June 2024

Yuma East/Gila River Travel Management Plan
Draft Environmental Assessment

DOI-BLM-AZ-C020-2024-0003-EA

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ACRONYMS

Acronym	Full Terminology
ACEC	Area of Critical Environmental Concern
ADEQ	Arizona Department of Environmental Quality
ATV	All-Terrain Vehicle
AZGFD	Arizona Game and Fish Department
BLM	Bureau of Land Management
BMP	Best Management Practice
CDFG	California Department of Fish and Game[1]
CEAA	Cumulative Effects Analysis Area
CFR	Code of Federal Regulations
CWA	Clean Water Act
CX	Categorical Exclusion
DNA	Determination of NEPA adequacy
DOI	Department of the Interior
DR	Decision Record
EA	Environmental Assessment
E-bike	Electric Bicycle
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FUDS	Formerly Used Defense Sites
GIS	Geographic Information System
IDT	Interdisciplinary Team
IPaC	Information for Planning and Consultation
MLRA	Major Land Resource Area
NEPA	National Environmental Policy Act
NHT	National Historic Trail
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OHV	Off-Highway Vehicle
PFYC	Potential Fossil Yield Classification
PM	Particulate Matter
Reclamation	U.S. Bureau of Reclamation
RMP	Resource Management Plan
RNA	Research Natural Area
ROW	Right-of-Way
SCRMA	Special Cultural Resource Management Area
SDWA	Safe Drinking Water Act
SOP	Standard Operating Procedure
SRMA	Special Recreation Management Area
T&E	Threatened and Endangered
TMA	Travel Management Area
TMP	Travel Management Plan
USFWS	U.S. Fish and Wildlife Service
UTV	Utility Terrain Vehicle

[1] California Department of Fish and Game is now known as California Department of Fish and Wildlife

VRM	Visual Resource Management
YFO	Yuma Field Office

1 INTRODUCTION/PURPOSE AND NEED

1.1 Introduction

The Bureau of Land Management (BLM) Yuma Field Office (YFO) proposes to designate a comprehensive network of motorized routes and trails for managing travel within the Yuma East/Gila River Travel Management Area (TMA) (Map 1). This Yuma East/Gila River Travel Management Plan (TMP) is comprehensive in that it addresses access for public land users for recreation and authorized uses such as rights-of-way, mining, special use, and grazing permittee access as well as access for resource management purposes. Though the term Off-Highway Vehicle ("OHV") is associated with off-road vehicles, in BLM planning, OHVs include full-size cars and trucks as well as UTVs, ATVs, motorcycles, e-bikes, etc., when in use by the public (BLM 2016). Emergency motorized vehicles used for emergency purposes and certain authorized motorized vehicles are not considered OHVs in BLM planning. Emergency, administrative, and access by recreationists with disabilities is considered separately, on a case-by-case basis. The TMP also considers all modes and conditions of travel on public lands, including typical highway vehicles (low-clearance sedans and trucks), four-wheel drive (4WD) vehicles, motorcycles, utility terrain vehicles (UTVs), all-terrain vehicles (ATVs), bicycles, electric bicycles (e-bikes), equestrian, and foot travel.

The TMP has been developed in careful consideration and evaluation of each existing inventoried travel route within the TMAs, and the potential impacts that these routes and their uses could have on the TMA's natural and human environment. The potential impacts are disclosed in this Environmental Assessment (EA) which has been prepared in compliance with the National Environmental Policy Act (NEPA) and will assist the BLM decision maker in determining whether any significant impacts could result from implementing the TMP. Following public review and any necessary revisions to the EA, if there are no significant impacts anticipated, the BLM will prepare a Finding of No Significant Impact (FONSI) and issue a signed Decision Record (DR). The DR documents the decision for the selected network of designated routes that would be carried forward for this project. The TMP may then be implemented after all appeal procedures and program-specific legal and procedural requirements have been met, including:

- Section 106 of the National Historic Preservation Act (NHPA), BLM Handbook H-8110-1, and the 2018 Programmatic Agreement for BLM-Arizona Travel Management Plans in Arizona and Portions of California (2018 Travel PA[2]) between the BLM and the Arizona State Preservation Office
- Consultation with American Indian Tribes under Section 106 of the NHPA
- Consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7(c) of the Endangered Species Act (ESA)

1.2 Proposed Action

The YFO is proposing to designate a comprehensive travel route network from 1,282 evaluated travel routes totaling 1,314.8 miles on 700,684 acres of BLM-managed lands as well as Bureau of Reclamation (Reclamation) lands on which the BLM manages public recreation within the TMA[3], comprising an area

[2] https://www.blm.gov/sites/blm.gov/files/BLM%20AZ%20Travel%20Management%20Programmatic%20Agreement%20EXECUTED%209%2018%202018.pdf

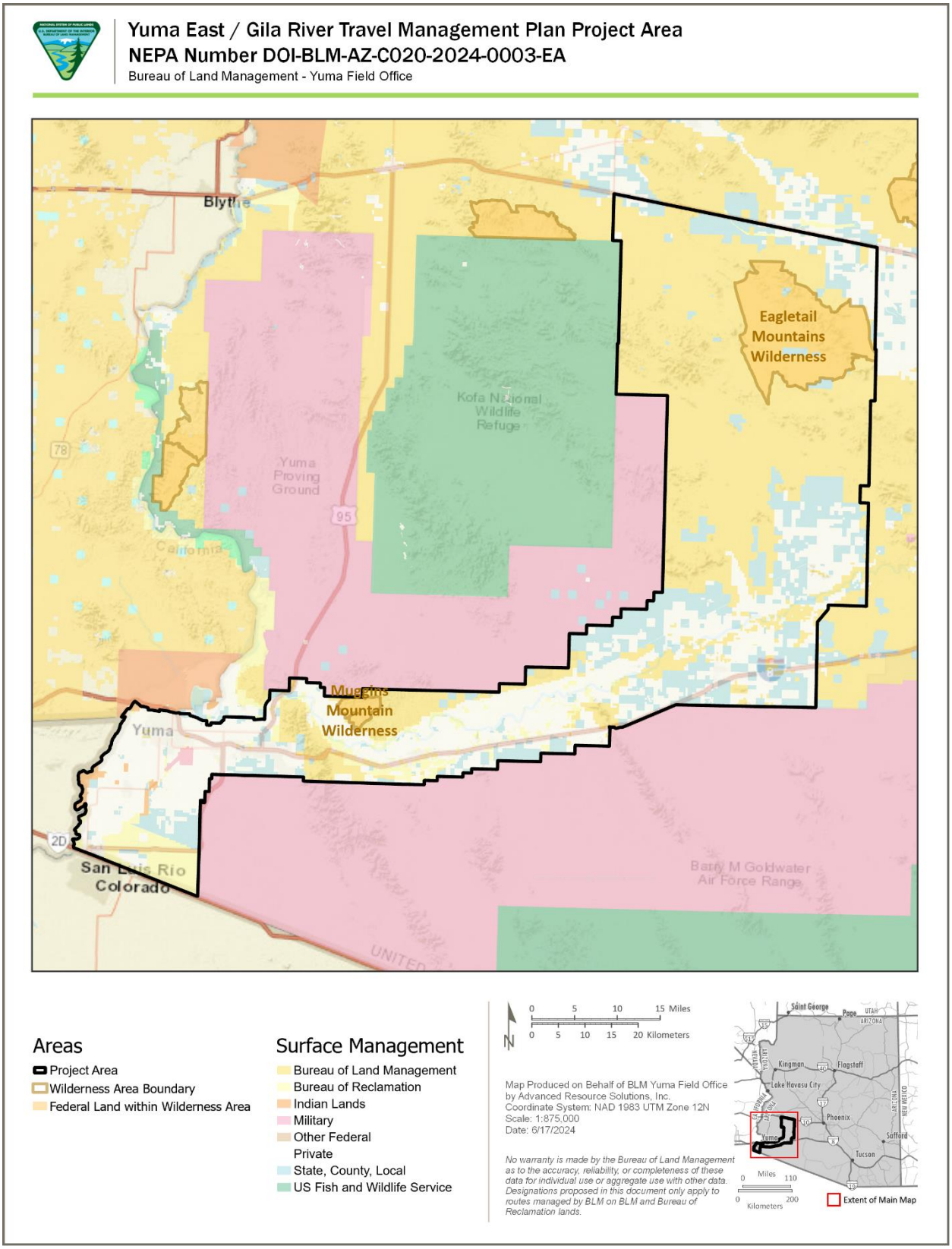
[3] U.S. Department of the Interior Departmental Manual 613, Chapter 1 assigned the BLM to manage Reclamation lands, through coordination with Reclamation, along the Lower Colorado River for recreation and wildlife purposes.

stretching from the Mexico border south of Yuma, Arizona, north and east along the Gila River and then north through the Paloma Plains, the Little Horn Mountains, and the Eagletail Mountains to Interstate 10, and includes parts of Yuma, Maricopa, and La Paz Counties (see Map 1, below). The TMA includes BLM, private, state, local, Bureau of Reclamation, and Tribal land jurisdictions; however, only those BLM-managed lands and Bureau of Reclamation lands on which the BLM manages public recreation within the TMA are subject to the decisions resulting from this EA.

The TMP would result in a network of routes that provides for a variety of public opportunities, addresses resource management needs and protections, and brings travel and transportation management in the TMA into conformance with 43 CFR 8342.1 as well as other applicable laws, regulations, and policies (see section 1.5 for more details on conformance). A companion Implementation Guide to the TMP provides details for long-term operation and maintenance of the network, and for enhancements to user navigation.

Note: Levee roads are not public roads and therefore were not included in the inventory or evaluation process. Access to Reclamation's withdrawn and acquired lands, rights-of-ways, and facilities will be maintained.

Map 1: Yuma East/Gila River Travel Management Area



Upon compliance with applicable legal and procedural requirements (e.g., Section 106 of the NHPA, etc.), the approved TMP would be implemented, and the selected network operated and maintained, in accordance with the Implementation Guide, a standalone document that provides details for long-term operation and maintenance of the network, available on this project's ePlanning page. The travel network route designations chosen for this project would supersede any previous route designations assigned in the TMA. The Proposed Action incorporates updated consideration and evaluation of all inventoried routes in the TMA. Any subsequent route designation(s) would be completed in compliance with NEPA requirements and subject to applicable administrative processes.

1.3 Purpose and Need

The purpose for action is to develop a comprehensive TMP of designated travel routes on BLM-managed lands and Reclamation lands on which the BLM manages recreation within the Yuma East/Gila River TMA. The need for action is to comply with FLPMA Section 302 and 43 CFR 8342.1.

The TMA's existing routes have not previously been evaluated for compliance with the criteria in 43 CFR 8342.1 to determine their function and minimize potential impacts on the natural and human environment.

Moreover, the proposed TMP helps the BLM comply with Presidential Executive Orders 11644 and 11989[4], which state that TMPs be developed to protect the natural resources of public lands while minimizing conflicts among the various users of those lands.

