground facilities shall be painted to blend in with the surrounding environment.
12. All disturbed areas will be contoured to blend with the natural topography. Blending is defined as reducing form, line, and color contrast associated with the surface disturbance. In visually sensitive areas and WSAs, all disturbed areas shall be contoured to match the original topography. Matching is defined as reproducing the original topography and eliminating form, line, and color caused by the disturbance as much as possible.

ROAD CONSTRUCTION AND MAINTENANCE

1. Base road design criteria and standards on road management objectives such as traffic requirements of the proposed activity and the overall transportation plan, economic analysis, safety requirements, resource objectives, and minimizing damage to the environment. Road construction and maintenance will be subject to the minimum standards contained in BLM Manual 9113.
2. Locate roads so as to minimize their influence on riparian areas and, when stream crossing is necessary, design the approach and crossing perpendicular to the channel. Locate the crossing where the channel is well-defined, unobstructed and straight.
3. Locate roads on stable positions (e.g., ridges, natural benches, and flatter transitional slopes near ridges and valley bottoms). Implement extra mitigation measures when crossing areas of unstable or fragile soils.
4. Avoid headwalls, midslope locations on steep, unstable slopes, seeps, old landslides, slopes in excess of 70 percent, and areas where the geologic bedding planes or weathering surfaces are inclined with the slope.

5. Locate roads to minimize heights of cutbanks. Avoid high, steeply sloping cutbanks in highly fractured bedrock.
6. Locate roads on well-drained soil types. Avoid wet areas.
7. Sloping the road base to the outside edge for surface drainage is normally recommended for local spurs or minor collector roads where low volume traffic and lower traffic speeds are anticipated. This is also recommended in situations where long intervals between maintenance will occur and where minimum excavation is wanted. Out sloping is not recommended on gradients greater than eight to 10 percent.
8. Sloping the road base to the inside edge is an acceptable practice on roads with gradients more than 10 percent and where the underlying soil formation is very rocky and not subject to appreciable erosion or failure.
9. Crown and ditching is recommended for arterial and collector roads where traffic volume, speed, intensity and user comfort are considerations. Gradients may range from two to 15 percent as long as adequate drainage away from the road surface and ditch lines is maintained.
10. Minimize excavation through use of balanced earthwork, narrowing road width, and end hauling where slopes are greater than 60 percent.
11. Surface roads if they will be subject to traffic during wet weather. The depth and gradation of surfacing will be determined by traffic type, frequency, weight, maintenance objectives, and the stability and strength of the road foundation and surface materials.
12. Provide vegetative or artificial stabilization of cut and fill slopes in the design process. Avoid establishment of vegetation where it inhibits drainage from the road surface or where it restricts safety or maintenance.
13. When roads are located in low-lying areas, ensure that the road surface is constructed above the adjacent ground surface.
14. Avoid side casting where it will adversely affect water quality or weaken stabilized slopes.
15. Provide for erosion-resistant surface drainage prior to fall rain or snow.
16. Improve flat gradients to a minimum of two percent or provide raised subgrade sections to avoid saturation of the road base.
17. Reconstruct culvert catch basins to BLM specifications. Catch basins in solid rock need not be reconstructed provided water flow is not restricted by soil, rock, or other debris.
18. Identify potential water problems caused by off-site disturbance and add necessary drainage facilities.
19. Identify ditchline and outlet erosion caused by excessive flows and add necessary drainage facilities and armoring.
20. Replace undersized culverts and repair or replace damaged culverts and downspouts.
21. Add additional full-rounds, half-rounds, and energy dissipators as needed.
22. Correct special drainage problems (e.g., high water table, seeps) that affect stability of subgrade by using perforated drains, geotextiles, or drainage bays.
23. Eliminate undesirable berms that retard normal surface runoff.
24. Surface inadequately-surfaced roads that are to be left open to public traffic during wet weather.
25. Roadside brushing should be done in a way that prevents disturbance to root systems (i.e., avoid using excavators for brushing).
26. Leave abandoned roads in a condition that provides adequate drainage without further maintenance.
27. Close abandoned roads to traffic. Physically obstruct the road with a gate or as many large berms, trenches, logs, stumps, or rock boulders as necessary to accomplish permanent closure.
28. When seasonal activity is completed and road closure is not necessary, the road surface should be crowned, outsloped, insloped, or water-barred.
29. Remove berms from the outside edge of road where runoff is channeled.
30. Maintenance should be performed to conserve existing surface material, retain the original crowned or outsloped self-draining cross section, prevent or remove rutting berms (except those designed for slope protection) and other irregularities that retard normal surface runoff. Avoid wasting loose ditch or surface material over the shoulder where it can cause stream sedimentation or weaken slump-prone areas. Avoid undercutting backslopes.
31. Promptly remove slide material when it is obstructing road surface and ditchline drainage. Save all soil or material useable for reclamation and stockpile for future reclamation needs. Use remaining slide material for needed road improvement or place in a stable waste area. Avoid side casting of slide material where it can damage, overload, saturate embankments, or flow into downslope drainage courses. Reestablish vegetation in areas where more than 50 percent of vegetation has been destroyed due to side casting.
32. Retain vegetation on cut slopes unless it poses a safety hazard or restricts maintenance activities. Cut roadside vegetation rather than pulling it out and disturbing the soil.
33. Bridges should be designed and constructed according to the standards provided in BLM Manual 9112. The design, review, and evaluation must be accomplished under the direct supervision of a registered professional engineer.
34. If the installation of a bridge would result in the discharge of soil into water, a permit must be obtained from the U.S. Army Corps of Engineers according to Section 404 of the Clean Water Act of 1977.
35. Culverts should be designed and constructed according to the standards provided in BLM Manual 9112. The design, review and evaluation must be accomplished under the direct supervision of a registered professional engineer.
36. Culverts should be designed and placed to assure the adequate passage of fish, provide minimum impact on water quality, and handle peak runoff and flood waters.
37. Culvert placement should lay on solid ground to avoid road failures.
38. Proper sized aggregate and rip rap should be used during culvert construction.
39. Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces.
40. Provide energy dissipators at culvert outlets or drainage dips.
41. Place rip rap at culvert entrance to streamline water flow and reduce erosion.

42. Install cross drains according to the following:

Percent Grade	Spacing in Feet.
1-6	300
7-9	200
10-14	150
15-20	90
21-40	50
Over 41	25

43. Use drainage dips instead of culverts on roads that have gradients less than 10 percent or where road management objectives result in blocking roads. Avoid drainage dips on road gradients greater than 10 percent.
44. Do not locate drainage dips where water might accumulate or where there is an outside berm that prevents drainage from the roadway.
45. Locate and design drainage dips immediately upgrade of stream crossings, providing buffers and sediment basins, to prevent sediment from entering the stream.
46. Limit activities of mechanized equipment within stream channels.
47. Place permanent stream-crossing structures on fishery streams before heavy equipment moves beyond the crossing area. Where this is not feasible, install temporary crossings to minimize stream disturbance.
48. Use 12 inches as the minimum recommended cover over a culvert, or one-half the diameter of the culvert, whichever is greater.
49. Monitor culvert installations to ensure adequate armoring of inlet and outlet and no erosion of design. Patrol areas susceptible to road or watershed damage during periods of high runoff.
50. Keep road inlet and outlet ditches, catch basins, and culverts free of obstructions, particularly before and during spring runoff. Routine machine-cleaning of ditches should be kept to a minimum during wet weather.

TANKS AND PITS

1. All fluid storage tanks shall have a dike constructed around the tank of sufficient capacity to adequately contain at least 110 percent of the storage capacity of the tank. Tank batteries shall have a dike capable of adequately containing 110 percent of the largest tank.
2. Pits designed to contain fluids shall be constructed so that leaking or breaching problems are minimized and reclamation potential is maximized. At least 50 percent of the pit capacity shall be in cut material. When fractured rock or porous materials are encountered, pits shall be lined with bentonite or an impermeable membrane to prevent leakage.
3. All pits constructed in high and medium priority riparian areas (see Tables 2-30 and 2-31 in the Draft RMP), will be lined with an impermeable membrane.
4. Reserve pits used for drilling will be fenced on three sides prior to drilling activity and closed off on the fourth side after drilling is finished. All fence corners will be braced with an H-type brace. Within the wild horse range, the reserve pit fence shall be 48 inches high. In sheep allotments, the fence will have 48 inches of woven wire and cattle allotments will have four strands of barbed wire. Fences will be located at least four feet from the edge of the pit slope.
5. Remove all oil from the surface of reserve pits within 24 hours.
6. All produced liquids shall be contained in a pit or tank, including the dehydrator vent/condensate line effluent. All production pits shall have a livestock-proof fence. All pits shall be bermed. If inverted culverts are used as production pits, the culvert top may be covered with an expanded metal cover in lieu of fencing.
7. Pits remaining after the drilling period which store or are expected to store production fluids will be wired or netted to prevent or discourage entry by larger birds attracted to sources of water, including raptors and waterfowl. At a minimum, wire will be stretched over the entire length and breadth of the pit at intervals not exceeding three feet, and made permanently conspicuous either by choice of material or installation of flagging material evenly distributed across the pit at a minimum rate of one flag per 18 square feet.
8. Reserve pits will be allowed to dry through natural evaporation for one four season cycle after the well is drilled. If a pit has not dried by the end of this period, all remaining fluids and/or mud must be removed and disposed of in an approved manner. The pit shall be recontoured within 15 months after the well is drilled.
9. The concentration of hazardous substances in the reserve pit at the time of pit backfilling must not exceed the standards set forth in CERCLA.

OIL AND GAS

1. Mineral resources and fresh water aquifers shall be protected while drilling mineral exploration and development wells.
2. All wells, whether exploration or development, drilling, producing, suspended, or abandoned, shall be identified following 43 CFR 3162.6. Pressure tests are required before drilling out from under all casing strings set and cemented in place. Blowout preventer controls must be installed prior to drilling out the surface shoe and prior to starting workover or completion operations. Preventers will be inspected and operated at least daily to insure good mechanical working order. This inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling out from below each casing string. All BOP pressure tests must be recorded on the daily drilling report.
3. If air drilling, the operator shall control blooey line discharge dust by use of water injection or any other acceptable method. The blooey line discharge shall be a minimum of 100 feet from the well head and be directed into the blooey pit in such a manner as to allow containment of drill bit cuttings and waste in blooey pit.
4. Well Plugging Standards:
   a. Open Hole: a cement plug shall be placed to extend at least from 50 feet below the bottom (except as limited by total depth (TD) or plugged back total depth (PBTD) to 50 feet above the top of (1) any zones encountered during drilling that contain fluid with a potential to migrate; (2) lost circulation zones; and (3) any potential valuable minerals, including noncommercial hydrocarbons, coal, and oil shale. Extremely thick sections may be secured by placing 100-foot plugs across the top and bottom of the formation. Lost circulation zones may require alternate methods. In the absence of productive zones or minerals that otherwise required placement of cement plugs, long sections of open hole shall be plugged at least every 3,000 feet. Such plugs shall be placed across in-gauge sections of the hole.

b. Cased Hole: a cement plug shall be placed opposite all open perforations and extend a minimum of 50 feet below (except as limited by TD or PBTD) to 50 feet above the perforated interval. In lieu of the cement plug, a bridge plug is acceptable, provided (1) the plug is set as close as practical above the open perforations; (2) the perforations are isolated from any open hole below; and (3) the plug is capped--if cap is placed through tubing, a minimum of 50 feet of fill-up is required; if placed by bailer, a minimum of 35 feet of fill-up is needed. If production casing is cut and recovered, a cement plug shall be placed to extend at least 50 feet above and below the stub. An additional cement plug shall be placed to extend a minimum of 50 feet above and below the shoe of the surface casing (or intermediate string, as appropriate). The exposed hole resulting from the casing removal must be secured as required above.

c. Annular Space: no annular space that extends to the surface shall be left open to the drilled hole below. If this condition exists, a minimum of the top 50 feet of annulus shall be plugged with cement.

d. Testing: the first plug below the surface plug shall generally be tested by either tagging the plug with the working pipe string or pressuring to a minimum pump (surface) pressure of 1,000 psig with no more than a 10 percent drop during a 15-minute period (cased hole only). If the integrity of any other plug is questioned, it must be tested in the same manner. Also, any cement plug that is the only isolating medium for a fresh water interval or a zone containing a valuable mineral deposit should be tested by tagging with the drill string. Tagging the first plug below the surface plug will not be necessary where water flows or valuable mineral deposits have not been encountered.

e. Surface Plug: a cement plug of at least 50 feet shall be placed in the smallest casing that extends to the surface. The top of this plug shall be placed as near the eventual casing cut-off point as possible.

f. Mud: each interval between the plugs shall be filled with mud of sufficient density to exert hydrostatic pressure exceeding the greatest formation pressure encountered while drilling such interval. In the absence of other information at the time plugging is approved, a minimum mud weight of nine pounds per gallon shall be specified.

g. Surface Cap: all casing shall be cut off at the base of the cellar or three feet below final restored ground level (whichever is deeper). The casing shall be filled from the cement plug to the surface with suitable material (cement, sand, gravel, etc.). The well bore must then be covered with a metal plate at least 1/4-inch thick, welded in place, or a four-inch pipe, extending four feet above the recontoured ground surface and embedded in cement as specified by the authorized officer. The well location and identity shall be permanently inscribed on the pipe or plate.