1.4 Background and TMA Overview

The TMA is shown on Map 1 in section 1.1, above, and encompasses several jurisdictions; the multi-jurisdictional breakdown is shown in Table 1. The purpose of including these other lands and travel routes in the TMA is to ensure that the travel network is part of an overall seamless route system that provides needed ingress and egress to BLM-managed lands within and adjoining the TMA. The analysis in this EA and any Decision Record will apply only to BLM-managed lands and to routes on Bureau of Reclamation lands for which the BLM manages public recreation; however, plans, actions, and activities on the adjacent jurisdictional lands are included as part of the cumulative effects analysis in Chapter 3.

Table 1: TMA Acreage by Jurisdiction

Jurisdiction	Acres	% of TMA
BLM	700,684	49.3%
Private	415,995	29.3%
State & Local	228,929	16.1%
Bureau of Reclamation	65,248	4.6%
Tribal Lands	6,811	0.5%
Other	3,256	0.2%
Total	1,420,923	100%

The TMA includes BLM-managed public lands and Reclamation lands on which BLM manages recreation in Yuma, Maricopa, and La Paz Counties, Arizona. The TMA's features include the Sears Point Area of Critical Environmental Concern (ACEC), the Eagletail Mountains and Muggins Mountains Wilderness Areas, and the Juan Bautista de Anza National Historic Trail. The TMA contains habitat for

[4] Executive Order 11644: Use of Off-Road Vehicles (ORVs) on The Public Lands; Amended by Executive Order 11989: Use of Off-Road Vehicles on Public Lands (1977) and Executive Order 12608: Elimination of Unnecessary Executive Orders and Technical Amendments to Others (1987)

the endangered Sonoran pronghorn, Southwestern willow flycatcher, and Yuma Ridgway's rail; and the threatened western yellow-billed cuckoo.

1.5 Conformance with Management Plans and Policies

The Yuma Field Office Approved Resource Management Plan (BLM 2010; Yuma RMP) designated OHV Management Areas, established a preliminary YFO Transportation System, provided guidance for finalizing the YFO Transportation System, and delineated TMAs based on area-specific desired future conditions for resource protection, recreation user opportunities, and reducing user conflicts.

The Proposed Action is in conformance with the Yuma RMP. RMP decisions and goals to which this project conforms are listed below in Table 2. The route evaluation criteria are tied to RMP decisions and goals and are listed in route reports (see Appendix C). Additionally, the Secretary of the Interior has assigned recreation and wildlife management responsibilities on Reclamation-withdrawn lands to the BLM; routes on these Reclamation lands are included in this TMP and were subjected to the same route evaluation criteria as those on BLM lands.

Table 2: Key Travel-Related Decisions in the Yuma RMP

Desired Future Conditions	
TM-005	No OHV use occurs within designated Closed OHV Management Areas.
TM-009	The unauthorized proliferation of motorized and non-motorized recreation trails is reduced or halted.
TM-010	OHV access within designated ACECs will be managed in a manner which does not damage important cultural resources and wildlife habitat.
TM-017	Roads traversing bighorn sheep habitat may be closed, limited, or rerouted during the lambing season in specific areas consistent with safety and maintenance requirements of authorized uses in cooperation with AZGFD and CDFG[5].
TM-023	The YFO Transportation System continues to provide essential motorized access to non-Federal lands, access across BLM-administered lands, access to private in-holdings surrounded by BLM-administered lands, and recognizes prior existing access rights.
TM-024	The YFO Transportation System continues to provide adequate motorized access for the maintenance of wildlife water catchments and for dispersed recreation activities such as hunting.
TM-025	The YFO Transportation System provides for a wide variety of trail-based recreational opportunities (i.e., hiking, mountain biking, OHV riding, horseback riding) in a manner that reduces existing user conflicts.
TM-026	The YFO Transportation System minimizes impacts to identified sensitive resource values from routes that provide non-essential access.
TM-028	During the development of the YFO Transportation System, interested stakeholders are provided additional opportunities to update the route inventory by identifying existing roads, trails, and drivable desert washes that do not appear on Maps TMA-1 to TMA-5 and indicate those that should be considered for designation.
TM-047	The future route designation process in the Greater Yuma TMA focuses on creating an interconnected system of motorized and non-motorized recreational trails for the use of local community residents.
TM-048	The future route designation process in the Greater Yuma TMA provides route-specific use limitations to reduce user conflicts where multiple forms of travel are occurring.
SM-005	A multiple-use Anza NHT provides contiguous recreational trail connectivity between the Greater Yuma TMA and the BLM Lower Sonoran Field Office.
SM-010	Public land visitors are provided with recreational connectivity from the Anza Trail to other recreational trails and other points of interest within the Gila River Valley TMA, including the Sears Point ACEC.

[5] California Department of Fish and Game is now known as California Department of Fish and Wildlife

Other Relevant Travel Management-Related Desired Future Conditions: TM-007, TM-027, TM-030, TM-031, TM-058, AA-036, SM-009, SM-020, VM-006, VM-046, VM-052, WF-001, WF-009, WF-020, WF-026, WF-034, WF-038, WF-040, WF-041, WF-044, WF-045, WF-049, WF-050, WF-053	
Management Actions	
TM-012	Limit motorized use within Limited OHV Management Areas to existing inventoried routes appearing on the YFO route inventory maps (Maps TMA-1 to TMA-5 [in the Yuma RMP]). Motorized travel will not be allowed on roads, trails, and drivable washes that are not included on the YFO route inventory maps. After the YFO Transportation System is finalized, limit motorized use within Limited OHV Management Areas to designated routes only.
TM-013	OHV travel will be limited to existing inventoried routes, until future route evaluation and designation is complete within the ACEC. Upon designation of motorized routes within ACECs, use of motor vehicles will be limited to the designated routes only and will not be allowed to drive 100 feet from the centerline of the route. Motorized use shall remain within the route with reasonable use of the shoulder and immediate roadside for vehicle passage, parking/overnight camping, and emergency stopping.
TM-015	Unauthorized cross-country travel which results in the creation of new routes or the widening or extension of existing routes will not be permitted within Limited OHV Management Areas. Cross-country motorized travel will not be permitted for the retrieval of downed game within Limited OHV Management Areas. Cross-country vehicle travel may be permitted within Limited OHV Management Areas when a specific authorized task requires such use, and only where cross-country travel will not cause undue resource damage.
TM-017	Roads traversing bighorn sheep habitat may be closed, limited, or rerouted during the lambing season in specific areas consistent with safety and maintenance requirements of authorized uses in corporation with AGFD and CDFG.
TM-032	Designate all inventoried routes within the YFO as open, closed, or limited to public use. Routes may be limited seasonally or to specific types of uses to prevent and reduce impacts to resource values and user conflicts. While lands within the Ehrenberg Sandbowl Open OHV Management Area will be exempt from the route evaluation/designation process, specific routes crossing these lands may be designated. No routes will be designated as open to motorized use within Closed OHV Management Areas. Routes within Closed OHV Management Areas may be designated to non-motorized modes of travel, such as hiking or horseback riding.
TM-033	BLM may close or limit routes on the public lands at any time as public health and safety and resource protection needs arise (43 CFR 8342).
TM-045	Designate portions of the Anza Trail through BLM-administered lands for motorized and non-motorized recreation as appropriate.
SM-022	Prohibit new routes within designated ACECs except as needed to manage and interpret resources or as required by law, such as access to valid mining claims or private property.
Other Relevant Travel Management-Related Management Actions: TM-008, TM-014, TM-016, TM-018, TM-020, TM-021, TM-022, TM-035, TM-036, TM-037, TM-040, TM-044, TM-049, TM-057, TM-059,	
Administrative Actions	
AA-036	Provide reliable, safe, and legal administrative access to the Sears Point ACEC from Interstate 8.
AA-233	Work with interested cooperators to establish legal and safe public access to Anza NHT trailheads and the Sears Point ACEC from Interstate 8.
AA-236	Work with interested cooperators to establish legal and safe public access to and across designated recreational routes in the Greater Yuma TMA.
Other Relevant Travel Management-Related Administrative Actions: AA-026, AA-117, AA-211, AA-215, AA-216, AA-217, AA-218, AA-219, AA-220, AA-221, AA-222, AA-223, AA-225, AA-228, AA-232, AA-234, AA-240	

The Proposed Action and alternatives were developed in accordance with guidance in the BLM NEPA Handbook H-1790-1 (BLM 2008a) as well as the following federal regulations, BLM manuals and handbooks, and land use plans:

- 2001 Final National Management Strategy for Motorized Off-highway Vehicle Use on Public Lands (BLM 2001)
- Planning for Recreation and Visitor Services 8320-1 (BLM 2014c)
- Travel and Transportation Handbook 8342 (BLM 2012)
- Travel and Transportation Manual 1626 (BLM 2016)
- 40 CFR (Parts 1500-1508)
- 43 CFR 8342.1, Designation Criteria
- BLM Manual 6840 Special Status Species Management (BLM 2008b)
- Departmental Manual 613, Chapter 1 (1984)
- Lower Colorado River Land Use Plan (DOI 1964)
- Public Law 89-72, as amended
- 43 CFR 423, Public Conduct on Bureau of Reclamation Facilities, Lands, and Waterbodies
- 43 CFR 429, Use of Bureau of Reclamation Land, Facilities, and Waterbodies

Table 3 provides the designation criteria as listed in 43 CFR 8342.1. An interdisciplinary team (IDT) of BLM specialists applied the criteria to each route in the inventory (see Chapter 2 for more details on this process).

Table 3: 43 CFR 8342.1 Designation Criteria

(a)	Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.
(b)	Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.
(c)	Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.
(d)	Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which such areas are established.

1.6 Scoping and Issue Identification

1.6.1 Overview

The BLM provided a public comment period to review and provide information on the route inventory from January 22 to February 21, 2024. As part of this comment period, the BLM conducted two virtual Zoom meetings, on January 23 and 24. The BLM reviewed the public input and updated the route inventory as appropriate.

While many preliminary issues related to the Proposed Action and alternatives were identified through internal and external scoping, not all issues warrant analysis in this EA. Issues that are brought forward for detailed analysis are based on the following (as directed by the BLM NEPA Handbook H-1790-1):

- Analysis of the issue is necessary to make a reasoned choice between alternatives. That is, does it relate to how the Proposed Action or alternatives respond to the purpose and need?
- The issue is important (that is, an issue associated with a potentially significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of impacts).

1.6.2 ISSUES CARRIED FORWARD FOR DETAILED ANALYSIS

Those issues identified through internal and external scoping necessary to make a reasoned choice between the travel network alternatives, and therefore carried forward for detailed analysis, are organized below in Table 4 under two primary headings: 1) potential impacts on the TMA's natural and human environment, and 2) potential impacts to recreation user opportunities and experiences, and to authorized users.

Table 4: Issues Carried Forward for Analysis

1. POTENTIAL IMPACTS ON THE TMA'S NATURAL AND HUMAN ENVIRONMENT
• How would the route designation alternatives impact air quality in the TMA?
• How would the route designation alternatives impact cultural resources in the TMA?
• How would the proposed designated travel network alternatives impact soil stability, biotic communities, and special status plants?
• How would the route designation alternatives impact the TMA's specially designated areas—that is, the cultural and recreational values of the Juan Bautista de Anza National Historic Trail (NHT) and the relevant and important values of the Sears Point Area of Critical Environmental Concern (ACEC)?
• How might the travel network alternatives impact the quality of visual resources?
• What impact might the proposed travel network alternatives have on surface water flow patterns, water quality, and associated riparian habitats?
• How would the route designation alternatives impact designated Wilderness areas? • How would the travel network alternatives impact the size, apparent naturalness, outstanding opportunities for solitude or primitive and unconfined recreation in lands managed by the BLM to maintain their wilderness characteristics or lands inventoried by the BLM as possessing wilderness characteristics that are managed for multiple uses?
• How might disturbance and habitat fragmentation from use of the proposed travel network alternatives and the presence of travel routes impact special status wildlife?
• How might disturbance and habitat fragmentation from use of the proposed travel network alternatives and the presence of travel routes impact general wildlife species and migratory birds?
2. POTENTIAL IMPACTS TO RECREATION USER OPPORTUNITIES AND EXPERIENCES, AND TO AUTHORIZED USERS
• How would the proposed travel network alternatives impact motorized and non-motorized recreation opportunities and experiences? • How would the proposed travel network alternatives impact recreation user conflicts? • How would the proposed travel network alternatives impact public health and safety of recreation users?
• How would the proposed travel network alternatives impact livestock grazing operations?

1.6.3 RESOURCE/USE TOPICS IDENTIFIED, BUT ELIMINATED FROM DETAILED ANALYSIS

Some issues raised during scoping were beyond the scope of this project, were not substantive, or were not helpful in making reasoned choices among alternatives. Additional resource/use topics that were identified but eliminated from detailed analysis in the EA can be found in Appendix A.

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2 ALTERNATIVES

2.1 Alternative Development

A reasonable range of alternatives, each of which meets the Purpose and Need described in Chapter 1, Section 1.3, were developed from preliminary issues and concerns raised from internal and external scoping.

A BLM IDT evaluated all inventoried travel routes in the Yuma East/Gila River TMA and created a preliminary range of alternative travel networks. Reasonable alternatives are those that "are *practical or feasible* from the technical and economic standpoint and using common sense, rather than simply *desirable*. . ." (BLM 2008a). Each action alternative meets the purpose and need and responds to the key issues described in Section 1.6.2.

2.1.1 TMP Route Inventory and Evaluation

2.1.1.1 Route Inventory

The BLM compiled the routes considered for designation through this travel planning effort as follows:

Step 1: Initial Baseline Inventory and Data Collection: Between 2022 and 2024, the BLM and its contractors used a combination of remotely sensed data (e.g., aerial photography), GIS and other map data, and a protocol-based on-the-ground inventory process to identify all existing transportation linear features within the TMA. The term *transportation linear feature* refers to a linear ground disturbance that results from travel across or immediately over the surface of BLM-administered public lands. These features include engineered roads and trails as well as user-defined, non-engineered routes created as a result of public or unauthorized use (BLM 2016). The initial baseline inventory captured other natural and man-made features that appear to an observer to be transportation linear features, such as fences, pipelines, and other linear rights-of-way.

Step 2: Preliminary Analysis and Inventory Refinement: The BLM and contractors conducted a preliminary evaluation of each linear feature identified during the initial baseline inventory and data collection process to identify and remove linear features such as game trails, cattle trails, fence-lines, remnants of past motor vehicle usage where there was no evidence use was continuing, and seismic exploration scars because they were inappropriate for consideration in a travel planning effort. The BLM also considered linear features brought forward during public review of the route inventory from January 22 to February 21, 2024.

Step 3: Preparation for Route Evaluation: The IDT collected and compiled additional data (such as cultural resource inventory and soils data) necessary to evaluate the routes in the refined inventory.

2.1.1.2 Evaluation

The IDT rigorously reviewed and evaluated every route in the refined baseline inventory and in doing so applied and documented compliance with the designation criteria set forth at 43 CFR 8342.1. The results of the route evaluations are documented in the route reports, which are described in detail in Appendix C. During route evaluations, the BLM IDT:

- Identified the function and use of each route. The IDT identified and evaluated whether, and to what extent, each route currently or historically has received motorized and non-motorized use and provides for access, connectivity, or recreational outcomes. This process included documentation and consideration of known authorized uses, user conflicts, whether and to what extent the route provides access to adjacent land ownerships, facilities, campsites, points of

interest (e.g., scenic overlooks or natural and historic features), and whether there are multiple routes leading to the same location or providing a similar experience.

- Verified the character and use level of the route.
- Identified the users of the route.
- Identified the resources present on or near the route and resource protection needs, user safety issues, user conflict issues, and minimization and monitoring opportunities for resource damage, wildlife harassment or disruption, and impairment of wilderness values.
- Considered and documented how resource impacts and user conflicts could be minimized through appropriate designations proposed in each action alternative. As necessary, additional management (e.g., monitoring) was assigned to routes as part of their individual proposed designations to help mitigate potential resource impacts and/or user conflicts. Details on these management assignments are contained in the route reports (Appendix C).
- Created three alternative route networks (identified below as Alternatives B, C, and D) and assigned designations (open, limited, or closed) for each route that supported the alternative's route network theme(s). The IDT documented in each route report the rationale for each route alternative's designation including how the designation would minimize damage to affected soils, watershed, vegetation, and other resource values, as well as minimize conflicts between users.

As described above, the route inventory and evaluation processes were based on the best available data from various sources. Throughout the planning process, the BLM received numerous route-specific comments and input from the public, stakeholders, and cooperating agencies that resulted in further refinement of the route evaluations and proposed route designations in the network alternatives.

2.1.2 TRAVEL ROUTE DESIGNATIONS

A travel route is formally assigned a designation specifying a mode of travel or use as part of a travel management network decision, thereby becoming a designated route. Preliminary designations for alternative networks are assigned as part of the route evaluation process that considers on-the-ground conditions and utilizes the best available GIS data.

In tables throughout this EA, travel route designations are presented under the broader OHV designation categories described below to enable the reader to more easily compare differences between the route network alternatives. In some cases, some form of management (e.g., monitoring) was assigned to routes as part of their individual designations, and details on such management can be found in the route reports.

For the Yuma East/Gila River TMP project, the OHV designation for any given route falls into one of the following categories:

- OHV-Open — Open year-round to all motorized vehicle travel.
- OHV-Limited — Public motorized vehicle use limited to specified season, vehicle type, width, mode of travel, etc.
- OHV-Closed — Route not available for public motorized vehicle use; only available for equestrian, hiking, and mechanized (e.g., bicycle) use. This category also includes routes that are limited to authorized or administrative use only and may provide access to communication sites, grazing facilities, wildlife water developments, mining claims/sites, etc.

In this TMP, electric bikes, or e-bikes, are only allowed on routes designated for OHV use (OHV-Open or OHV-Limited). Mechanized travel is also limited to designated routes. Regardless of travel route designations, people can walk or ride horses anywhere on TMA BLM-managed lands (on routes or cross-country) unless there is a specific mandated exclusion.

As the need arises, and in accordance with applicable regulations, any route (including those that are OHV-Closed) could be made available to authorized or administrative uses.

The TMP alternative route networks to be analyzed in this EA are described below.

2.1.3 ALTERNATIVES

Alternative Themes: The alternatives in Figure 1, below, were developed with themes reflecting the issues that emerged through internal and external scoping. The themes are as follows:

- **Alternative A (Current Management)**: Alternative A represents no action/continuation of current management for travel on the BLM-managed lands within the TMA. This alternative serves as the baseline against which potential effects from any of the action alternatives B-D can be compared.
- **Alternative B (Resource Protection Emphasis):** Alternative B provides for lower levels of motorized use opportunities while emphasizing more natural and cultural resource protections than Alternatives C or D.
- **Alternative C (Multiple Use Emphasis):** Alternative C represents a variety of route designations which resolve resource and access needs in a blended manner while accommodating a wider variety of the BLM's programs and priorities than Alternative B.
- **Alternative D (Access Emphasis):** Alternative D emphasizes an expanded range of travel route use opportunities as compared to Alternatives B and C while still providing required protections for natural and cultural resources.

The IDT evaluated existing travel routes on BLM public lands within the TMA during formal route evaluation sessions held in 2023 and 2024, creating a preliminary range of alternative travel route networks. The evaluation and development of each alternative network was informed by the designation criteria at 43 CFR 8342.1, the issues identified through internal and external scoping, and the Yuma RMP. The holistic analysis of these evaluated routes, through their organization in action alternatives, is the crucial step to informing a decision on which proposed route designations become the travel network adopted in the TMP.

Each of the action alternative networks B-D displayed below in Figure 1 meets the purpose and need, conforms to the management direction and policies noted in Section 1.5, and responds to the issues in 1.6.2. Figure 1 displays an overview of the broad OHV-Open, OHV-Limited, and OHV-Closed designations while Table 5 shows a detailed rundown of the specific route designations for each alternative.

Figure 1: Miles of Evaluated Routes in the TMA by Designation and Alternative

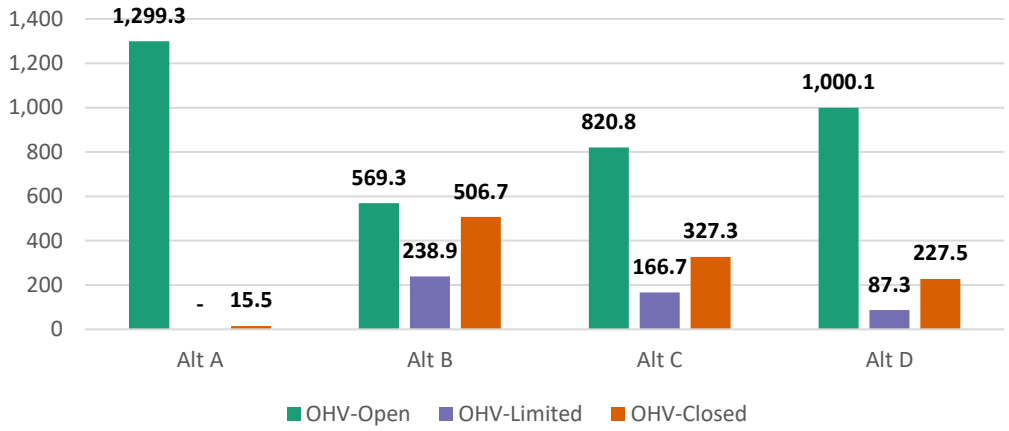

Table 5: Miles of Evaluated Routes in the TMA by Designation and Alternative

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	1,299.3	569.3	-730.1	820.8	-478.5	1,000.1	-299.3
Excludes off-route travel (OHV-Limited)	-	121.5	+121.5	158.3	+158.3	86.2	+86.2
Limited by vehicle type (OHV-Limited)	-	-	-	1.0	+1.0	1.1	+1.1
Limited by season (OHV-Limited)	-	117.3	+117.3	7.4	+7.4	-	-
Limited to authorized users (OHV-Closed)	5.2	102.0	+96.8	83.0	+77.8	59.8	+54.7
Limited to non-motorized use (OHV-Closed)	-	1.9	+1.9	3.4	+3.4	2.1	+2.1
Limited to non-mechanized use (OHV-Closed)	-	6.0	+6.0	6.0	+6.0	-	-
Closed (OHV-Closed)	10.3	396.8	+386.4	234.9	+224.6	165.5	+155.2

2.1.4 R.S. 2477 Assertions

The State of Arizona and counties may hold valid existing rights-of-way within the TMA pursuant to Revised Statute (R.S.) 2477, Act of July 28, 1866, Chapter 262, 8,14; Stat. 252, 253, codified at 43 U.S.C. 932. This travel planning effort and resulting TMP is not intended to provide any evidence bearing on or to address the validity of any asserted R.S. 2477 rights-of-way and does not adjudicate, analyze, or otherwise determine the validity of any asserted rights-of-way. R.S. 2477 rights are determined through a process that is entirely separate from BLM travel planning efforts. Consequently, this planning effort does not consider any R.S. 2477 assertions or evidence and has no effect on any legal rights relating to asserted R.S. 2477 rights-of-way. When administrative or judicial determinations are made acknowledging or adjudicating asserted R.S. 2477 rights-of-ways, the BLM will adjust the TMP accordingly.