5. All aquifers encountered during drilling that have potential for development as a water well will be evaluated for use by BLM as a water source well at the time the well is proposed to be plugged. Suitable wells would have plugging procedures altered to plug back to the water zone, at which point, the BLM would assume liability for the well and file for the appropriate water rights.

6. For dry holes in visually sensitive areas and WSAs, the abandonment marker must be at least 4-inch diameter pipe, embedded in cement, buried to final reclaimed ground level, and capped with a 2 feet by 2 feet, steel plate, at least 1/4 inch thick. The plate must permanently inscribed with the identity requirements of 43 CFR 3162.6 (b).

GEOPHYSICAL EXPLORATION

1. Blasting or vibrating within 1/8-mile of federally-owned or controlled springs and flowing water wells would not be allowed.
2. Plugging of drill shot holes will conform to the Colorado Reclamation Standards Abandoned Drill Holes Act. Drill hole cuttings shall be placed back in the hole.
3. No blading or other dirt work will be allowed without specific written permission from the Area Manager.
4. Rehabilitation of disturbed areas shall be performed concurrent with the exploration operation.

COAL EXPLORATION

1. All drill holes must be plugged with cement through the underground minable coal beds and aquifers for a distance of at least 50 feet above and below the coal beds and aquifers.
2. Holes may be plugged with a mud conditioner subject to the following:
   a. Drill holes encountering aquifers having artesian flow shall be plugged from bottom to top with a neat cement slurry or, at a minimum, be cemented across to a minimum of 50 feet on either side of the aquifer.
   b. Other drill holes not plugged with cement shall be plugged with abandonment mud having a 10-second API gel strength of at least 20 pounds per 100 square feet and a filtrate volume not to exceed 13.5 cc, as determined by accepted procedures. The abandonment mud mix shall have a Marsh Funnel viscosity of at least 20 seconds per quart greater than that of the drilling fluid or at least 55 seconds Marsh Funnel viscosity.
3. All drill holes shall be plugged at the surface with a minimum of five feet of cement.
4. Holes must be plugged as soon after drilling as possible.
5. Any hole proposed for groundwater monitoring must be completed and cemented to isolate all aquifer intervals that show significant head differences or changes in water quality to prevent mixing of unlike waters. Minable coal beds also must be isolated using casing and cement.
6. All drilling fluid, foam, cuttings, and water must be contained on the drill site. Portable pits may be used; however, earth pits will be required if large volumes of fluid are encountered. Pits will be pumped out or allowed to dry completely before backfilling. Drill cuttings not returned to the hole shall be buried, hauled away, or scattered in a thin layer so they do not inhibit plant growth.

FOREST STAND TREATMENTS

1. Timber stand improvement and harvesting will be prohibited in riparian areas unless removing undesirable species or prescribing canopy manipulation and management as a means of enhancing riparian development. Adequate buffers will be designated next to riparian areas, considering the following factors:
   a. Harvest intensity - clearcuts require a wider buffer than selective cuts.
   b. Slope - Steep slopes require wider buffers than gentle slopes.
   c. Aspect - North aspects will require narrower buffers due to more dense vegetative cover and slower runoff.

d. Soil - Sensitive soil will require wider buffers than resilient soil.

2. Stand treatments shall be designed to minimize adverse effects on water quality. The distribution of cutting units, intensity of cutting, and the cumulative effects in a watershed shall be considered when formulating stand prescriptions.
3. The closure of new roads will be considered and planned for during sale preparation according to existing policy. Skid trails and access roads within the sale will be reclaimed.
4. Stand treatments shall be monitored and terminated during periods when soil compaction may occur.
5. Timber and woodland sale areas with less than a 15 percent ground cover in the understory on critical deer and elk winter ranges will be seeded with a mixture of grasses, forbs and shrubs approved by the Area Manager.

PIPELINE AND POWER LINE CONSTRUCTION

1. Construction width shall include the existing road. The pipeline shall be located two to three feet from the edge of the ditch along the existing road. The existing road shall be on the working side of the trench.
2. Right-of-ways will use areas adjoining or adjacent to previously disturbed areas whenever possible, rather than traverse undisturbed communities.
3. The pipeline will be buried to provide a minimum cover of 36 inches through normal terrain. The pipeline will be buried deep enough to avoid problems with irrigation ditches, canals, potential irrigation areas and existing pipelines, as designated by the authorized officer. In rocky areas, a minimum cover of 24 inches will be provided. In areas next to or crossing access roads, the pipeline shall be buried with a minimum of four feet of cover in alluvial areas and three feet of cover in rocky areas.
4. Water bars or dikes shall be constructed on all of the rights-of-way, and across the full width of the disturbed area, as directed by the authorized officer.
5. Slopes within the disturbed area shall be stabilized by non-vegetative practices designed to hold the soil in place and minimize erosion. Vegetative cover shall be reestablished to increase infiltration and provide additional protection from erosion.
6. When erosion is anticipated, sediment barriers shall be constructed to slow runoff, allow deposition of sediment, and prevent it from leaving the site. In addition, straining or filtration mechanisms may also contribute to sediment removal from runoff.
7. All trees on the pipeline right-of-way shall be purchased from the Bureau of Land Management, White River Resource Area.
8. Trees removed during pipeline construction shall be skidded back onto the right-of-way following seeding operations. Those trees not brought back onto the right-of-way will be cut into four-foot lengths down to a four-inch diameter and located to allow removal by the applicant or public.
9. Unless otherwise agreed upon in writing, power lines shall be constructed according to standards as outlined in *Suggested Practices for Raptor Protection on Power Lines*, Raptor Research Foundation, Inc., 1981. The BLM reserves the right to require modifications or additions to all power line structures placed on the right-of-way, should they be necessary to ensure the safety of large perching birds.
10. Poles and transmission line locations will be selected to achieve the minimum practicable adverse impact on visual quality.
11. Blading or excavating to prepare a structure framing pad will not be permitted. If a structure cannot be framed on the natural ground, aerial framing or off-site framing will be required.

FENCE LOCATION, DESIGN, AND CONSTRUCTION

1. Fence design will conform to BLM Manual H 1737-1 to accommodate negotiation by big game and minimize fence damage. Modifications to fence design may be authorized on a case-by-case basis by the Area Manager as necessary to satisfy special fencing objectives.
2. To minimize future trespass litigation, the accurate location, survey, and marking of external property boundaries should precede fence construction.
3. Locate fences for easy access while satisfying operational objectives. Avoid fencing straight up and down steep slopes.
4. Design fences to accommodate winter snow levels and drifting snow. Inspect fences in late winter or early spring to identify deficiencies and make necessary design changes.
5. Design should consider the installation of narrow walk-though gates, post pass-through openings, or other access structures to improve esthetics.
6. Use landforms to reduce visual impacts. Avoid bulldozer clearing or major soil disturbance.
7. Use fences to protect natural wetlands, streambanks, woodlands, and plants. Keep fences away from heavy vegetation and areas of potential blowdown.
8. Off-highway vehicular traffic during construction shall be held to a minimum.
9. On allotments used by wild horses, fences will be designed to have minimal impact on horse movement.

PROTECTION OF ARCHAEOLOGICAL AND PALEONTOLOGICAL SITES DURING DISTURBANCE

1. Class I geologic units (the Chinle, Glen Canyon, Morrison, Cedar Mountain, Mowry Shale, Parachute Creek Member of Green River, Wasatch, and Brown's Park formations and, in the Rangely area, the Mesaverde Group and Uinta formations) shall be surface surveyed for paleontological resources if they have good, safe outcrops likely to produce scientifically-important fossils. Class I geologic units having vertical- to near-vertical (unsafe) slopes, soil development, and much vegetation shall not require surveys as these areas are unlikely to produce recoverable fossils.
2. Class II geologic units shall be sample-surveyed for paleontological resources during any surface-disturbing activities, projects, or land exchanges greater than 100 acres. Up to five percent of potentially-disturbed Class II areas shall be inventoried.
3. If any fossils are discovered during project operations, operators shall cease activity immediately and notify the authorized officer. The BLM shall provide the operator with a list of BLM-approved paleontologists. The company shall hire a paleontologist from the approved list. The selected paleontologist would be given 48 hours to inspect the site and make a decision regarding disposition of the fossils.

4. If fossils are encountered during underground mining, the operator shall move the fossil material to a safe place and immediately notify the authorized officer.
5. If any evidence of human skeletal remains is encountered during a project on BLM lands, the operator shall not disturb these remains and shall immediately notify the authorized officer. Work shall not resume until the authorized officer has given permission. Human remains shall not be moved, excavated, or in any way disturbed by the operator.
6. A Class III (100 percent pedestrian) cultural resource inventory shall be completed by a qualified archaeologist prior to beginning land disturbing activities. A report of the inventory will be submitted and approved by the BLM with stipulations necessary to comply with EO 11593 and Section 106 of the National Historic Preservation Act of 1966.
7. If, during its operations, the operator discovers any cultural remains, monuments or sites, paleontological sites, or any object of antiquity subject to the Antiquities Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. secs. 431-433), the Archaeological Resources Protection Act of 1979 (Public Law 96-95), NHPA, of 1966, Mineral Leasing Act of 1920, or 43 CFR, Part 3, activity shall immediately cease and the Area Manager notified. The BLM will then take such action as required under the acts and regulations thereunder. The operator shall follow the mitigation requirements set forth concerning protection, preservation, or disposition of any sites or material discovered. In cases where salvage excavation is necessary, the cost of excavation shall be borne by the holder, unless otherwise stated.

WILDFIRE SUPPRESSION

1. The use of heavy equipment for fire suppression will not be permitted except on high-risk project fires, when limited use is first approved by the Area Manager and continuously monitored by a Resource Advisor (Range Conservationist, Wildlife Biologist, Hydrologist or Archaeologist).
2. The location and construction of handlines will implement methods that result in minimal surface disturbance while effectively controlling the fire. Handcrews shall locate lines to take full advantage of existing land features that represent natural fire barriers. Whenever possible, handlines should follow the contour of the slope to protect the soil, provide sufficient residual vegetation to capture and retain sediment, and maintain site productivity.
3. Suppression in riparian areas shall be by handcrew only and concentrate on areas of heavy fuels. Vehicle entry into the riparian area will be permitted to establish pumping operations and access water only if no bridges or natural stream crossings are in the burn area.
4. The incident commander will ensure that aerial retardant is not dropped into any stream or wetland. Retardant applications shall be outside riparian areas and parallel to the stream course.
5. Fire mop-up will include rehabilitation of handlines. Waterbars will be located to minimize future channeling of runoff and direct the runoff toward areas of natural vegetative filters. Vegetation will be returned to the handline to help prevent erosion.
6. Emergency rehabilitation plans shall be prepared for fires requiring artificial regeneration to stabilize the burn area or fireline. The rehab plan should be developed through the interdisciplinary process with the objective of restoring resource quality and productivity.