2.2 Implementation Actions Common to all Alternatives

2.2.1 Overview

The implementation actions discussed below are common to all the TMP alternatives described above. These routine actions and Best Management Practices (BMPs) are described in more detail in the TMP Implementation Guide, a standalone document that can be found on this project's ePlanning site. Potential effects from routine actions are discussed in Chapter 3. The TMP is meant to be a living document throughout the life of the plan. Adaptive management strategies would be implemented to minimize impacts and conflicts and maximize multiple use benefits (see the TMP Implementation Guide for more on adaptive management). Future changes to the approved TMP (e.g., new use authorizations for ROWs or permittees, additions of new routes, route closures, changes in designations) would be considered on a case-by-case basis and addressed in project-specific NEPA.

2.2.2 Sign Installation

The TMA travel route network would be signed to identify and direct users to facilities and routes, and inform users of locations, special conditions, and limitations. Regardless of the presence or absence of signs, the route designations approved for this TMP would be in effect once the BLM meets its NHPA Section 106 responsibilities. Sign installations result in ground disturbance (post hole excavation, minor grading) and may involve minor vegetation removal. Sign placement would be done in previously disturbed areas where possible. Most sign installations can be categorically excluded from further NEPA review, as allowed by 43 CFR 46.210(G)(2) and the BLM NEPA Handbook (BLM 2008a), Appendix 4. However, all planned sign installations would still be reviewed to determine if there are any extraordinary circumstances in accordance with the BLM NEPA Handbook, Appendix 5. More detail can be found in the Implementation Guide and in the BLM NEPA Handbook.

2.2.3 Routine Route Maintenance

Routine maintenance of facilities and routes includes upkeep, repairs, blading and cleaning of drainage structures (rolling dips, culverts, waterbars, wingditches, etc.), and periodic replacement (e.g., culverts, gravel surfacing, etc.). Route maintenance, realignment, and surfacing would be accomplished in accordance with BMPs (see Implementation Guide, Section 3) which account for the possibility of noxious weed introduction (see Chapter 7 of BLM Handbook H-1740-2 (BLM 2008b)).

2.2.4 Monitoring

Routine monitoring would be conducted throughout the TMA to determine the effects of OHV use. As required in 43 CFR 8342.3 ("Designation changes"), "The authorized officer shall monitor effects of the use of off-road vehicles. Based on information so obtained, and whenever the authorized officer deems it necessary to carry out the objectives of this part, designations may be amended, revised, revoke, or other actions taken pursuant to the regulations in this part." In the broadest sense, monitoring helps to determine if adequate progress is being made toward management objectives. Among other things, this means that the monitoring program will be used to determine:

- If resource protection and resource use objectives are being met
- Visitor satisfaction
- Use patterns and volumes

- The condition of roads and trails, the condition of public use areas, and compliance with route designations and use restrictions
- The effectiveness of cross-jurisdictional enforcement

The process of route inventory is based on the best available technology and collection methods exercised by the BLM; however, it is acknowledged that technological as well as human errors may result in existing routes being overlooked or inadvertently omitted from the TMP process. In the event of such an occurrence, the Field Manager or Authorized Officer may choose to close or propose that a missed route or routes be added into the TMP pending an appropriate level of NEPA review and that includes an evaluation of the effects on the total travel network.

It is also acknowledged that the creation of social trails and route proliferation from motorized and non-motorized use is a well-known and documented occurrence on BLM lands. If such trails or routes are created within the TMA, the Field Manager or other Authorized Officer may choose to close such routes immediately or further evaluate them for potential inclusion within the TMA pending an appropriate level of NEPA review.

Details on monitoring protocols and materials can be found in the Implementation Guide.

2.2.5 MITIGATION

Specific prescribed mitigation measures would be applied, as needed, as a result of resource monitoring via adaptive management. Mitigation measures (for example, BMPs such as those detailed below in Section 2.2.8) would be applied to respond to resource or resource use issues identified during monitoring. Monitoring would continue during and after mitigation measure implementation. More details on mitigation are available in the Implementation Guide.

2.2.6 MINOR REALIGNMENTS

Minor route adjustments or realignments to avoid or mitigate impacts to sensitive resources would be considered maintenance actions, consistent with the BLM NEPA Handbook (BLM 2008a). Minor realignments would be documented in the official record and kept on file in the YFO.

2.2.7 CLOSURE AND RECLAMATION OF TRAVEL ROUTES

Travel routes may be physically closed and reclaimed through a variety of methods as described below:

- Closed routes may be allowed to revegetate naturally.
- Signs or barriers (e.g., boulders, fences and gates, berms, vegetation) may be placed/installed at entrances to physically close routes.
- Routes may be physically ripped or scarified using equipment and revegetated through seeding or planting.
- Some routes may be graded and recontoured using heavy equipment to restore natural slope and blend in with adjacent ground contours.
- In sandy areas and washes, tracks may be raked out so there is no evidence of vehicle use.
- As with maintenance activities, ground disturbance may extend into areas not previously disturbed.
- Mulching may be used to obscure closed routes or protect disturbed surfaces.
- Revegetation via seedings or plantings would be done using native, weed-free seed mixes and materials to avoid introduction of noxious or invasive weeds.

2.2.8 BEST MANAGEMENT PRACTICES AND STANDARD OPERATING PROCEDURES

Implementation activities with all alternatives are subject to BMPs and Standard Operating Procedures (SOPs), per Chapter 3 of the Implementation Guide for this TMP. These BMPs and SOPs are intended to reduce impacts to resources relevant to the issues identified in this EA.

2.2.9 AUTHORIZATIONS AND SPECIAL RECREATION PERMITS

Travel management designations would not affect valid existing rights for permitted uses, including ROWs, grazing authorizations, or current easements. Routes designated as Authorized or Administrative Use Only are also subject to seasonal closures, vehicle size restrictions, and ongoing monitoring. A special recreation permit (SRP) is required for commercial or competitive events and vending, and may be required for organized group activities in accordance with 43 CFR 2930 and the BLM's Recreation Permit and Fee Administration Handbook H-2930-1 (BLM 2014b).

2.2.10 ROUTE ADJUSTMENTS

After the Decision Record is signed for this TMP, adjustments to the designated travel network may occur. That is, as travel planning is an implementation-level process, the TMP may be modified through subsequent implementation planning and project planning on a case-by-case basis. Routes may be considered for addition to the travel network for any number of reasons, including, for example, to add recreational value or to address routes missed during the planning process. Routes may also be removed through the same process. Such adjustments to the network may not require new environmental analysis (i.e., a new EA) if the BLM completes a Determination of NEPA Adequacy and confirms that the adjustments are adequately analyzed, as described in Section 5.1 the BLM NEPA Handbook (BLM 2008a). Also, some adjustments to the network may be categorically excluded from further NEPA review as allowed by 43 CFR § 46.210(G)(2) and the BLM NEPA Handbook (BLM 2008a), Appendix 4. However, all changes to the network must still be reviewed subject to legal mandates, regulations, policies, etc., including the NEPA. See the TMP Implementation Guide, Section 3.5 for more details on route adjustments.

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3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS

3.1 Overview

3.1.1 INTRODUCTION

This chapter describes the existing conditions and trends of issue-related elements of the human environment that may be affected by the route network alternatives. It also discloses the known and predicted effects which are related to the issues (BLM 2008a) that are identified in Section 1.6.2 and analyzed in Sections 3.3 and 3.4. Whereas the analysis area for each issue is specific to the issue being analyzed, the TMA is the same for all alternatives. For an overview of the TMA setting, see Section 1.4.

3.1.2 ASSUMPTIONS

The following assumptions are applied in the analysis of each of the travel network alternatives' potential effects on the TMA environment:

1. For the purposes of estimating the temporal scope of the impacts, the BLM assumes the timeframe for this plan is 20 years in order to account for impacts that may occur over longer timeframes such as reclamation success.
2. The construction of new routes is not in the scope of this project; however, the possibility of future addition of new routes is part of the operation and management of the overall travel network (see the TMP Implementation Guide). As part of ongoing travel management associated with this TMP, route designations may be added or changed in the future to respond to growing public demand for access, Title V ROW considerations, or concerns of damage to resources (e.g., an existing route that is needed to access a trailhead is causing unacceptable erosion). "Incorporation of eligible roads and trails in any transportation plan when no new construction or upgrading is needed" would be categorically excluded, per the BLM NEPA Handbook (BLM 2008a).
3. The BLM assumes that public land users will primarily operate their OHVs in accordance with the TMP designations and the regulations; however, it is acknowledged that the creation of occasional social trails and route proliferation from motorized and non-motorized use is a well-known and documented occurrence on BLM-administered lands. If such trails or routes are created within the TMA, the Field Manager or other Authorized Officer may choose to close such routes immediately or further evaluate them for potential inclusion within the TMA pending an appropriate level of NEPA review.
4. Evaluated routes refers to the routes within the TMA that were considered for designation and subjected to formal evaluation by an BLM IDT as a part of this TMP process.
5. Independent of the network alternative selected for the TMP, year-round OHV and non-motorized recreation are expected to increase in and around the TMA, based on the increasing demand for dispersed recreation across BLM lands.
6. For Alternatives B-D, the designation of a comprehensive route network that accounts for all evaluated routes is anticipated to provide enhanced predictability and clarity for users along with a variety of OHV opportunities and experiences that could help reduce user inclination to travel off OHV-Open and OHV-Limited routes (GAO 2009).

7. Under Alternatives B-D, maintenance, mitigation, and monitoring of routes will be done in accordance with the TMP Implementation Guide. Details and examples of monitoring, BMPs, and mitigation may be found in the TMP Implementation Guide.
8. Implementation of the Alternatives B-D referenced in this document and detailed in the TMP Implementation Guide is subject to available funding and resources. For the purposes of this EA, it is assumed that funding and resources would be available for implementation of the TMP.
9. Game retrieval: Per the Yuma RMP, the use of non-motorized wheeled game carriers to retrieve game kills is allowed on all BLM-administered lands except within Congressionally designated Wilderness (TM-014).
10. Cross-country OHV travel is not allowed within the TMA (TM-015 in the Yuma RMP).
11. Passing and parking: As part of motorized use of designated routes, vehicles may occasionally need to pull off for purposes of passing or parking (such off-route passing, parking, etc. is not allowed in designated wilderness areas). Management decision TM-013 in the Yuma RMP allows for motorized vehicles to pull off up to 100 feet on either side of the centerline of most designated routes.
12. Allow motorized vehicles to pull off up to 100 feet from a designated route on either side of the centerline. This use will not be allowed along the Anza Trail or within ACECs and SCRMAs (Special Cultural Resource Management Areas). Within these stated areas, motorized use shall remain within the route with reasonable use of the shoulder and immediate roadside for vehicle passage, parking/overnight camping, and emergency stopping. Where pulling off a vehicle 100 feet from a route's centerline is allowed, impacts to natural and cultural resources shall be monitored on a continuing basis. If monitoring results show effects that exceed limits of acceptable change, motorized vehicles will not be allowed to pull off 100 feet from any designated route on either side of the centerline within the impacted area (TM-013 in the Yuma RMP).
13. Routes that are designated as limited to non-mechanized or non-motorized use but OHV-Closed would become part of the TMA's overall travel network (e.g., hiking and/or biking trails). Some routes that are designated as OHV-Closed would remain available only for administrative or authorized uses (e.g., access to range facilities or ROW sites). Other routes designated as OHV-Closed would be decommissioned and earmarked for reclamation.

3.1.3 EFFECTS ANALYSIS METHODOLOGY

Potential effects on issues analyzed in detail in this chapter are discussed in the context of:

- Direct effects: caused by the action and occur at the same time and place (40 CFR 1508.8(a)).
- Indirect effects: Caused by an alternative but later in time or further removed in distance but are still reasonably foreseeable (40 CFR 1508.8(b)). Note that this EA does not usually differentiate between direct and indirect effects. Instead, they are addressed together as "effects" of the alternative.
- Cumulative effects: According to 40 CFR 1508.1, a cumulative effect "is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time."

The effects analysis applies the following methodologies:

- GIS data and resource/use data collected during route evaluation are the basis for disclosing the alternative route networks' potential effects on issues associated with particular resource/use

topics. Data in tables indicate how many miles and/or numbers of routes of a particular designation under each alternative are likely to affect resources or uses associated with certain issues. These tables are used to compare effects of the alternatives. In many cases, the potential for effects is estimated by comparing percentages or miles of routes of a designation with the total miles or numbers of routes associated with a particular resource or resource use. Tables throughout Chapter 3 present these comparisons of potential effects. Routes and miles are considered associated with a resource when they cross over it (e.g., species habitat polygons), are within a defined proximity distance of it (e.g., within ¼ mile), or are otherwise noted as being associated in route reports. Proximity distances are based on the professional knowledge of the YFO resource specialists unless otherwise stated.

- Effects analysis is based on the best available data and resource staff knowledge of the TMA (based on observation and analysis of conditions and resources in the area and other similar areas).
- For some resource/use topics, specific methodologies were used to determine effects. These methodologies are described in their respective resource/use sections.
- Mileages, percentages, acreages, and other quantities used in this analysis are approximate projections for comparison and analytical purposes only; they do not always reflect exact measurements or precise calculations. Table mileages and percentages may not total equally in some instances due to rounding.
- Additional route information and summary tables can be found in Appendix B.
- Effects focus on public OHV designations. Permitted activities (e.g., grazing operations) in the TMA are administered and analyzed in conjunction with their respective authorization(s) and would not be changed by any public OHV route designations resulting from this project. Permitted activities are considered, however, in cumulative effects in this EA.

3.1.4 What This EA Does Not Analyze

This EA does not analyze direct or indirect effects from maintenance or reconstruction activities on existing routes that would involve previously undisturbed ground such as realignments, reroutes, or reconstruction/major maintenance. Such surface-disturbing activities are outside the scope of this EA and would be subject to separate site-specific review and documentation as appropriate under NEPA before they could be authorized.

3.1.5 Additional Management and Mitigation

During route evaluation, additional measures were considered and documented where appropriate for routes with the designations of Open "with management" or Limited "with management." Measures include but are not limited to such actions as fencing, parking area creation, and monitoring for cultural sites or recreational uses. Details on monitoring, BMPs, and mitigation may be found in the TMP Implementation Guide. Mitigation measures would help reduce the detrimental effects of the alternative travel networks on many of the TMA's natural and cultural resources, and monitoring would ensure mitigation is effective.

3.2 Cumulative Impacts Scenario

This section outlines past, present, and reasonably foreseeable future actions and trends in and around the TMA, plus recent, ongoing, and projected TMPs that have a relationship to potential resource cumulative effects (see Section 3.1.2) associated with the alternatives. This cumulative impacts scenario precedes the effects analysis in this EA because it serves to provide broader context for other past, present, and

reasonably foreseeable actions and trends occurring region wide (i.e., not just within the TMA but adjacent to or throughout the southwestern Arizona region).

The cumulative effects associated with the issues are then discussed on an issue-by-issue basis at the end of each Section 3.3.1 through 3.4.2 and are informed by the data and information presented here. The cumulative effects analysis area (CEAA) is defined (i.e., delineated) for each issue based on the projected extent of effects. The temporal scope for cumulative effects is 20 years, which is the projected life of the TMP (see Section 3.1.2).

Past, present, and reasonably foreseeable actions and trends include the following:

Travel Management Planning: Travel management planning is an ongoing process on BLM public lands throughout the west. Designated travel route networks provide access to and throughout public lands for recreation and authorized uses as well as resource management. Besides this Yuma East/Gila River TMP there are five other TMPs in the southern Arizona region that have been completed or are in current or reasonably foreseeable development. These include:

- Ajo TMP, comprising approximately 177,112 acres of BLM-managed lands in Pima County, was initiated by the BLM's Lower Sonoran Field Office in May 2023. Virtual public meetings were held at the time with requested feedback from the public on an existing route inventory of approximately 385 miles of routes, as well as comments and concerns on area activities, resources and access needs. This comment period closed on July 6, 2023, and the project has since been paused while the BLM evaluates workload.
- Buckeye Hills TMP was proposed by the BLM's Lower Sonoran Field Office for the Buckeye Hills West and East Travel Management Areas (Project Area). The Project Area comprises approximately 572,159 acres and 679 miles of routes on BLM-managed lands located in Maricopa and Pinal counties. This TMP is the first implementation-level document tiered to the Lower Sonoran Approved Resource Management Plan (RMP), which designates all inventoried routes on BLM-administered lands in the Project Area as "open," "limited" or "closed." The project was started in 2017, placed on hold in 2018, and reinitiated in 2021 following BLM staffing changes. A DR and FONSI were issued on August 31, 2022. This TMP designated 380.1 miles for OHV use, 63.1 miles for non-motorized use, and 80.5 miles for authorized use only; it closed to all use 123.8 miles.
- Gila-San Simon TMP covering 951,842 acres and approximately 2,392 miles of travel routes on BLM public lands in Graham, Greenlee, and Cochise Counties managed by the BLM's Safford Field Office and located southeast of Phoenix in the Gila-San Simon areas. This project was initiated in August of 2017, a Draft TMP EA was released to the public on November 15, 2023, and public comment on the Draft closed December 23, 2023.
- Imperial Hills TMP, comprising 8,704 acres of BLM-managed lands and 117.1 miles of inventoried travel routes. This TMP was initiated on January 4, 2022, and completed in 2024 with issuance of a DR and FONSI on June 3, 2024. This TMP designated 65.9 miles of routes open to OHV use and closed 51.2 miles.
- La Posa TMP, comprising 402,395 acres and approximately 1,814 miles of travel routes on BLM lands managed by the YFO. This TMP was initiated in 2013 and completed in 2016 with issuance of a DR and FONSI on March 8, 2016. This TMP designated 1,073.7 miles of routes for public or authorized use and closed to all use 740.5 miles.
- Lower Colorado River TMP, which includes the areas of Laguna Mountains, Trigo Mountains, and Big Maria Mountains within Imperial, California, La Paz, and Yuma counties. This TMP was started in 2017, placed on hold in 2018, and re-initiated on May 17, 2022.
- Middle Gila South TMP, begun in May 2022, comprising approximately 212,000 acres and 700 miles of travel routes on BLM-managed lands in the Middle Gila South, Picacho, and Lower

Galiuro areas in the Tucson Field Office. A FONSI and DR were signed on June 3, 2024, designating 446.2 miles as OHV-Open (including 5.3 miles of proposed new routes), 15.2 miles limited to non-motorized use (including 4.5 miles of proposed new routes), 0.8 miles limited to non-mechanized use, and 28.8 miles limited to authorized use only (including 2.1 miles of proposed new routes).

Recreation Use: Recreation use on BLM-managed lands and Reclamation lands on which the BLM manages recreation in the TMA and adjacent southwest Arizona region (including from the California border on the west, Interstate 10 on the north, Interstates 10 and 19 on the east, and the Mexico border on the south) tends to be seasonal as users migrate to the area from northern states in the winter months, and residents use the area for hunting, camping, and trail-based recreation activities. This use is trending upward commensurate with population growth, and this trend is expected to continue regardless of which alternative is selected. Popular recreation activities in the TMA and surrounding region include camping, hiking, OHV riding, hunting, shooting, wildlife viewing, rock hounding, and vehicle exploring.

Livestock Grazing and Grazing Management: Authorized livestock grazing has occurred on public lands managed by the YFO and on adjoining Lake Havasu Field Office (LHFO) public lands for decades. YFO and LHFO lands authorized under the Yuma RMP for livestock grazing that are relevant to resource effects and jointly managed by the YFO comprise 428,300 acres (YFO) and 215,200 acres (LHFO).

Wildlife Habitat Management: The TMA and surrounding region provide important habitat for a variety of wildlife species (see Sections 3.3.8 and 3.3.9). Travel route designations resulting from this TMP and other regional TMP efforts such as those noted above will affect wildlife habitat and movement in and around the TMA.

Past Military Uses: Within the TMA are potential explosive hazards and tank tracks on BLM-administered lands. Additionally, travel routes in the TMA provide access to the Yuma Proving Ground, an area used to test various Army gear and equipment.

Renewable Energy Development: Renewable energy development projects in the YFO are reasonably foreseeable. The TMA contains areas identified as developable Solar Energy Zones. The Yuma RMP does not allow renewable energy facility development in special designation areas (e.g., Wilderness areas, Sears Point ACEC, Juan Bautista de Anza National Historic Trail corridor, etc.). Solar- or wind-generating facilities are not allowed in VRM Classes I and II. Table 6 lists the reasonably foreseeable renewable energy development projects and the estimated acres of potential disturbance for each.