WATER DEVELOPMENT

1. Water developments (springs, reservoirs, catchments, wells, pipeline and water troughs) will conform to BLM Manual H 1741-2.
2. On some allotments, proposed and existing water developments will be fenced to provide livestock management by restricting access to water and to reduce the cost required to fence some allotments and eliminate restricted wild horse movements created by pasture fences.
3. Actual work in spring and stream beds will be done by hand where possible.
4. The source of all spring developments shall be fenced.
5. Cuts, fills, and excavations shall be dressed and blended with surroundings. Pipelines will be buried where possible. Vegetation will be planted on disturbed areas.
6. Fence reservoirs, where possible to create riparian vegetation and wildlife habitat providing water to livestock through water gaps in the fence or piped to a water trough.

LIVESTOCK GRAZING

1. Develop grazing systems to keep livestock off streambanks when they are most vulnerable to damage and to coincide with the physiological needs of important riparian plant species.
2. Limit grazing intensity to a level that will maintain the desired species composition and vigor.
3. Consider changing livestock species to obtain better animal distribution through herding.
4. Use vegetation and/or structures to stabilize and protect banks of streams or excavated channels against scour and erosion.
5. Regulate grazing at a proper rate of timing intensity that will maintain enough cover to protect the soil and maintain or improve the quantity and quality of desirable vegetation.
6. Implement soil stabilization practices on rangelands to help reduce soil erosion and prevent sediments, organic debris, and applied chemicals and fertilizer from entering surface and groundwater. The best practices for stabilizing soils are the utilization of vegetation or artificial soil covers to reduce erosion.
7. Locate livestock water developments and salting away from riparian and wetland areas.
8. Fence springs, seeps, and water developments to protect water quality and riparian ecosystems.
9. Ensure rest for plant growth and vigor during the critical growing period.
10. Monitor, evaluate, and adjust livestock management practices to meet resource objectives.

PESTICIDE AND HERBICIDE APPLICATION

1. Application of pesticides and herbicides on public lands will conform to BLM Manual H-9011-1 and 9015.
2. To prevent the entry of hazardous substances into surface waters:
   a. Chemical treatments within the riparian areas shall be by hand and shall be applied only to specific targets.

b. Leave a 25-foot buffer along surface waters when chemicals are being applied through ground application with power equipment.

c. For aerial application, leave at least a 50-foot buffer along live water and do not spray in the riparian area.

d. Always refer to chemical label instructions for additional guidance on use near water and required buffer zones.

3. To enhance effectiveness and prevent transport into streams, apply chemicals during appropriate weather conditions (generally calm and dry) and during the optimum time for control of the target pest or weed.

PRESCRIBED BURNING

1. Prescribed burning will be conducted by a certified burn official within the parameters of an approved burn plan. An environmental assessment will be prepared for each prescribed burn.
2. Prescribed burn scheduling will be established by prioritizing resource objectives. Treatment priorities should be based on soil productivity and potential, desired plant community composition, and site preparation and treatment costs.
3. To protect soil productivity, burning will be conducted under conditions when a light burn can accomplish stated objectives.
   a. Highly sensitive soils - Burn only in spring-like conditions when soil and duff are moist. Maximize retention of duff layer. Maintain 90 percent of woody debris equal to or greater than nine inches in diameter.
   b. Moderately sensitive soils - Burn only in spring-like conditions when soil and duff are moist. Maximize retention of duff layer. Maintain 80 percent of woody debris equal to or greater than nine inches in diameter. Write burning prescriptions that reduce disturbance and duration and achieve low fire intensity.
   c. Least sensitive soils - Write prescriptions for low and moderate intensity burns to protect most of the nutrient capital. Maximize retention of duff layer. Maintain 75 percent of woody debris equal to or greater than nine inches in diameter.
4. Do not burn piles of slash within 100 feet of riparian areas. If riparian areas are within or adjacent to the prescribed burn unit, piles will be firelined or scattered prior to burning.
5. When preparing the unit for burning, avoid piling concentrations of large logs and stumps; pile small material (3 to 8 inches in diameter). Piles should be burned when soil and duff moisture are high.
6. Burning will be conducted only within prescription. The prescription should provide an ignition design and sequence that will result in the desired burning intensity.
7. Test burns shall be conducted to ensure that the actual burn can be conducted within the prescribed atmospheric and site conditions necessary to achieve specified objectives.
8. Burning must comply with BLM Manual Section 7733 - Air Quality Maintenance Requirements, to minimize impacts from resulting particulates (smoke). This procedure requires obtaining an approved open burning permit from the state prior to implementation.

MECHANICAL TREATMENTS

1. All projects affecting aquatic or riparian habitats would be reviewed and mitigation developed in order to reduce adverse impacts. A buffer strip along all perennial streams would be maintained in areas of vegetation manipulations.
2. No vegetation manipulation would be allowed within areas of intensive mineral activity where major surface disturbance, such as strip mining, may occur.
3. Vegetation manipulations would not be conducted on soils having high erosion susceptibility.
4. Areas proposed for vegetation manipulation would not be grazed by livestock until understory vegetation becomes well established and is able to support livestock grazing. A minimum of two complete growing seasons of rest from livestock grazing would be required to help ensure desirable vegetation regains vigor.
5. Vegetation manipulations would be irregular in shape, consisting of patches, strips, and fingers that maximize edge effect.
6. No point in a treated area would be greater than 200 yards from suitable cover unless a need is revealed through analysis by an interdisciplinary team.
7. Pinyon-juniper manipulations would be limited to 40-acre blocks unless the distance to cover stipulation is followed.
8. Adequate cover for wild horses would be ensured in wild horse areas, before initiating pinyon-juniper manipulation.
9. Snags, flat-topped or open-limbed conifers, and trees used intensively by cavity nesters, would be protected within vegetation manipulations. All snags would be preserved within a 1/2-mile radius of known active raptor nests.
10. Manipulation of sagebrush would be evaluated to determine impacts and necessary mitigation to ensure protection of sagebrush-dependent wildlife species. In general, no sagebrush within a 2-mile radius of a sage grouse strutting ground would be manipulated where the canopy cover is less than 40 percent.
11. Vegetation manipulations would not be conducted on any archaeological, cultural, paleontological, or significant recreational area.
12. Mechanical manipulations would be limited to slopes of 20 percent or less.

HAZARDOUS SUBSTANCES

1. All authorized users of public lands are expected to know and comply with regulations governing the storage, handling, application (including licensing of applicators), and disposal of hazardous substances.
2. Do not transport, handle, store, load, or dispose of any hazardous substance in such a manner as to pollute water supplies or waterways, or cause damage or injury to land, including humans, desirable plants and animals.
3. Do not store, mix, or rinse hazardous substances or fertilizers in an area where they might enter state waters.
4. When a project might involve the use of hazardous substances, the applicant shall develop a contingency plan for spills, including cleanup procedures and notification of the state Water Quality Bureau.

PROTECTION OF WILDLIFE HABITAT

1. Vehicular access by the public on important wildlife habitats and/or during sensitive functional use periods (e.g., big game severe winter range, critical summer use areas, raptor nesting

areas, sage grouse reproductive habitats) would be subject to restrictions as directed by the Area Manager. Use of restricted road segments by authorized personnel (e.g., BLM personnel, law enforcement, permitted land users) may be allowed for administrative and operational purposes. Methods used to restrict vehicular access may include: installing lockable gates, barricades or other forms of deterrents, signing, or reclaiming and abandoning roads or trails no longer necessary for management, or other methods prescribed by the Area Manager.

2. Surface disturbance and vegetation clearing associated with project construction should generally be located to avoid vegetative types in most limited supply, those less conducive to successful reclamation, or those representing greater site-specific value for wildlife, as determined during the NEPA process. Examples of these vegetative types are juniper stands in a predominant sagebrush type, sagebrush in a predominant woodland type, mature tree stands rather than younger growth, and woodlands with well developed understory rather than with barren understory.
3. Woodland treatments will be designed and located where possible to replicate natural patterns of forest succession and distribution. Efforts will be made to minimize community fragmentation, including structural and age class components. In general, no point within an opened stand will be more than 200 yards from equal or greater intervals of cover.
4. Snags, including dead or dying trees, will be retained within the interior of forest treatment areas at levels commensurate with stand composition. Leave trees will be designated by the Area biologist prior to treatment.

MANAGEMENT OF NOXIOUS WEEDS

1. An Integrated Weed Management (IWM) approach to the prevention, control or containment of noxious weeds and undesirable plant species will be implemented according to BLM Manual 9015--Integrated Weed Management (12/2/92).
2. All seed planted or sowed in BLM weed-free zones, for any purpose, shall be certified by a qualified federal, state or county officer as free of noxious weed seed.
3. All hay, straw, mulch or other vegetative material used in weed-free zones for site stability, rehabilitation or project facilitation shall be certified by a qualified federal, state or county officer as free of noxious weeds and noxious weed seed. Current state standards shall be applicable.
4. All baled feed, pelletized feed and grain transported onto BLM weed-free zones and used to feed livestock shall be certified as free of noxious weed seed by a qualified federal, state or county officer.
5. All contractors and land-use operators moving surface disturbing equipment into the weed free zones must clean their equipment prior to use on BLM lands. These requirements may be waived by the Area Manager.
6. All pest control proposals will include an environmental analysis developed within an Integrated Pest Management format. Selection of the preferred alternative shall depend upon environmentally sound and cost-effective criteria.
7. Monitoring of land-disturbing activities in weed-free zones will use permanent photo points to identify noxious weed growth stages, degree of infestation, and trends.
8. Application of herbicides must be under field supervision of an EPA-certified pesticide applicator. Herbicides must be registered by the EPA and application proposals must be approved by the BLM.

RECLAMATION

1. All disturbed sites shall be promptly reclaimed to the satisfaction of the Area Manger.
2. Reclamation should be implemented concurrent with construction and site operations to the fullest extent possible. Final reclamation actions shall be initiated within six months of the termination of operations unless otherwise approved in writing by the authorized officer.
3. The goal for rehabilitation of any disturbed area shall be the permanent restoration of original site conditions and productive capability.
4. Disturbed areas shall be restored as nearly as possible to its original contour.
5. Fill material shall be pushed into cut areas and up over backslopes. Leave no depressions that will trap water or form ponds.
6. Distribute topsoil evenly over the location and prepare a seedbed by disking or ripping. Drill seed on contour at a depth no greater than 1/2 inch. In areas that cannot be drilled, broadcast at double the recommended seeding rate and harrow seed into the soil.
7. Use seed that is certified and free of noxious weeds. Seed certification tags must be submitted to the Area Manager.
8. Additional seed applications of standard seed mixes (see Table C-1) may be required to accommodate specific site conditions or if initial seed germination has failed.
9. Seed species used in reseeding disturbed areas will be based on the eight standard seed mixes identified in table C-1. These mixes are based on range sites. When possible, native seed mixes most suitable to an area will be substituted for revegetating disturbed areas.
10. Leave the disturbed area in a condition that provides drainage with no additional maintenance.