Table 6: Reasonably Foreseeable Renewable Energy Development Projects in the TMA

Project Name	Acres (Estimated)
Atlas North Solar Project	5,878
Bouse Solar Project	6,106
Elisabeth Solar Project	1,660
GVL Blue Ammonia Pipeline (Transmission Line)	828
Hoodini Solar Project	4,225
Hoodini Solar Gen-Tie (Solar)	77
Ironwood Gen-Tie (Solar)	27
Jove Solar Project	3,428
Ranegras Plains Solar Project	4,759
Remy Solar Project	2,501
Sawtooth Solar Project	4,368
Seebury Proposal Solar Project	4,563

Ten West Link (500kV Transmission Line)	264
White Wing Ranch Gen-Tie (Solar)	30

3.3 Potential Impacts on the TMA's Natural and Human Environment

3.3.1 AIR QUALITY

How would the route designation alternatives impact air quality within the TMA?

3.3.1.1 Affected Environment

The EPA lists particulate matter (PM) as a criteria air pollutant. PM particles come in many sizes and shapes and can be made up of hundreds of different chemicals. Some are emitted directly from a source such as unpaved roads, which the Arizona Department of Environmental Quality (ADEQ) lists as one of the sources of pollutants. Travel management has the potential to contribute to emissions of air pollutants both directly from maintenance of routes, and indirectly from public vehicle use of unpaved routes.

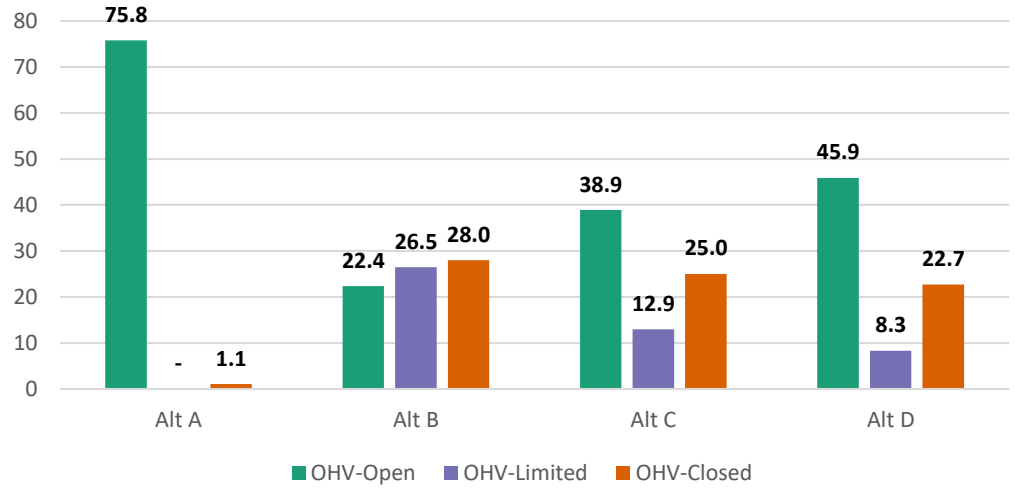
National Ambient Air Quality Standards for PM pollution specify a maximum amount of PM to be present in outdoor air. On BLM-managed lands within the TMA are 12,640 acres that are PM-10 non-attainment areas, which means the areas are not meeting PM standards. There are 76.9 miles of evaluated routes in these areas.

3.3.1.2 Environmental Effects

OHV use on dirt roads can increase dust levels in the air, the extent of which depends on traffic characteristics and road quality (Etyemezian et al. 2003). Indirect emissions from vehicle exhaust and dust lifted into the air from vehicle travel is directly related to vehicle usage which is a function of the number of visitors and vehicle miles traveled. The number of visitors to the area is not anticipated to change as a result of this TMP, but route designation could impact vehicle use patterns within the TMA. Routes that are designated for OHV use in PM-10 nonattainment areas may contribute to the nonattainment of air quality standards in those areas. Conversely, routes that are closed to public OHV use, particularly those that are reclaimed, would eventually contribute less dust pollution.

Figure 2 shows the miles of evaluated routes in PM-10 nonattainment areas and is used as an indicator of each alternative's potential to impact air quality within the TMA.

Figure 2: Miles of Evaluated Routes in PM-10 Nonattainment Areas



Alternative A (Current Management)

Under Alternative A, 99% (75.8 miles) of the evaluated route miles in PM-10 nonattainment areas would remain available for OHV use. The effects described above from vehicle use and maintenance of the routes would continue to occur on these routes. Impacts to the TMA's air quality (e.g., increased dust levels in the air) would reflect a continuation of current management.

Alternative B (Resource Protection Emphasis)

Alternative B would designate 48.9 miles of evaluated routes in PM-10 nonattainment areas for OHV use, a 71% reduction from Alternative A. The effects described above from vehicle use and maintenance of the routes would continue to occur on those routes designated for OHV use (OHV-Open or OHV-Limited). Overall, Alternative B would have the lowest potential of any alternative for OHV use-related impacts to air quality in the TMA.

Alternative C (Multiple Use Emphasis)

Alternative C would designate 51.8 miles of evaluated routes in PM-10 nonattainment areas for OHV use, a 49% reduction from Alternative A. The effects described above from vehicle use and maintenance of the routes would continue to occur on those routes designated for OHV use. Overall, Alternative C would have lower potential than Alternative A and D but slightly higher potential than Alternative B for OHV use-related impacts to air quality in the TMA.

Alternative D (Access Emphasis)

Alternative D would designate 54.2 miles of evaluated routes in PM-10 nonattainment areas for OHV use, a 39% reduction from Alternative A. The effects described above from vehicle use and maintenance of the routes would continue to occur on those routes designated for OHV use. Overall, Alternative D would have lower potential than Alternative A but slightly higher potential than the other action alternatives for OHV use-related impacts to air quality in the TMA.

Cumulative Effects

The CEAA for considering cumulative effects on air quality is the TMA plus the general southwest Arizona region where PM-10 nonattainment remains a moderate to serious issue (ADEQ 2024).

As noted above, fugitive dust and vehicle exhaust from OHV use on routes that are designated for such use in PM-10 nonattainment areas can contribute to air quality degradation. Within the TMA there are 12,640 acres containing 75.8 miles of routes open to OHV use under Alternative A that are incrementally adding to fugitive dust from similar use in other areas of the southwest Arizona region regardless of jurisdiction. Under the Action Alternatives B-D, OHV-open use designations would be reduced from 39% under Alternative D to 71% under Alternative B. Routes remaining open to OHV use under Alternatives B-D would still continue to incrementally contribute to regional PM 10 air quality issues; however, closing approximately 1/3 of the currently OHV-open routes under each of these alternatives would reduce or eliminate air quality impacts along the closed route locations and could incrementally benefit air quality.

3.3.2 CULTURAL RESOURCES

How would the route designation alternatives impact cultural resources within the TMA?

3.3.2.1 Affected Environment

The Gila River corridor functioned as a source of sustenance for inhabitants and travelers in prehistoric and historic times. The river corridor contains geoglyphs and intaglios on delicate desert pavement formations, and an extensive system of prehistoric trails, extensive rock art sites, and other important cultural features. These sites have spiritual significance to contemporary Native Americans of the region. This river corridor also has importance as a travel route in historic times, with the Anza Trail, Butterfield Overland Mail Route, Mormon Battalion Trail, and Gila Trail all following the course of the Gila River floodplain. In order to effectively manage the important cultural resources that are situated along the Gila River, the BLM designated the Sears Point ACEC, which contains the Sears Point NRHP archaeological district and a portion of the Anza Trail route (see Section 3.3.4 for analysis of the Sears Point ACEC and the Anza Trail). Ethnographic and archaeological studies suggest that in desert areas, access to water was a prime consideration in prehistoric and historic settlement location decisions and travel routes. Most undisturbed water sources in the area, including springs, tinajas, and washes, have some type of prehistoric or historic sites in association. These include trails and associated features, petroglyph and pictograph sites, and habitation sites (BLM 2008c).

In accordance with Section 106 of the National Historic Preservation Act, BLM Handbook H-8110-1, and the 2018 Programmatic Agreement for BLM-Arizona Travel Management Plans in Arizona and Portions of California (2018 Travel PA[6]) between the BLM and the Arizona State Preservation Office, the BLM will consider an undertaking's effect to cultural resources prior to project implementation. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and interested parties at the early stages of project planning.

The prehistory of the area can be divided into the Paleoindian (10,000–8500 B.C.), Archaic (8500 B.C.–A.D. 300), Ceramic (A.D. 300–1450) and the Protohistoric and Historic periods (A.D. 1450–1950). BLM Manual 8100 – Foundations for Managing Cultural Resources (BLM 2004a) defines cultural resources as "definite location[s] of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence." The TMA contains important cultural resources of prehistoric and historic value, which may take the form of sites (such as lithic debitage scatters), artifacts, buildings, structures, features (such as historic inscriptions), and natural landscapes. Cultural resources are identified though cultural resource inventories and surveys, which are defined as "a representation of the cultural

6 https://www.blm.gov/sites/blm.gov/files/BLM%20AZ%20Travel%20Management%20Programmatic%20Agreement%20EXECUTED%209%2018%202018.pdf

resource content of a geographical locale" by BLM Manual 8110 (BLM 2004b). The BLM cultural resource inventory system is composed of three kinds of inventory: Class I Existing Information Inventory, Class II Probabilistic Field Survey, and Class III Intensive Field Survey (BLM 2004b).

Per the 2018 Travel PA, the Area of Potential Effect (APE) on cultural resources for this TMP is defined as the evaluated travel routes on public lands managed by the BLM within the TMA along with a ¼-mile buffer on either side of the centerline of these travel routes. Recreation use, such as OHVs, hiking, exploring, etc. can cause surface disturbances and accelerated erosion, which can expose sites to damage, theft, and vandalism. Motorized vehicles can act as a vector for the introduction of weed seeds or invasive species, which, upon establishment, can increase the potential for wildfire and subsequent damage to cultural resources. Conversely, some travel routes provide beneficial access for interpretive and educational experiences as well as for ongoing Native American ceremonial or traditional uses of areas.

3.3.2.2 Environmental Effects

Both incidental and intentional human actions pose a threat to cultural resources (Sampson 2009). Direct and indirect impacts may occur to cultural sites from OHV use of routes. For example, OHV travel through or immediately adjacent to a cultural resource site (within 100 feet on either side of the centerline of a route, as per guidance in the 2018 Travel PA) may directly impact cultural resources by causing a displacement of cultural artifacts or features at the site that would occur at the time of the activity or cause soil movement that may lead to erosion which could further displace cultural materials. Additional adverse OHV use-related impacts include site vandalism, collectors' piles, unauthorized artifact collection, etc. Impacts to cultural resources from routes designated OHV-Closed would be less than those designated for OHV use. Travel access restrictions (e.g., OHV-Closed designations) may be effective in reducing unauthorized damage to archaeological resources (Hedquist, et al. 2014).