Table C-1. Standard Seed Mixes

Seed Mix #	Species (Variety)	Lbs PLS/ Acre	Range Sites
1	Siberian wheatgrass (P27) Russian wildrye (Bozoisky) Crested wheatgrass (Hycrest) *Alternates*: Yellow sweetclover, Fourwing saltbush, Nutall saltbush, Winterfat, Annual Sunflower, Western wheatgrass	3 2 3	Alkaline Uplands, Badlands, Clayey 7"-9", Clayey Salt Desert, Cold Desert Breaks, Cold Desert Overflow, Gravelly 7"-9", Limey Cold Desert, Loamy 7"-9", Loamy Cold Desert, Loamy Salt Desert, Saline Lowland, Salt Desert Breaks, Salt Flats, Salt Meadow Sands 7"-9", Sandy 7"-9", Sandy Cold Desert, Sandy Salt Desert, Shale 7"-9", Shale/Sands Complex, Shallow Loamy, Shallow Sandy, Shallow Slopes, Silty Salt Desert, Silty Swale, Steep Slopes.
2	Western wheatgrass (Arriba) Pubescent wheatgrass (Luna) Russian wildrye (Bozoisky) Crested wheatgrass (Fairway/Ephraim) Yellow sweetclover (Madrid) Fourwing saltbush (Wytana/Rincon) *Alternates*: Winterfat	3 2 2 2 0.5 2	Alkaline Slopes, Clayey Foothills, Clayey Slopes, Claypan, Mountain Shale.
3	Pubescent wheatgrass (Luna) Western wheatgrass (Rosanna) Crested wheatgrass (Ephraim) Indian ricegrass (Nezpar) Orchardgrass (Paiute) Yellow sweetclover (Midrid) *Alternates*: Fourwing saltbush, Intermediate wheatgrass, Cicer Milkvetch (Monarch)	4 2 1 1 1 0.5	Deep Loam, Loamy 10"-14", Loamy Breaks, Loamy Slopes, Rolling Loam, Valley Bench.
4	Western wheatgrass (Rosanna) Pubescent wheatgrass (Luna) Crested wheatgrass (Nordan) Orchardgrass (Paiute) Indian ricegrass (Nezpar) Fourwing saltbush (Wytana) *Alternates*: Alfalfa (Nomad or Ladak)	2 3 2 1 1 1	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany).
5	Pubescent wheatgrass (Luna) Crested wheatgrass (Fairway) Western wheatgrass (Rosanna) Indian ricegrass (Nezpar) *Alternates*: Yellow sweetclover, Alfalfa (Nomad or Ladak), Fourwing saltbush	4 2 3 2	Sandy Bench, Sandy Foothills, Sand Hills.
6	Basin wildrye (Magnar) Western wheatgrass (Rosanna) Pubescent wheatgrass (Luna) Orchardgrass (Paiute) Fourwing saltbush (Wytana) *Alternates*: Crested wheatgrass,Cicer milkvetch (Monarch), Yellow sweetclover	2 3 3 1 1	Foothill Swale, Sandy Swale, Swale Meadow.
7	Big bluegrass (Sherman) Intermediate wheatgrass (Greenar) Smooth brome (Manchar) Orchard grass (Latar) Cicer milkvetch (Monarch) *Alternates*: Small burnet, Pubescent wheatgrass, Mountain brome, Alfalfa (Nomad or Ladak)	2 4 3 1 0.5	Alpine Meadow, Alpine Slopes, Aspen Woodlands, Brushy Loam, Deep Clay Loam, Douglas-fir Woodland, Loamy Park, Mountain Loam, Mountain Meadows, Mountain Swale, Shallow Subalpine, Spruce-fir Woodland, Subalpine Loam.
8	Smooth brome (Manchar) Pubescent wheatgrass (Luna) Crested wheatgrass (Nordan) Cicer milkvetch (Monarch) Alternates: Alfalfa, Russian wildrye (Vinall), Beardless wheatgrass (Whitmar)	3 3 2 1	Dry Exposure, Dry Mountain Loam, Limestone Hills, Rocky Loam, Stony Loam.

Table A-2. Native Seed Mixes

Seed Mix #	Species (Variety)	Lbs PLS/ Acre	Range Sites
1	Western wheatgrass (Arriba) Streambank wheatgrass (Sodar) Thickspike wheatgrass (Critana) Fourwing saltbush (Wytana, Rincon) *Alternates:* Winterfat, shadscale, globemallow	3 2 2 2	Alkaline Slopes, Clayey Foothills, Clayey Slopes, Claypan, Mountain Shale.
2	Western wheatgrass (Rosanna) Indian ricegrass (Nezpar) Bluebunch wheatgrass (Whitmar) Thickspike wheatgrass (Critana) Green needlegrass (Lodorm) Globemallow *Alternates*: Fourwing saltbush, Utah sweetvetch, balsamroot	2 1 2 2 1 0.5	Deep Loam, Loamy 10"-14", Loamy Breaks, Loamy Slopes, Rolling Loam, Valley Bench.
3	Western wheatgrass (Rosanna) Bluebunch wheatgrass (Secar) Thickspike wheatgrass (Critana) Indian ricegrass (Nezpar) Fourwing saltbush (Wytana) Utah sweetvetch *Alternates:* Needle and thread, globemallow	2 2 2 1 1 1	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)
4	Western wheatgrass (Rosanna) Needle and Thread Thickspike wheatgrass (Critana) Indian ricegrass (Nezpar) Sand dropseed *Alternates*: Fourwing saltbush	2 2 2 2 1	Sandy Bench, Sandy Foothills, Sand Hills
5	Basin Wildrye (Magnar) Western wheatgrass (Rosanna, Arriba) Bluebunch wheatgrass (Secar) Thickspike wheatgrass (Critana) Fourwing saltbush (Wytana) *Alternatives*: Utah sweetvetch, globemallow	2 3 1 2 1	Foothill Swale, Sandy Swale, Swale Meadow
6	Bluebunch wheatgrass (Secar) Slender wheatgrass (Primar) Big bluegrass (Sherman) Canby bluegrass (Canbar) Mountain brome (Bromar) *Alternates*: Blue flax[1/], Rocky Mountain penstemon[2/], balsamroot	2 2 1 1 2	Alpine Meadow, Alpine Slopes, Aspen Woodlands, Brushy Loam, Deep Clay Loam, Douglas-fir Woodland, Loamy Park, Mountain Loam, Mountain Meadows, Mountain Swale, Shallow Subalpine, Spruce-fir Woodland, Subalpine Loam
7	Thickspike wheatgrass (Critana) Slender wheatgrass (Primar) Beardless wheatgrass (Whitmar) Streambank wheatgrass (Sodor) Canby bluegrass (Canbar)	2 2 2 1 1	Dry Exposure, Dry Mountain Loam, Limestone Hills, Rocky Loam, Stony Loam1/Appar2/Bandera

[1/] Appar

[2/] Bandera

APPENDIX D
REASONABLE FORESEEABLE DEVELOPMENT SCENARIO FOR OIL AND GAS

INTRODUCTION

The White River Resource Area (WRRA) is situated within portions of six physiographic-geologic provinces: Piceance basin, Douglas Creek arch, Yampa Plateau, Axial Basin arch, White River uplift, and the Uinta uplift and two U. S. Geologic Survey (USGS) (1995) petroleum resource assessment provinces: The southwest Wyoming and Uinta-Piceance basin. Within each of these resource assessment provinces are oil and gas plays from which the USGS has estimated undiscovered oil and gas resources.

OIL AND GAS PLAYS

USGS oil and gas plays within WRRA are briefly described in Table 1. A play is defined by the USGS as "a group of geologically related known or undiscovered accumulations and (or) prospects having similar characteristics of hydrocarbon source, reservoir, trap and geologic history.

Estimated mean undiscovered reserves from conventional reservoirs is 34 million barrels of oil (MMBO) and 93.9 billion cubic feet of gas (BCFG). In place hydrocarbons are not estimated for unconventional plays, however a mean estimate for spacing units of 160 acres is given. The volumes given is an estimate of the mean ultimate recoverable gas from a spacing unit. Tight gas sands average 919 million cubic feet of gas (MMCFG) and CBM averages 1270 MMCFG per spacing unit.

OIL AND GAS POTENTIAL

The majority of lands within WRRA are prospectively valuable for oil and gas. Prospectively valuable lands are those which contain at least 1,000 feet of sedimentary rock. Those lands considered prospectively valuable are rated according to their potential for the occurrence of oil and gas (Map D-1) and are described below.

High, (a) in this area there is the demonstrated existence of: (1) source rock, (2) thermal maturation, and (3) reservoir strata possessing permeability and/or porosity, and (4) traps or (b) be part of an oil and gas play as defined by the USGS (Open File Report 88-373 or related publication).

Moderate, there is as geophysical or geological indication that the following are present: (1) source rock, (2) thermal maturation and (3) reservoir strata possessing permeability and/or porosity, and (4) traps.

Low, there are specific indications that one or more of the following are <u>not</u> present: (1) source rock, (2) thermal maturation, or (3) reservoir strata possessing permeability and/or porosity, and (4) traps.

None, requires that the absence of source rock, or thermal maturation or reservoir rock prohibits the occurrence of oil and/or gas.

OIL AND GAS ACTIVITY

Historical Activity

Gas was first discovered in the Tertiary Wasatch Formation in 1890 at the White River dome and oil was first discovered in the Mancos Shale at Rangely Field in 1902. Since that time, about 53 fields have been discovered within the Planning Areas in reservoirs within formations ranging from the Pennsylvanian Minturn to the Tertiary Green River (Table 1). The most prolific reservoirs are the Weber Sandstone (Rangely Field) for oil, and the Wasatch formation, Mancos "B" member of the Mancos Shale, Dakota Sandstone, and Morrison Formation for gas.

Field size varies greatly within the planning area. Proven productive acreage consist of one well field of 40 to 160 acres in size to over 600,000 acres of proven and inferred production on the Douglas Creek arch. The Rangely Field has been the most productive oil producer, accounting for about 90% of the oil produced, while fields on Douglas Creek arch have produced about 73% of the gas produced within WRRA (Table 2).

Since the fist well was drilled near Meeker in 1890, over 4180 wells have been drilled within the planning area with an overall success rate of 65%, including 37% for wildcat wells and 72% for development wells. Excluding Rangely Field, the overall success rate is about 85%, including 37% for wildcat wells and 90% for development wells during the period of 1975 through 1995.

Annual drilling activity in Rio Blanco County is illustrated in Figure 1 for the period of 1950 through 1995, while Figure 2 illustrates the same period, but does not include activity within the Rangely Field. Total well completions averaged 80 wells per year, while the annual average was 42 wells with the Rangely Field excluded. The Rangely Field accounts for about 54% of the total wells drilled, while about 72% of the wells outside of the Rangely Field were drilled on the Douglas Creek arch.

In 1986, oil and gas activity in the planning area reached its lowest level since the mid 1960s. This was due, in part, to market conditions caused by the collapse of oil prices during the early 1980s. Since 1986, drilling activity increased and averages about 42 wells per year. Most of the drilling activity has consisted of infill wells to develop gas in the Mancos "B" member of the Mancos Shale by Conoco, as well as the completion of 21 wells in the White River and Pinyon Ridge Fields for coal bed methane (CBM) in the Williams Fork Formation.

The elimination of tax credit incentives for development of CBM on January 1, 1993 has made the development of CBM less desirable. The last reported CBM completions were in 1992 in the White River Field and 1994 in Pinyon Ridge Field. The completions in the Pinyon Ridge Field produced very minor amounts of gas and large volumes of water. Future CBM activity will depend on much more favorable gas prices, as well as improved completion and production technologies.

An average of 17 producing wells per year have been taken out of production from 1986 through 1992.

Present Activity

During January 1996, there are 95 active well permits and wells (federal, state, fee) within Rio Blanco County. The majority of these permits are for gas development on Douglas Creek arch. The number of wells that will be drilled is not known at this time.

A proposed natural gas pipeline, TransColorado gas transmission project, was approved in July 1992. The pipeline, as planned extends from the Piceance basin (Rio Blanco County) south through the San Juan basin into New Mexico near Farmington. Construction has not yet started nor are there any plans, at present to begin construction within the Piceance basin within the next year or two.

DRILLING ACTIVITY FORECAST

Since the Piceance basin is primarily gas producing, future drilling estimates are dependent on the future supply and demand of natural gas. Projected drilling estimates based on historical activity do not include the Rangely Field. This was done to get a more realistic picture of exploration and development not biased by the development of one large oil reservoir. Gas prices are forecast to be lower then expected in the near term with modest gains by 2015. This conclusion is based on industry replacing 1994 production at prices of $1.77 MCF, Canadian producers are planning several large pipelines to expand their markets in the U.S., and the replacement of reserves at relatively low cost (DRI/McGraw-Hill, 1995) in the near term.

Another aspect of future pricing is the expiration of well head tax credits for tight sand and CBM gas in 2001. This will most likely result in producers increasing production from those wells to offset the loss of the tax credit or raise prices. Investments in CBM and tight gas projects in the San Juan and Piceance basins has significantly decreased, since tax credits apply to wells drilled prior to the end of 1992.

The TransColorado pipeline, when built, will probably not result in immediate drilling, because there is sufficient gas available from both conventional and unconventional (tight gas and CBM) reservoirs (Bureau of Land Management, 1992) within the Piceance basin.

Nationally, onshore gas drilling activity is forecast to increase by 3.7% annually for 1995 through 2005 and 2.6% annually for 2005 through 2015 (DRI/McGraw-Hill, 1995). This forecast takes into account a continuing surplus of gas in the western U.S. and Canada, a slow but steady increase in demand throughout most sectors, and several large increases in gas supply during the next few years from the Gulf of Mexico and pipeline imports from Canada.

Applying the DRI/McGraw-Hill (1995) annual growth forecast to Rio Blanco County yields an average of 42 wells per year or 840 total wells drilled during the period 1996 through 2015 (ie., there is no basis to apply this forecast to the planning area). The application of a trend-comparison model to statistically forecast activity for the period results in an average of 56 well per year or a total of 1,113 wells. A linear regression of cumulative wells drilled since 1986 results in an average of 54 (+/- 22) wells per year or a total of 1074 wells. An average of drilling activity since 1950 results in 42 (+/- 29) wells per year or a total of 840 wells.

REASONABLE FORESEEABLE DEVELOPMENT

The Douglas Creek arch is expected to be the continuing focus of infill drilling to develop gas resources in the Castlegate and Mancos "B" members of the Mancos shale, Dakota Sandstone, and Morrison Formation. It is possible that large portions of the arch will eventually be downspaced to 80-acres, however this most likely will not occur during the life of this plan.

The Piceance basin's Cretaceous and Tertiary gas resources will probably experience increased interest. CBM has been explored and developed at White River Dome and Pinyon Ridge fields. Wide scale development is not anticipated in light of the expiration of tax credits in 2001.

Additional drilling within the Rangely Field will not be significant, since it is considered fully developed and is in tertiary enhanced oil recovery operations. Exploration for Paleozoic reservoirs will most likely be concentrated with testing unconformity traps between the Maroon-Weber and Minturn-Morgan formations (Waechter and DeVoto, 1989) and structural traps within the Permian-Pennsylvanian, Axial uplift, and basin margin subthrust plays.

It is expected that exploration and development will continue with in planning area at about the same levels as the past. Drilling on federal leases is expected to average 55 wells per year or 1100 during the life of the plan, but may vary widely on a yearly basis.

The forecast scenario is based on the following assumptions outlined below:

1. A total of 1100 wells will be drilled on federal leases.
2. 67% of the wells will be drilled on the Douglas Creek arch, 20% in the Piceance basin, 3% in Rangely Field, 5% on the Axial Basin arch, and 5% within the sub-thrust play.
3. 76% of the wells will be development wells.
4. 10% of the development wells will be dry holes and 37% of the wildcat wells will be dry.
5. An Average of 17 producing wells will be taken out of production and plugged each year.

Oil and gas development potential areas and the number of wells forecast to be drilled on federal leases is illustrated in Table 3. The planning area outside of Rangely, is predominately gas productive. Drilling activity is expected to be concentrated near existing production areas and transportation systems.

Table 3. Drilling Forecast for WRRA Federal Lands.

AREA	WILDCAT			DEVELOPMENT			TOTAL		
	D&A	PW	Total	D&A	PW	Total	D&A	PW	Total
Douglas Creek Arch	65	112	177	56	504	560	121	616	737
Piceance Basin	20	33	53	17	150	167	37	183	220
Axial Basin	5	8	13	4	38	42	9	46	55
Subthrust	5	8	13	4	38	42	9	46	55
Rangely Field	3	5	8	3	23	25	6	28	33
TOTAL	98	166	264	84	753	836	182	919	1100

It is expected that future drilling will be concentrated in further defining known or inferred production by either infilling existing fields or stepping-out from existing fields. Most of the drilling will be in high to moderate potential areas. Actual numbers of federal wells drilled each year may range from 15 to 150 or more. The nature of the oil and gas industry is very dynamic and subject to sudden change, therefore, a more exact figure is not possible.

Table 1. USGS Oil and Gas Plays in WRRA

USGS Play	Reservoir Type	Depth (Feet)	Trap Type	Status
Piceance Tertiary Conventional	SS	500-5,500	Stratigraphic	Moderately explored
Upper Cretaceous Conventional	SS	1,000-6,000	Stratigraphic	Well explored
Cretaceous Dakota to Jurassic Conventional	SS	1,000-6,000	Structural with Stratigraphic influence	Well explored
Permian-Pennsylvanian Conventional	SS & LS	6,000-12,000	Structural & Stratigraphic	Moderately explored
Basin Margin Subthrust Conventional	SS & LS	5,000-25,000	Structural & Combination	Hypothetical
Tight Gas Piceance Mesaverde Williams Fork Conventional	SS	5,500-9,800	Continous Gas	Moderately explored
Cretaceous Fracture Shales Unconventional	SH	1,000-6,000	Continous Oil	Moderately explored
Tight Gas Piceance Mesaverde Iles Unconventional	SS	5,800-10,000	Continous Gas	Moderately explored
White River Dome Unconventional	Coal	500-7,500	Coal Bed Methane	Confirmed
Western Basin Margin Unconventional	Coal	500-8,500	Coal Bed Methane	Confirmed
Grand Hogback Unconventional	Coal	500-6,000	Coal Bed Methane	Hypothetical
Axial Uplift Conventional	SS & LS	2,000-12,000	Structural	Maturely explored

Table 2. Oil and Gas Fields in WWRA with 1992 Production

Field	Year	1992			Cumulative through 1992	
		Liquid BBLS	Gas MCF	Wells	Liquid BBLS	Gas MCF
Wilson Creek	ACT	214,052	753,514	18	84,547,357	66,644,125
Piceance Creek	ACT	948	3,885,243	40	137,241	227,385,669
Dragon Trail	ACT	21,659	8,654,311	277	42,469	177,032,152
Lower Horse Draw	ACT	1,137	1,225,788	36	77,332	60,849,685
Douglas Creek North	ACT	2,652	829,978	52	70,160	44,571,142
Douglas Creek	ACT	35	2,235,522	56	53	41,798,389
Douglas Creek West	INA			31	3,301	36,913,843
Cathedral	ACT	1,161	1,850,611	138	30,020	33,579,897
Thornburg	ACT	0	267,183	4	753,856	17,731,177
White River	ACT	16,601	1,763,628	35	115,227	16,655,269
Winter Valley	ACT	20,625	179,281	5	389,821	14,868,601
Hells Hole Canyon	ACT	7,461	1,924,454	18	68,436	14,006,830
Baxter Pass	ACT	970	558,750	20	20,047	12,030,581
Texas Mountain	ACT	691	224,229	12	73,701	10,043,176
Trail Canyon	ACT	73	275,673	23	5,612	9,181,070
Taiga Mountain	ACT	41,405	292,013	9	383,542	5,009,778
Sulphur Creek	ACT	181	212,927	17	6,689	6,968,995
Philadelphia Creek	ACT	0	246,960	39	756	6,867,141
Nine Mile	ACT	10,827	0	1	1,131,953	308

Field	Year	1992			Cumulative through 1992	
		Liquid BBLS	Gas MCF	Wells	Liquid BBLS	Gas MCF
Douglas Creek South	ACT	0	523,102	24	216	6,249,157
Rangely SW	ACT	0	1,397,431	17	0	5,764,154
Twin Buttes	ACT	242	199,682	3	4,817	5,382,241
Thunder	ACT	41	245,116	12	1,712	5,366,159
Foundation Creek	ACT	0	296,445	22	6,775	4,830,349
Park Mountain	ACT	7,262	1,678,970	3	20,121	3,969,887
Elk Springs	INA			2	592,132	13,769
Missouri Creek	ACT	0	97,654	2	0	2,902,927
Soldier Canyon	ACT	0	195,663	2	200	2,668,915
Corral Creek	ACT	0	131,878	7	2,398	2,625,585
Evacuation Creek	ACT	0	205,888	12	0	2,535,188
Banta Ridge	ACT	0	28,737	5	4,660	2,411,006
Piceance Creek South	INA			1	564	2,311,597
Blue Cloud	ACT	0	110,821	4	57	2,114,081
Scott Hill	ACT	24,346	0	3	285,894	0
Rock Canyon	ACT	0	177,961	4	0	1,238,499
Colorow Gulch	ACT	2,102	25,398	1	55,022	734,915
Pinnacle	ACT	1,677	10,284	2	132,845	119,175
Trail Ridge	ACT	0	224,431	5	0	906,441
Dragon Trail North	ACT	0	16,456	3	17,394	505,420
Weaver Ridge	ACT	590	84,169	1	2,294	514,657
Sage Brush Hills II	ACT	0	8,533	3	504	432,537
Sulphur Creek South	INA			1	0	398,012
Baxter Pass South	INA			1	0	301,509
Powell Park	INA			1	4,307	275,262
Gilliam Draw	INA			1	3,437	241,134
Pinyon Ridge	ACT	9,946	66,452	7	11,551	122,184
Gilsonite Draw	INA			1	25,875	0
McHatton	ACT	1,926	0	5	23,789	0
Rocky Point	INA			1	20,847	7,686
Fawn Creek	ACT	0	1,963	1	0	14,777
Big Ridge	INA			1	148	8,597
Boondocks	INA			0	0	3,116
Duck Creek	INA			1	212	0
Dinosaur	INA			1	107	0
Rangely	ACT	10,452,527	5,348,648	502	798,670,425	737,209,062
Total (-Rangely)		388,610	31,403,544	1,013	89,082,226	861,937,113
TOTAL		10,841,137	36,752,192	1,515	887,752,651	1,599,146,175

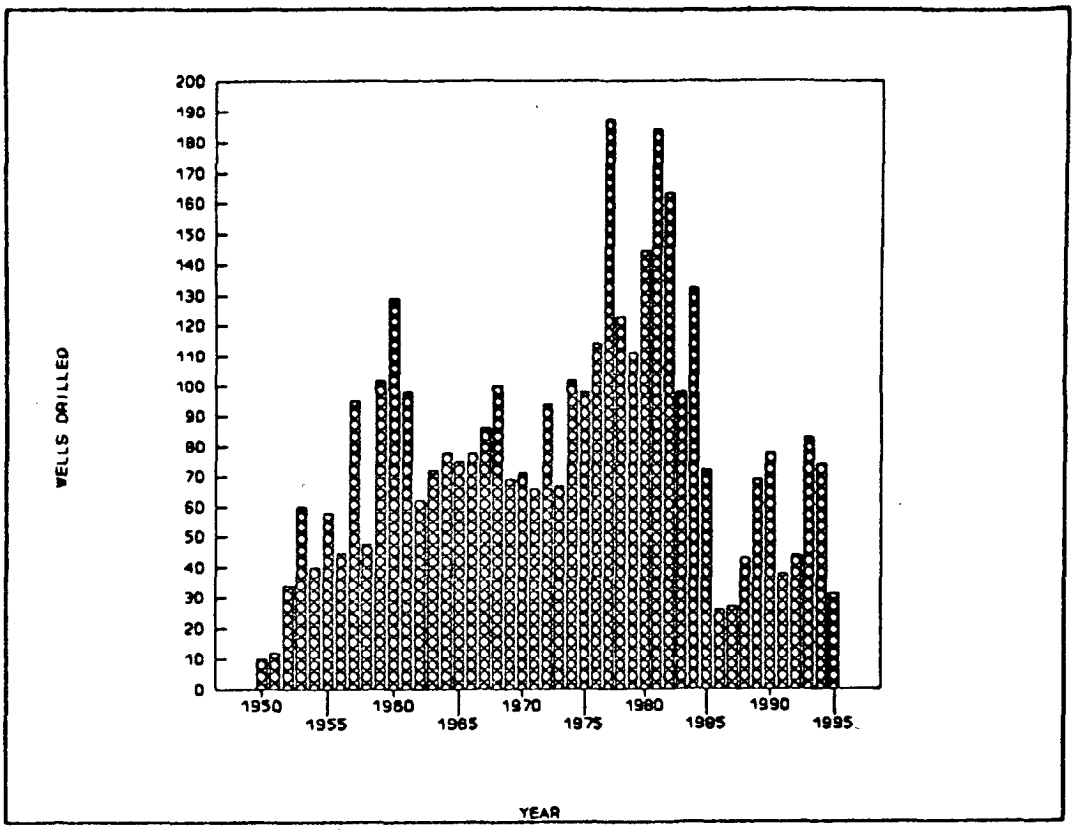

Figure 1. Histogram of wells drilled 1950-1995 in Rio Blanco County (Dwights EnergyData, 1996).