While it is assumed that route users would behave responsibly and not engage in illegal activities, the BLM acknowledges that the designation of routes as available for OHV use in areas with cultural resources may lead to impacts from vandalism, including looting, graffiti, or the illegal collection of artifacts. The level and nature of these potential impacts are influenced by the fragility of each cultural resource, their collectability, and their location and visibility. Even though a route may be designated for OHV use and may pass through or near a cultural resource, impacts to the cultural resource may not be major—that is, may not affect the resource's potential to convey the significance that may qualify it for the National Register of Historic Places (NRHP).

Closures of redundant routes were assessed for the potential to shift, concentrate, or expand use on open routes. When designating routes as OHV-Closed, traffic may be concentrated on nearby routes with the same destination. However, this assumes an equal distribution of use across a finite route network; designating a rarely used route as OHV-Closed may not appreciably increase traffic (concentrate use) on others. When evaluating potential impacts to cultural resources from route designations and resultant changes in route concentration (if any) the BLM considered numerous factors, including the use level of the route (primary, secondary, or tertiary), the durability of the route surface (e.g., sandy soil, natural gravels, or bedrock), the durability of the cultural resource, the extent of any impacts (minor, moderate, or major), and the reasons users select the route for travel, as documented in the Route Reports (Appendix C).

Previously documented cultural resources data was recorded during the route evaluation process described in Chapter 2. As noted above, cultural resources include archaeological sites that are both eligible and not eligible for the NRHP. Figure 3 – Figure 6 show the number of evaluated routes within ¼-mile of cultural sites.

Figure 3: Number of Evaluated Routes Proximate to Native American Use Sites

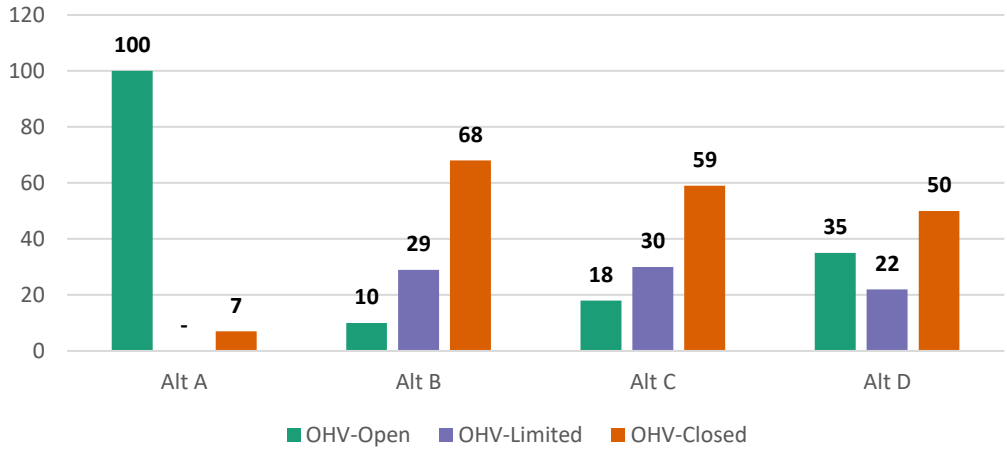


Figure 4: Number of Evaluated Routes Proximate to Traditional Cultural Properties

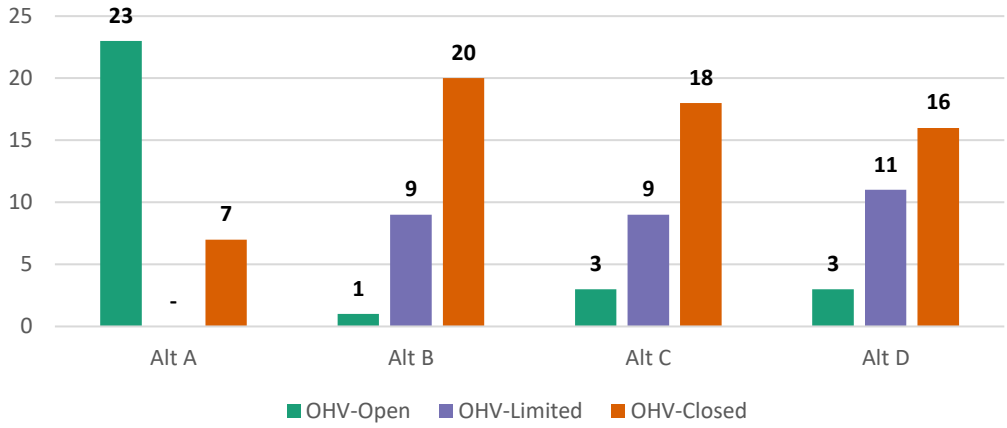


Figure 5: Number of Evaluated Routes Crossing Listed National Register Sites

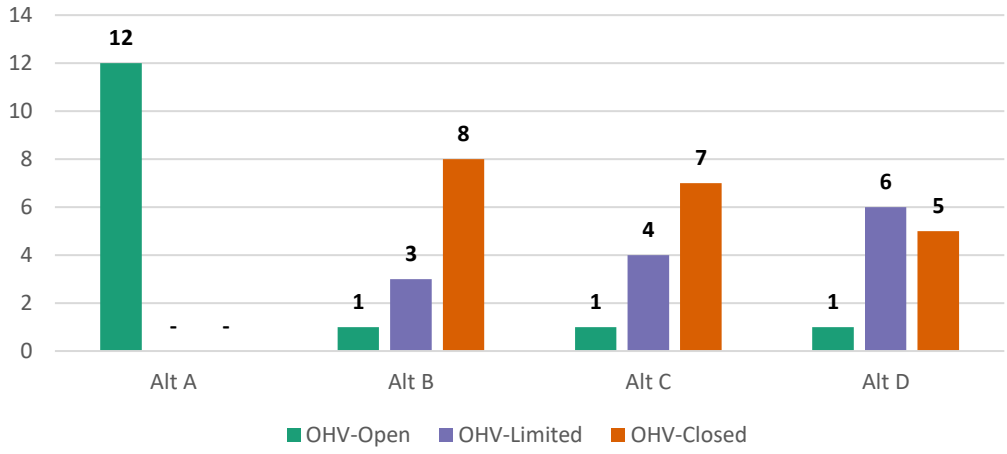
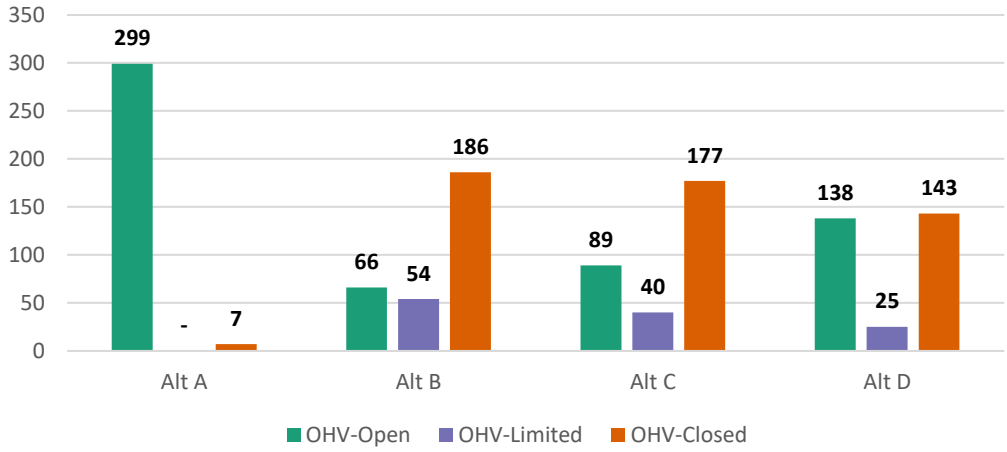


Figure 6: Number of Evaluated Routes Crossing Eligible or Unevaluated Cultural Sites



The BLM Yuma Field Office is following the requirements of the Programmatic Agreement among the Arizona Bureau of Land Management, the Advisory Council on Historic Preservation, the Arizona State Historic Preservation Officer, and the California State Historic Preservation Officer regarding the Arizona Bureau of Land Management's National Historic Preservation Act Responsibilities for Travel Management Plans, including compliance with Section 106 of the NHPA, which was executed in 2018.

Alternative A (Current Management)

Under Alternative A, 93% of the 107 routes proximate to Native American use sites, 77% of the 30 routes proximate to Traditional Cultural Properties, all 12 routes crossing listed National Register sites, and 98% of the 306 routes crossing eligible or unevaluated cultural sites would remain available for OHV use. In most cases, these routes currently allow OHV use up to 100 feet from the centerline for purposes of passing, parking, and camping. Impacts to cultural resources from ongoing OHV use (including damage from trampling, theft, and vandalism; erosion and exposure of cultural resources from travel-related disturbances that leaves cultural resources more susceptible to loss and damage; access that is beneficial for interpretive or educational opportunities, etc.) would reflect a continuation of current management.

Alternative B (Resource Protection Emphasis)

Compared to Alternative A, the Alternative B travel network would have 61% fewer routes designated for OHV use proximate to Native American use sites; 21 of these routes would also exclude the off-route allowance, offering further protections in these areas. Of the evaluated routes proximate to traditional cultural properties, 10 would be designated for OHV use, a 57% reduction from Alternative A; 8 of these routes would exclude the off-route OHV allowance (see Assumption #11 in Section 3.1.2). Of the evaluated routes crossing listed National Register sites, this alternative would designate 4 for OHV use, a 67% reduction from Alternative A; 3 of these routes would exclude the off-route OHV allowance. And of the evaluated routes crossing eligible or unevaluated sites, 120 would be designated for OHV use, a 60% reduction from Alternative A; 29 of these routes would exclude the off-route OHV allowance. Under Alternative B, the types of impacts to cultural resources from OHV use noted above would continue to occur on those routes designated for OHV use, though some of these impacts would be mitigated with the exclusion of the off-route OHV allowance. Overall, given reductions in routes designated for OHV use and increases in limitations of the off-route OHV allowance, this alternative would have the least potential of any alternative for OHV-related impacts to cultural resources within the TMA.

Alternative C (Multiple Use Emphasis)

Compared to Alternative A, the Alternative C travel network would have 52% fewer routes designated for OHV use proximate to Native American use sites; 28 of these routes would also exclude the off-route allowance, offering further protections in these areas. Of the evaluated routes proximate to traditional cultural properties, 12 would be designated for OHV use, a 48% reduction from Alternative A; 9 of these routes would exclude the off-route OHV allowance. Of the evaluated routes crossing listed National Register sites, this alternative would designate 5 for OHV use, a 58% reduction from Alternative A; 4 of these routes would exclude the off-route OHV allowance. And of the evaluated routes crossing eligible or unevaluated sites, 129 would be designated for OHV use, a 57% reduction from Alternative A; 36 of these routes would exclude the off-route OHV allowance. Under Alternative C, the types of impacts to cultural resources from OHV use noted above would continue to occur on those routes designated for OHV use, though some of these impacts would be mitigated with the exclusion of the off-route OHV allowance. Overall, given reductions in routes designated for OHV use and increases in limitations of the off-route OHV allowance, this alternative would have lower potential than Alternatives A and D but higher potential than Alternative B for OHV-related impacts to cultural resources within the TMA.