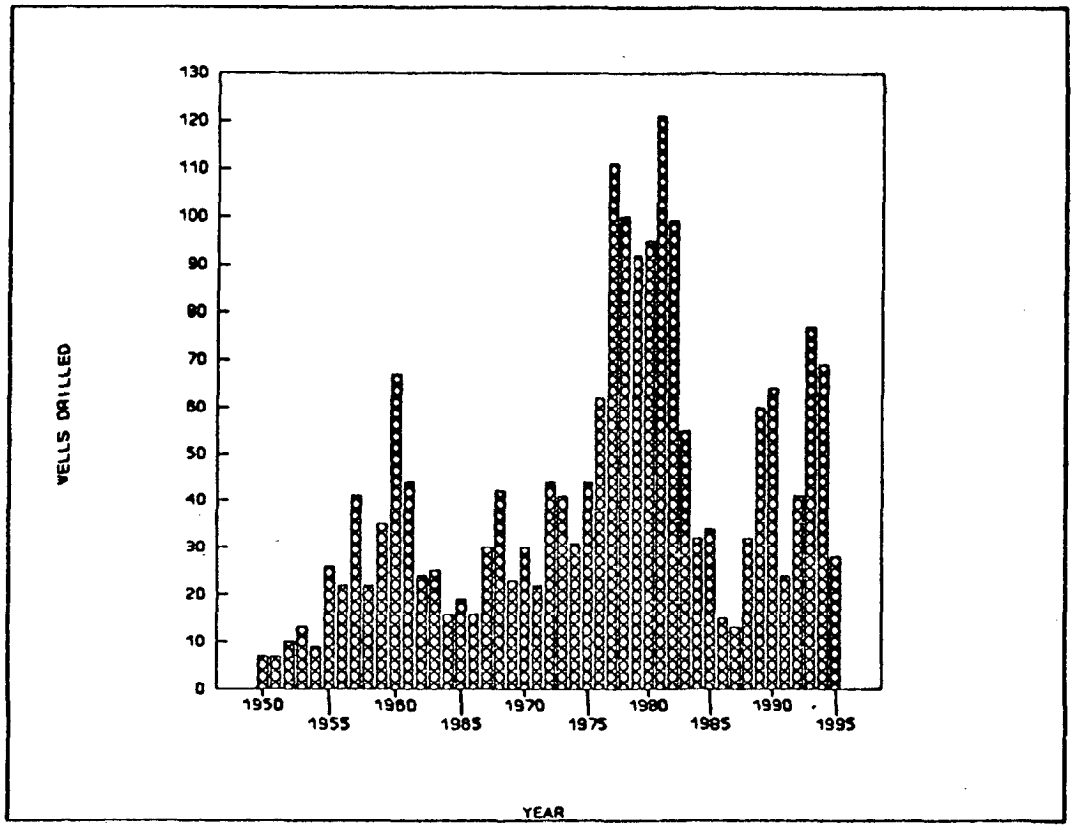

Figure 2. Histogram of wells drilled outside of Rangely Field 1950-1995 in Rio Blanco County (Dwights EnergyData, 1996).

ECONOMIC CONSIDERATIONS

The oil and gas industry and BLM economists developed the following economic assumptions that could occur as a result of applying the stipulation and COAs.

COSTS ASSUMPTIONS FOR DRILLING/ COMPLETING A WELL

Natural Gas Price $1.25/MCF
Oil Price $17.00/BBL
Royalty 12.5% - 16.66%
Severance Tax - 5%
Ad Valarem Tax - 3.6%
Shallow Well (+2,500 feet)
Intermediate Well (+7,000 feet)

Wells	Drilling	Completion	Total
Natural Gas Well (White River Dome)			
2,500' Depth			
Vertical Well	$65,000	$85,000	$150,000
Directional Well	$103,000	$90,000	$193,000
Operator Cost/month			
Vertical Well			$700/mo
Directional Well			$800/mo
Reserves 0.15 - 0.25 BCF/Well			
Oil Well (Elk Springs - Mancos Formation)			
2,500' Depth			
Vertical Well	$60,000	$60,000	$120,000
Directional Well	$95,000	$70,000	$165,000
Operator Cost/month			
Vertical Well			$1,200/mo
Directional Well			$1,600/mo
Reserves 40,000 BBLS/Well			
Natural Gas Well (Douglas Creek Arch - Dakota Formation)			
7,000' Depth			
Vertical Well	$260,000	$170,000	$430,000
Directional Well	$335,000	$180,000	$515,000
Operator Cost/month			
Vertical Well			$1,750/mo
Directional Well			$1,900/mo
Reserves 1.0 - 1.5 BCF/Well			
Oil Well (Generic)			
6,500' Depth			
Vertical Well	$185,000	$165,000	$350,000
Directional Well	$225,000	$180,000	$405,000
Operator Cost/month			
Vertical Well			$2,000/mo
Directional Well			$3,000/mo
Reserves 200,000 BBLS/Well			
White River Dome (Elk Springs)			
2,500' Gas Well	$65,000	$85,000	$150,000
Directional Well	$38,000	-0-	$188,000
Operator Cost/month			
Vertical Well			$700/mo
Directional Well			$800/mo
Reserves 0.15 - 0.25 BCF/Well			
2,500' Oil Well	$60,000	$60,000	$120,000

COST ASSUMPTIONS FOR COMPLYING WITH STIPULATIONS/CONDITIONS OF APPROVAL

NSO
1) Biological Survey
2) Directional Drill

T.L.
1) Biological Survey
2) Unnecessary Rig Move (Out & Back In)

CSU
1) Soil Erosion Mitigation
2) Soil Testing (Geotechnical)

Conditions of Approval
1) Extra Pipeline to Follow Road Alignment
2) Gravel Surface
3) Cultural Resource Mitigation

ESTIMATED BREAKDOWN OF COSTS FROM LEASE STIPULATIONS

NSO-01 Landslide Areas
$2,000=Limited soil survey reconnaissance
$4,000 - $15,000=Extensive geotechnical study with drilling to obtain core samples, lab soil analysis and compaction studies

NSO-O2 Raptor Nests-T/E and Candidate T/E Species
$500=Cursory field review, brief report (one day)
$2,500=2-3 day intensive field inventory
$2,000=Annual inventory with mitigation, if applicable

NSO - 03 Raptor Nests-Other than Special Status Raptors
$500=Cursory field review, brief report (one day)
$2,500=2-3 day intensive field inventory

NSO-04 Sage Grouse Leks
$500=Cursory field review, brief report (one day)
$2,500=2-3 day intensive field inventory
$2,000=Annual inventory with inventory/mitigation, if applicable

NSO-05 Bald Eagle Roost/Concentration Area
$500=Cursory field review, brief report (one day)
$2,500=2-3 day intensive field inventory
$2,000=Annual inventory with inventory/mitigation, if applicable

NSO-06 Proposed ACECs (plants)
$400-$800=Time needed for consultants to conduct plant inventory to prepare report

NSO-07 Proposed ACECs (plants)
$400-$800=Time needed for consultants to conduct plant inventory to prepare report

NSO-08 Proposed ACECs (plants)
$650=Cost to conduct field inventory
$1,000-$3,000=Cost to monitor and prepare report

NSO-09 Proposed ACEC
See NSO-08 & NSO-06

NSO-10 Duck Creek Wickiup Site
No data provided

NSO-11 T/E Plants
See NSO-06

NSO-12 Sensitive Plants and Vegetation Associations
See NSO-06

NSO-13 Oak Ridge State Wildlife Area
$500-$1,000=Costs to complete full study using third party contractor to supplement BLM and Division of Wildlife data

CSU-01 Fragile Soils >35%
$500-$2,000=Time needed to prepare and distribute reclamation plan; range exists due to varying in >35% slopes for a project

CSU-02 Designated ACECs
See NSO-06

CSU-03 Proposed ACECs
See NSO-06

CSU-04 Ferret Reintroduction
$2,500-$10,000=Costs vary depending upon extension of migration including fencing, avoiding prairie dog burrows and participating in ferret surveys
$70,000=Costs to directionally drill a deeper well location to avoid conflicts

CSU-05 Aspen, Serviceberry, and Chokecherry Communities
$750-$1,500=Depending upon extension of survey

CSU-06 Bald Eagle Nest, Roost and Perch Habitat
See NSO-02

CSU-07 Colorado River Cutthroat Trout Habitat
$2,500=Time needed to prepare plan of development then implement actions such as berming location or install sediment control structures such as haybales or retention pond(s)

CSU-08 Canyon Pintado Cultural Historic District
$1,000=Class III Pedestrian Survey
$1,000-$3,000=Monitoring
$19,000=Cost of moving/directional drilling

CSU-09 Coal Mine
No data provided

TL-01 Raptor Nesting Sites (Listed and Candidate T/E except Balk Eagle and Ferruginous Hawks)
See NSO-02

TL-04 Raptor Nests (other than T/E and Candidate T/E species)
See NSO-02 (Use only $1,000)

TL-05 Bald Eagle Roost or Concentration Areas
See NSO-02

TL-06 Sage Grouse Nest Habitat
See NSO-02

TL-07 Elk Production Areas
$2,000-$10,000=Costs to employ consultant to document and assist with acquiring data

TL-08 Big Game Severe Winter Range
No costs identified

TL-09 Deer/Elk Summer Range
$500/well=Costs to complete survey

ESTIMATED BREAKDOWN OF COSTS FROM APPLYING CONDITION OF APPROVAL

All Surface Disturbing Activities

1. $2,000 prep plan to implement
6. $3,000 to install sediment control/catch bars for flood event

Road Construction and Maintenance

19.-22. $2,000/each to replace/add culverts or correct problems
33.-35. $2,000 to obtain assistance of professional engineer
38. $5,000 to obtain "proper" sized aggregate

Tanks and Pits

3. $4,000 to purchase and install tank (fiberglass or steel) of sufficient quantity to reduce hauls, particularly during winter
6. $500 to prepare and install a smaller fiberglass tank
7. $2,000-$6,000 costs to net an entire pit

Pipeline and Power Line Construction

1. $5,000 cost to maintain pipe along road requiring additional miles of cross country ($1/inch-mile)
5. $5,000-$6,000/acre costs to install erosion netting

Protection of Archaeological and Paleontological Sties During Disturbance

2. $1,500-$5,000 costs to inventory - costs for inventory
3. $500 monitoring
4. $800 moving fossil material
6. $1,500 cost for survey
7. $6,000 to prepare plan
$20,000-$100,000 to implement plan

Hazardous Substances

4. $1,000 cost to prepare plan

Protection of Wildlife Habitat

1. 1,500/gate cost to purchase and install gate

Management of Noxious Weeds

1. $1,500 cost to prepare integrated weed management plan
5. $50,000/occurrence for each use of a backhoe, grader, etc.
6. $2,000 IPM with EA
7. $1,000/5photo prints includes maintenance and annual follow-up for 5 years
8. $2,000 attending certification class

A company planning to drill a well would need to take the above costs into consideration. If the added costs of complying with stipulations outweighs the expected return on investment of drilling the well, the lessee may choose to defer drilling until the commodity price increase. This could have an affect on the RFD in that, some number less than the 55 wells projected to be drilled each year, would be delayed or not drilled. This number is not determinable based on fluctuation in commodity prices and the number of wells that would be affected by a given stipulation.

APPENDIX E
ACRONYMS, GLOSSARY, REFERENCES

ACRONYMS

ACEC	Area of Critical Environmental Concern
ACMP	Area of Critical Mineral Potential
AIRFA	American Indian Religious Freedom Act
AML	Appropriate Management Level
AMP	Allotment Management Plan
APD	Application for Permit to Drill
AQRV	Air Quality Related Values
AUM	Animal Unit Per Month
BCF	Billion cubic feet
BLM	Bureau of Land Management
BMP	Best Management Practices
BO	Barrels of Oil
Btu	British Thermal Unit
C&MU	Classification and Multiple Use
CDOW	Colorado Division of Wildlife
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CNAP	Colorado Natural Areas Program
CO	Colorado
COA	Condition of Approval
CSU	Controlled Surface Use
DAU	Data Analysis Unit
DEIS	Draft Environmental Impact Statement
DOE	Department of Energy
DRMP	Draft Resource Management Plan
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Economic Study Area
FLPMA	Federal Land Policy and Management Act
FOOGLRA	Federal Onshore Oil and Gas Leasing Act of 1987
GIS	Geographic Information System
HAML	Herd Appropriate Management Level
HMA	Herd Management Area
HMP	Habitat Management Plan
IAP	Integrated Activity Plan
IHICS	Integrated Habitat Inventory and Classification System
KRCRA	Known Recoverable Coal Resource Area
LSRA	Little Snake Resource Area
MCF	One thousand cubic feet
MFP	Management Framework Plan
MPA	Management Priority Area
MOSS	Management (Map) Overlay Statistical System
NEPA	National Environmental Policy Act
NO_2	Nitrite
NOI	Notice of Intent
NRHP	National Register of Historic Places
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NSO	No Surface Occupancy
NTL	Notice To Lessees
NWCCOG	Northwest Colorado Council of Governments
NWPS	National Wilderness Preservation System
OHV	Off-Highway Vehicles
ONA	Outstanding Natural Area
PM-10	Particulate Matter < 10 Microns in size
PNC	Potential Native Community
POD	Potential of Development
PRLA	Preference Right Lease Area
PSD	Prevention of Significant Deterioration
PV	Prospectively valuable
R&PP	Recreation and Public Purposes Act
RAMP	Recreation Activity Management Plan
RFD	Reasonably Foreseeable Development
RMP	Resource Management Plan
RNA	Research Natural Area
ROD	Record of Decision
ROS	Resource Opportunity Spectrum
RVA	Remnant Vegetative Association
ROW	Right-of-Way
SCS	Soil Conservation Service
SRMA	Special Recreation Management Area
SRP	Special Recreation Permits
SSF	Soil Surface Factor
SWR	Severe Winter Range
T/E	Threatened and/or Endangered
TDS	Total Dissolved Solids
TL	Timing Limitation
TSP	Total Suspended Particulates
USDI	U.S. Department of the Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VRM	Visual Resource Management
WAP	Watershed Activity Plan
WRIS	Wildlife Resource Information System
WRRA	White River Resource Area
WSA	Wilderness Study Area
W&SR	Wild and Scenic Rivers
W&SRA	Wild and Scenic Rivers Act

GLOSSARY

ABANDONMENT. Abandonment is plugging of a well, removal of installations, and termination of operations for production from a well. Conclusively, abandoned unpatented oil placer mining claims are subject to conversion into a noncompetitive oil and gas lease pursuant to the Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 199(f)).

ACTIVITY PLANNING. Site-specific planning which precedes actual development, the most detailed level of BLM planning.

AIR QUALITY CLASSES. Classifications established under the Prevention of Significant Deterioration (a portion of the Clean Air Act which limits the amount of air pollution) is considered significant within an area. Class I applies to areas where almost any change in air quality would be significant. Class II applies to areas where the deterioration normally accompanying moderate well-controlled growth would be permitted. Class III applies to areas where industrial deterioration would generally be allowed.

ALLOTMENT MANAGEMENT PLAN. A concisely written program of livestock grazing management, including supportive measures if required, designed to attain specific multiple-use management goals in a grazing allotment.

ALLOTMENT CATEGORIZATION. As an aid in prioritizing grazing allotments for grazing management system development, all allotments have been tentatively placed into one of three categories: (1) Maintain or "M", (2) Improve or "I", and (3) Custodial or "C". Allotments within each category do not have to meet all the criteria to be managed according to the category objectives. Category criteria are:

> **"M" (MAINTAIN) CATEGORY CRITERIA.** Present range condition is satisfactory, allotments have moderate or high resource production potential (or trend is moving in that direction), no serious resource-use conflicts/controversy exist, opportunities may exist for positive economic return from public investments, and present management appears satisfactory.
>
> **"I" (IMPROVE) CATEGORY CRITERIA.** Present range condition may be unsatisfactory, allotments have moderate to high resource production potential and are producing at low to moderate levels, serious resource-use conflicts/controversy exist, opportunities exist for positive economic return from public investments, and present management appears unsatisfactory.
>
> **"C" (CUSTODIAL) CATEGORY CRITERIA.** Present range condition is not a factor, allotments have low resource production potential and are producing near their potential, limited resource-use conflicts/controversy may exist, opportunities for positive economic return on public investments do not exist or are constrained by technological or economic factors, and present management appears satisfactory or is the only logical practice under existing resource conditions.

ALLOTMENT. An area of land where one or more operators graze their livestock. It generally consists of public lands but may include parcels of private or State-owned lands. The number of livestock and period of use are stipulated for each allotment.

ALLOWABLE CUT. The amount of timber which can be harvested on an annual or decadal basis consistent with the principle of sustained yield. The allowable cut includes all planned timber harvest volumes exclusive of such products as Christmas trees, branches, and cones.

AMBIENT AIR QUALITY. The state of the atmosphere at ground level as defined by the range of measured and/or predicted ambient concentrations of all significant pollutants for all averaging periods of interest.

ANIMAL UNIT MONTH. The amount of forage necessary to sustain one cow and one calf or its equivalent for one month.

APPLICATION. A written request, petition, or offer to lease lands for the purpose of oil and gas exploration and/or the right of extraction.

AREA OF CRITICAL ENVIRONMENTAL CONCERN. An area established through the planning process, as provided in FLPMA, where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, paleontological or scenic values, or to fish and wildlife resources or other natural systems or processes, or to protect life and afford safety from natural hazards.

BEST MANAGEMENT PRACTICE. A practice, or a combination of practices, determined by a State or a designated planning agency to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

BIG GAME. Larger species of wildlife that are hunted, such as elk, deer, bighorn sheep, and pronghorn antelope.

BLM LAND. Land administered by the Bureau of Land Management.

CANDIDATE SPECIES. Any species not yet officially listed but which are undergoing a status review or are proposed for listing according to Federal Register notices published by the Secretary of the Interior or the Secretary of Commerce.

CLIMAX PLANT COMMUNITY. The final vegetative community that emerges after a series of successive vegetational stages. It represents the highest ecological development of a plant community capable of perpetuation under the prevailing climate and soil conditions.

COAL UNSUITABILITY CRITERIA. Regulations developed by the BLM which use the ability of an area's surface resources to accept or absorb the impact of coal mining activities as a means to determine the suitability or unsuitability of the area for coal mining.

COMMERCIAL FOREST LAND(S). Forest land (all species of trees) which is producing or is capable of producing 20 cubic feet per acre per year.

CONDITION OF APPROVAL. Conditions or provisions (requirements) under which a use Application is approved.

CONDITIONAL FIRE SUPPRESSION. Areas where the intensity of fire suppression actions is not fixed and will vary with the conditions existing at the time the fire starts. These areas are managed on a lease-cost basis.

CONTROLLED SURFACE USE. Use and occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. CSU is used for operating guidance, not as a substitute, for the NSO or timing stipulations.

CULTURAL RESOURCES. Those fragile and nonrenewable remains of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, and natural features that were of importance in human events.

CULTURAL RESOURCES INVENTORY CLASSES:

CLASS I. An existing data survey. This is an inventory of a study area to: (1) provide a narrative overview of cultural resources by using existing information, and (2) compile existing cultural resources site record data on which to base the development of the BLM's site record system.

CLASS II. A sampling field inventory designed to locate, from surface and exposed profile indications, all cultural resource sites within a portion of an area so that an estimate can be made of the cultural resources for the entire area.

CLASS III. An intensive field inventory designed to locate, from surface and exposed profile indications, all cultural resource sites in an area. Upon its completion, no further cultural resources inventory work is normally needed.

CUMULATIVE IMPACTS. The collective and aggregate impacts of all actions affecting a particular resource.

DISPOSAL. Transfer of ownership of a tract of public land from the United States to another party through sale, exchange, transfer under the *Recreation and Public Purposed Act*, or desert land entry.

DIVERSITY. The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

ECOLOGICAL SITE. A distinctive geographic unit that differs from other kinds of geographic units in its ability to produce a characteristic natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is capable of supporting a native plant community typified by an association of species that differs from that of other ecologic sites in the kind or portion of species or in total production.

ECOLOGICAL STATUS. The present state of vegetation of a range site in relation to the potential natural community for the site. Ecological status is use independent. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble that of the potential natural community. The four ecological status classes correspond to 0-25, 26-50, 51-75, 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. Collectively, all populations in a community plus the associated environmental factors.

ENDANGERED SPECIES. Any species which is in danger of extinction throughout all or a significant portion of its range.

ENVIRONMENTAL ASSESSMENT. A concise public document prepared to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact. It includes a brief discussion of the need for the proposal, alternatives considered, environmental impact of the proposed action and alternatives, and a list of agencies and individuals consulted.

ENVIRONMENTAL IMPACT STATEMENT. A formal public document prepared to analyze the impacts on the environment of a proposed project or action and released for comment and review. An EIS must meet the requirements of NEPA, CEQ guidelines, and directives of the agency responsible for the proposed project or action.

EXCEPTION. Case-by-case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria applies.

FIRE SUPPRESSION. Areas where fire suppression is required in order to prevent unacceptable resource damage and/or to prevent loss of life and property.

FISHERY, FISHERY STREAM. A body of water capable of producing and sustaining fishery populations.

FORAGE. All browse and herbaceous foods that are available to grazing animals.

FOREST MANAGEMENT UNIT. A specific geographic area for which a FMP would be prepared and in which intensive management of commercial forest land(s) would occur.

FRAGILE SOIL. A soil that is especially vulnerable to erosion or deterioration due to its physical characteristics and/or location. Disturbance to the surface or the vegetative cover can initiate a rapid cycle of loss and destruction of the soil material, structure, and ability to sustain a biotic community. Areas included as fragile soil are:

a. Areas rated as highly or severely erodible by wind or water, as described by the Soil Conservation Service in the Area Soil Survey Report or as described by onsite inspection.

b. Areas with slopes greater than or equal to 35 percent, if they also have one of the following soil characteristics: (1) a surface texture that is sand, loamy sand, very fine sandy loam, fine sandy loam, silty clay or clay, (2) a depth to bedrock that is less than 20 inches, (3) an erosion condition that is rated as poor, or (4) a K factor of greater than 0.32.

FRAGILE SOIL/SLOPE GRADIENT. Problem sites where unstable soils are made more vulnerable to degradation by steep slopes.

GRAZING SYSTEM. Scheduled grazing use and non-use of an allotment to reach identified goals or objectives by improving the quality and quantity of vegetation.

GROUNDWATER. Water beneath the land surface in the zone of saturation.

HABITAT. A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

IMPACT. The effect, influence, alteration, or imprint caused by an action.

INTEGRATED ACTIVITY PLAN. An activity level plan completed for more than one resource in a given area/site, usually when conflicts or potential conflicts could occur between various resource activities.

INTENSIVE FIRE SUPPRESSION. Areas where a full complement of equipment and work force is used to contain, control, and suppress wildfire.

INTERIM MANAGEMENT POLICY. The Department of Interior policy that mandates the BLM to manage lands under wilderness review so as not to impair wilderness values and to protect the right of Congress to make the wilderness designation decision.

KEY AREA. A relatively small portion of a rangeland selected because of its location, use, or grazing value as an area on which to monitor the effects of grazing use. It is assumed that key areas, if properly selected, will reflect the effects of current grazing management over all or a part of a pasture, allotment, or other grazing unit.

KEY SPECIES. (1) Those species which must, because of their importance, be considered in a management program, or (2) forage species whose use serves as an indicator to the degree of use of associated species.

LAND TREATMENT. All methods of artificial range improvement and soil stabilization such as reseeding, brush control (chemical and mechanical), pitting, furrowing, water spreading, etc.

LEASE. A contract in legal form that provides for the right to develop and produce resources for a specific period of time under certain agreed upon terms and conditions.

LEASABLE MINERALS. Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. They include coal, phosphate, asphalt, sulphur, potassium and sodium minerals, and oil and gas. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

LEASE NOTICE. Provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A Lease Notice also addresses special items the lessee would consider when planning operations, but does not impose new or additional restrictions.

LITHIC SITE. An archaeological site containing debris left from the manufacture, use or maintenance of flaked stone tools.

LOCATABLE MINERALS. Minerals or materials subject to claim and development under the Mining Law of 1872, as amended. Generally includes metallic minerals such as gold and silver and other materials not subject to lease or sale (some bentonites, limestone, talc, some zeolites, etc.).

LOCATION. Perfecting the right to a mining claim by discovery of a valuable mineral, monumenting the corners, completing discovery work, posting a notice of location, and recording the claim.

LONG-TERM. Long-term impacts would occur over a 20-year period.

MANAGEMENT FRAMEWORK PLAN. A land use plan that establishes land use allocations, multiple-use guidelines, and management objectives for a given planning area. The MFP planning system was used by the BLM until about 1980.

MASS WASTING. Dislodgment and downslope transport of earthen material as a unit, such as in landslides, rockslides, and earthflows.

MINERAL ENTRY. Claiming public lands under the Mining Law of 1872 for the purpose of exploiting minerals. Mineral entry may also refer to mineral exploration and development under the mineral leasing laws and the Material Sale Act of 1947.

MINERAL MATERIALS. Common varieties of sand, building stone, gravel, clay, moss rock, etc., obtainable under the *Minerals Act of 1947*, as amended.

MITIGATION. Alleviation or lessening of possible adverse effects on a resource by applying appropriate protective measures or adequate scientific study.

MODIFICATION. Fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may, therefore, include an exemption from, or alteration to, a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

MULTIPLE-USE. Management of the various surface and subsurface resources so they are jointly utilized in the manner which will best meet the present and future needs of the public, without permanent impairment of the productivity of the land or the quality of the environment.

NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA). Public Law 91-190. Establishes environmental policy for the Nation. Among other items, NEPA requires Federal agencies to consider environmental values in decision-making processes.

NATIONAL REGISTER OF HISTORIC PLACES (NATIONAL REGISTER). A listing of architectural, historical, archaeological, and cultural sites of local, state, or national significance, established by the Historic Preservation Act of 1966 and maintained by the National Park Service.

NO SURFACE DISTURBANCE. Defined on a case-by-case basis when the activity plan for an area is developed. In general, an activity would be allowed so long as it does not interfere with the management objectives of the area.

NO SURFACE OCCUPANCY. A stipulation which prohibits occupancy or disturbance on all or part of a lease or permit's surface in order to protect special values or uses.

NONDISCRETIONARY CLOSURES. Areas specifically closed to energy and/or mineral leasing, entry or disposal by law, regulation, secretarial decision, or Executive Order.

NONGAME SPECIES. Those species not commonly harvested either for sport or profit.

OFF-HIGHWAY VEHICLE. Any motorized vehicle capable of or designed for travel over land, water, or other natural terrain.

PALEONTOLOGICAL RESOURCE. A site containing nonhuman life of past geological periods, usually in the form of fossil remains.

PATENT. A grant made to an individual or group conveying fee simple title to selected public lands.

PATENTED CLAIM. A claim on which title has passed from the federal government to the mining claimant under the *Mining Law of 1872.*

POTENTIAL NATURAL COMMUNITY. The biotic community that would become established if all successional sequences were completed without interferences by man under the present environmental conditions. Natural disturbances are inherent in development. Includes naturalized non-native species.

PRESCRIBED FIRE (PRESCRIBED BURNING). Application of fire to natural fuels under specific conditions of weather, fuel moisture, soil moisture, smoke, and other conditions intended to produce the intensity of heat and rate of spread required to accomplish certain objectives of wildlife habitat or livestock grazing management and/or hazard reduction.

PRESCRIBED NATURAL FIRE (PNF). The application of fire in the ecological process, under specified prescriptions and preapproved plans. Wildfire is allowed to burn in predetermined areas to help achieve specific resource objectives.

PRIMITIVE. Areas that are almost completely free of management controls lying more than three miles from the nearest point of motor vehicle access, unmodified landscapes and little evidence of other people.

PRIMITIVE AND UNCONFINED RECREATION. Nonmotorized and undeveloped types of outdoor recreation.

PUBLIC LAND. Any land and interest in land (outside of Alaska) owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

RANGE CONDITION. See ecological status.

RANGELAND. A kind of land which supports vegetation useful for grazing on which routine management of that vegetation is through manipulation of grazing rather than cultural practices. (Rangeland includes natural grasslands, savannas, shrublands, most deserts, tundra, alpine communities, coastal marshes, riparian zones, and wet meadows. Rangeland also includes lands revegetated naturally or artificially to provide a plant cover which is managed like native vegetation.)

RECLAMATION. Returning disturbed lands to a form and productivity which will be ecologically balanced and in conformity with a predetermined land management plan.

RECREATION AND PUBLIC PURPOSES ACT (R&PP). This Act authorizes the Secretary of the Interior to lease or convey public lands for recreational and public purposes under specified conditions to States or their political subdivisions and to non-profit corporations and associations.

RECREATION OPPORTUNITY SPECTRUM. A method for classifying the land by setting opportunity, according to the ability of the land to provide various types of physical, social, and managerial settings to satisfy the desires and expected behavioral preferences of the users.

RESOURCE AREA. A geographic portion of a BLM District that is the smallest administrative subdivision in the BLM.

RESOURCE MANAGEMENT PLAN. A land use plan that establishes land use allocations, multiple-use guidelines and management objectives for a given planning area. The RMP planning system has been used by the BLM since about 1980.

REST-ROTATION. A prescribed pattern of grazing use that provides sequential rest for various parts of the range unit for at least an entire year.

RIGHTS-OF-WAY CORRIDOR. A designated parcel of land, either linear or areal in character, that has been identified through the land use planning process as the preferred location for existing and future rights-of-way grants and would accommodate more than one type of right-of-way or one or more rights-of-way that are similar, identical, or compatible.

RIPARIAN. Situated on or pertaining to the bank of a river, stream, or other body of water. Normally describes plants of all types that grow rooted in the water table or subirrigation zone of streams, ponds, and springs.

RIPARIAN ZONE. An area encompassing riparian and adjacent vegetation.

ROADLESS. Refers to the absence of roads that have been constructed and maintained by mechanical means to ensure regular and continuous use.

ROADS. As used herein, 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.

SALABLE MINERALS. Minerals, such as common varieties of sand, stone, gravel, cinders, pumice, pumicite, and clay, that may be acquired under the Materials Act of 1947, as amended.

SEDIMENT YIELD. The amount of sediment produced in a watershed, expressed as tons, acre-feet, or cubic yards of sediment per unit of drainage area per year.

SEMIPRIMITIVE. Areas that have very few management controls lying between ½ mile and three miles from the nearest point of motor vehicle access, excepting four-wheel drive roads and trails, with mostly natural landscapes and some evidence of other people.

SENSITIVE SPECIES. A species included on the sensitive species list developed by the Colorado State Office and approved by the State Director.

SERAL STAGE. The present state of vegetation of an ecological site in relation to the potential natural community for the site. Vegetation status is the 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 classes are potential natural community, late-seral, mid-seral, and early-seral.

SEVERE WINTER RANGE. An area where 90 percent of the animals are located when the annual snowpack is at its maximum in the two worst winters out of ten.

SHORT-TERM. In this document, 10- to 12-year life of the plan is referred to. Short-term impacts would occur within that time period.

SHUT-IN. An oil or gas well which is capable of production but is temporarily not producing.

SPECIAL RECREATION MANAGEMENT AREA: An area that possesses outstanding recreation resources or where recreation use causes significant user conflicts, visitor safety problems, or resource damage.

SPLIT ESTATE. Lands where the owner of the mineral rights and the surface owner are not the same party in interest. The most common split estate is Federal-ownership of mineral rights and other interest ownership of the surface. The Federal government can lease the oil and gas rights without surface owner consent, where such a condition occurs.

STIPULATION. A provision that modifies standard lease rights and is attached to and made a part of the lease.

SUITABLE COMMERCIAL FOREST LANDS. Lands determined to have the capability of sustaining low-term timber production.

SUSTAINED YIELD. 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.

THREATENED SPECIES. Any species or significant population of that species likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Usually includes only those species which have been recognized and listed as threatened by Federal and State governments, but may include species categorized as rare, very rare, or depleted.

TIMBER: Standing trees, downed trees, or logs which are capable of being measured in board feet.

TIMING LIMITATION (SEASONAL RESTRICTION). Prohibits surface use during specified time periods to protect identified resource values. The stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

UNIQUE PLANT ASSOCIATIONS. Plant communities which: (1) occur only in Colorado, (2) are common elsewhere but are represented by only a few occurrences in Colorado, (3) could easily be eliminated from Colorado, or (4) are considered to be their natural state.

VALID EXISTING RIGHTS. Legal interests that attach to a land or mineral estate that cannot be divested from the estate until that interest expires or is relinquished.

VEGETATION MANIPULATION. Planned alteration of vegetation communities through use of prescribed fire, plowing, herbicide spraying, or other means to gain desired changes in forage availability, wildlife cover, etc.

VISUAL RESOURCE MANAGEMENT CLASSES. VRM classes identify the degree of acceptable visual change within a particular landscape. A classification is assigned to public lands based on the guidelines established for scenic quality, visual sensitivity, and visibility.

VRM CLASS I. This classification preserves the existing characteristic landscape and allows for natural ecological changes only. Includes Congressionally authorized areas (wilderness) and areas approved through the RMP where landscape modification activities should be restricted.

VRM CLASS II. This classification retains the existing characteristic landscape. The level of change in any of the basic landscape elements due (form, line, color, texture) to management activities should be low and not evident.

VRM CLASS III. This classification partially retains the existing characteristic landscape. The level of change in any of the basic landscape elements due to management activities may be moderate and evident.

VRM CLASS IV. This classification provides for major modifications of the characteristic landscape. The level of change in the basic landscape elements due to management activities can be high. Such activities may dominate the landscape and be the major focus of viewer attention.

VRM CLASS V. This classification applies to areas where the characteristic landscape has been so disturbed that rehabilitation is needed. Generally considered an interim short-term classification until rehabilitation or enhancement is completed.

WAIVER. Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

WETLAND OR WETLAND HABITAT. Permanently wet or intermittently flooded areas where the water table (fresh, saline, or brackish) is at, near, or above the soil surface for extended intervals, where hydric wet soil conditions are normally exhibited, and where water depths generally do not exceed two meters. Vegetation is generally comprised of emergent water-loving forms (hydrophytes) which require at least a periodically saturated soil condition for growth and reproduction. In certain instances, vegetation may be completely lacking. Marshes, shallows, swamps, muskegs, lake bogs, and wet meadows are examples of wetlands.

WILDERNESS. An area formally designated by Congress as a part of the National Wilderness Preservation System.

WILDERNESS CHARACTERISTICS. Identified by Congress in the *Wilderness Act of 1964*, namely, size, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation and supplemental values such as geological, archaeological, historical, ecological, scenic, or other features.

WILDERNESS MANAGEMENT POLICY. Policy document prescribing the general objectives, policies, and specific activity guidance applicable to all designated BLM wilderness areas. Specific management objectives, requirements, and decisions implementing administrative practices and visitor activities in individual wilderness areas are developed and described in the wilderness management plan for each unit.

WILDERNESS STUDY AREA. An area determined to have wilderness characteristics. Wilderness study areas will be subject to interdisciplinary analysis through BLM land use planning system and public comment to determine wilderness suitability. Suitable areas will be recommended to the President and Congress for designation as wilderness.

WITHDRAWAL. An action that restricts the use of public land and segregates the land from the operation of some or all of the public land and mineral laws. Withdrawals are also used to transfer jurisdiction of management of public lands to other Federal agencies.

WOODLANDS. Plant communities in which trees, often small and characteristically short-bowed relative to their depths of crown, are present but from only an open canopy, the intervening areas being occupied by lower vegetation, commonly grass. Woodland forests contain major and minor forest products (or any wood fibre) that has, or may have, merchantability.

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