Alternative D (Access Emphasis)

Compared to Alternative A, the Alternative D travel network would have 43% fewer routes designated for OHV use proximate to Native American use sites; 22 of these routes would also exclude the off-route allowance, offering further protections in these areas. Of the evaluated routes proximate to traditional cultural properties, 14 would be designated for OHV use, a 39% reduction from Alternative A; 11 of these routes would exclude the off-route OHV allowance. Of the evaluated routes crossing listed National Register sites, this alternative would designate 7 for OHV use, a 42% reduction from Alternative A; 6 of these routes would exclude the off-route OHV allowance. And of the evaluated routes crossing eligible or unevaluated sites, 163 would be designated for OHV use, a 45% reduction from Alternative A; 24 of these routes would exclude the off-route OHV allowance. Under Alternative D, the types of impacts to cultural resources from OHV use noted above would continue to occur on those routes designated for OHV use, though some of these impacts would be mitigated with the exclusion of the off-route OHV allowance. Overall, given reductions in routes designated for OHV use and increases in limitations of the off-route OHV allowance, this alternative would have lower potential than Alternative A but higher potential than the other action alternatives for OHV-related impacts to cultural resources within the TMA.

Cumulative Effects

The CEAA for cultural resources is the TMA and surrounding public lands in the southwest Arizona region, as described in Section 3.2. This area takes into consideration impacts that may be occurring to cultural resources resulting from OHV access on these lands and other area travel management planning efforts such as those identified in the Cumulative Impacts Scenario.

The potential for impacts to cultural resources on BLM public lands from users is directly related to access. Even most non-motorized access (e.g., foot, horse, bike) requires an OHV route onto public lands to a staging area or trailhead. Accordingly, if OHV access is reduced, the potential for impacts to cultural resources as described above in this section under Environmental Effects should correspondingly decrease. Potential impacts from this TMP would add to the past, present, and reasonably foreseeable future actions described in the Cumulative Impacts Scenario in Section 3.2 (i.e., other TMPs in the region, recreation use, livestock grazing, military uses, and renewable energy development).

Under Alternative A, as discussed above, the impacts to cultural resources (including damage from trampling, theft, and vandalism; erosion and exposure of cultural resources from travel-related disturbances that leaves cultural resources more susceptible to loss and damage) from OHV use within the TMA would reflect current management which allows for OHV access ranging from 12 routes to 299

routes proximate to or crossing various sites. These impacts would continue to add to similar impacts on cultural resources on those public lands within the CEAA.

Under the Action Alternatives B-D, OHV access to each of the various sites is dramatically reduced. Each of these alternatives would include a companion Implementation Guide which provides for structured operation and management (e.g., mitigation and monitoring methods, signing, BMPs, law enforcement, adaptive management, etc.) of the selected alternative travel route network. This structured operation and management should help reduce OHV route-related impacts, such as soil erosion, trampling of vegetation, etc. on the landscape, which would indirectly contribute to protection of cultural sites. Each of the Action Alternatives B-D would provide for incremental reductions in impacts to cultural resources within the CEAA.

3.3.3 SOILS AND BIOTIC COMMUNITIES (INCLUDING SPECIAL STATUS PLANTS)

How would the proposed designated travel network alternatives impact soil stability, biotic communities, and special status plants?

3.3.3.1 Affected Environment

Soil Resources

The TMA is part of the Basin and Range physiographic province, characterized by northwest-trending, block-faulted mountain ranges separated by deep, alluvium-filled basins. In general, soils in the areas developed under hot, dry conditions and are characterized as having thermic or hyperthermic temperature regimes and aridic or semi-aridic moisture regimes (BLM 2008c).

Stable and productive soils in the TMA provide the foundation for other resources, such as vegetation and wildlife, and for resource uses, such as livestock grazing and recreation. Soils also serve as the foundation that infrastructure such as roads, trails, and recreation facilities are built on. A variety of surface uses may compact or displace TMA soils and damage or remove vegetation or other ground cover, resulting in accelerated erosion or a loss of soil productivity.

Erosive soils are those that are more susceptible to accelerated erosion and degradation requiring specific management consideration. Erosive soils may be erodible by wind or water. Water erosion is the detachment and movement of soil by water. Natural erosion rates depend on inherent soil properties, slope, soil cover, and climate. Wind erosion is the physical wearing of the earth's surface by wind. Wind erosion removes and redistributes soil. Small blowout areas may be associated with adjacent areas of deposition at the base of plants or behind obstacles, such as rocks, shrubs, fence rows, and roadbanks.

Native Vegetation, and Invasive and Nonnative Species

The TMA is within the Lower Colorado Valley Subdivision of the Sonoran Desert. The extreme aridity of the region is reflected in open plains covered sparsely with drought-tolerant shrubs, grasses, and cacti. Vegetation succession progresses very slowly in the desert, except in areas of surface disturbance or where moisture levels are high as a result of human influence. Low precipitation results in few plants surviving to maturity and slow perennial plant growth (BLM 2008c).

Invasive plant and noxious weed species can occur throughout the TMA, particularly in areas of disturbance (e.g., ROWs, OHV use areas, and residential and commercial development sites). The presence of noxious weeds and invasive species can be used as indicators of healthy ecosystems as their presence is often related to disturbances and loss of native species in those systems. Because roads and trails act as dispersal vectors, OHV and recreation use are primary contributors to the spread of invasive species, which pose a threat to native vegetation diversity. Encroachment of noxious and invasive species

presents a problem both along river and riparian corridors as well in large areas of uplands and rangelands.

Biotic Communities

The Arizona Wildlife Conservation Strategy relies on a biotic communities classification system to define major habitat types in the state (AZGFD 2022). BLM-managed lands in the TMA include two biotic communities: Lower Sonoran Desertscrub and Upland Sonoran Desertscrub. See Section 3.3.9 for more information on general wildlife and migratory birds associated with these biotic communities in the TMA.

Lower Sonoran Desertscrub:

Lower Sonoran desertscrub is an arid habitat with vegetation dominated by drought-tolerant, low, open stands of creosote bush and white bursage. The vegetation community also includes winter annuals, columnar cacti, ocotillo, and cholla. Larger trees such as ironwood, palo verde, and mesquite may be present in washes and other drainages. Lower Sonoran desertscrub habitats contain some habitat features or microhabitats of particular importance, including riparian areas, dune systems, ephemeral washes and pools, bedrock tinajas, and bajadas. Common invasive plants in this habitat type include stinknet, giant salvinia (where pools are present), tamarisk, and Sahara mustard.

Upland Sonoran Desertscrub:

The Upland Sonoran desertscrub habitat type is highly diverse in composition and topography. Characteristic vegetation includes saguaro, cholla, prickly pear, organ pipe cacti, palo verde, ironwood, catclaw acacia, mesquite, jojoba, and creosote bush. Annual plant species emerge in response to seasonal precipitation during mid- to late-summer monsoons and in winter. Upland Sonoran desertscrub habitats contain microhabitats of particular importance to some species, including springs; bedrock tinajas; bajadas; ephemeral washes and pools; caves and mines; and riparian areas. Common invasive plants in this habitat type include buffelgrass and tamarisk.

Table 7 shows the area of each biotic community on BLM-managed lands in the TMA, and the miles of evaluated routes within each.

Table 7: Biotic Communities in the TMA

Biotic Community	Habitat Acres on BLM	Miles of Evaluated Routes within Habitat
Lower Sonoran Desertscrub	596,166	1,213.7
Upland Sonoran Desertscrub	122,416	101.1

Vegetation Habitat Management Areas (VHAs)

The **Blue Sand Lily VHA** protects the *Triteleiopsis palmeri*, a flowering plant listed as a BLM Sensitive species. The VHA is located on stabilized sand dunes of the Gila River Mesa and is the northernmost known population in the U.S.

The **Elephant Tree VHA** protects a proposed priority plant, *Bursera microphylla*, which is a shrub with subtropical affinities. This species is found in isolated populations of the Sonoran Desert on mountains, and the population in the Gila Mountains within the TMA is one of the most well-represented stands in the U.S.

The **Fred J. Weiler Greenbelt VHA** includes portions of Gila River riparian habitat. The greenbelt was originally segregated as a Resource Conservation Area in 1970 to set aside the riparian habitat for game birds for hunting along the Gila River.

Table 8: Vegetation Habitat Management Areas in the TMA

VHA	VHA Acres on BLM	Miles of Evaluated Routes within VHA
Blue Sand Lily VHA	549	5.3
Elephant Tree VHA	10,020	14.1
Fred J. Weiler Greenbelt VHA	11,853	5.1

Special Status Plants

BLM special status plants are: (1) species listed or proposed for listing under the ESA, or (2) species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA (BLM Sensitive). The USFWS's Information for Planning and Consultation (IPaC) planning tool does not list any Threatened and Endangered (T&E) plant species within the TMA. The TMA does have potential habitat for a number of BLM Sensitive plants and proposed priority plants listed in the Yuma RMP, including the blue sand lily (*Triteleiopsis palmeri*), clustered barrel cactus (*Echinocactus polycephalus*), desert rock-purslane (*Cistanthe ambigua*), elephant tree (*Bursera microphylla*), hall shrub spurge (*T. fasciculatus* var. *hallii*), Las Animas nakedwood (*Colubrina californica*), spiny sand spurge (*Stillingia spinulosa*), Thurber pilostyles (*Pilostyles thurberi*), and velvet brittle-stem (*Psathyrotes ramosissima*).

Table 9: Special Status Plant Habitat in the TMA

Species	Habitat Acres on BLM	Miles of Evaluated Routes within Habitat
Blue Sand Lily	141	1.9
Clustered Barrel Cactus	624	2.1
Desert Rock-purslane	1,625	12.4
Hall Shrub Spurge	4,691	6.0
Las Animas Nakedwood	3,124	6.2
Spiny Sand Spurge	2,102	11.4
Thurber Pilostyles	4,275	25.7
Velvet Brittle-stem	183	2.9

3.3.3.2 Environmental Effects

Effects on soils and native vegetation from travel and recreation activities such as camping, exploring, antler shed hunting, hunting, OHV use, equestrian use, etc. are often adverse and are closely interrelated; adverse effects on one of these resources can have a subsequent effect on the other (e.g., soil impacts can result in vegetation impacts and vice versa). OHV-related direct effects on soils can include compaction and rutting while indirect effects include displacement and soil loss (i.e., erosion during runoff periods or high precipitation events). Braiding of existing narrow primitive roads where OHVs circumvent deep ruts or potholes can result in trampling and crushing of roadside vegetation and additional surface disturbance. OHV and related anthropogenic use can alter soil properties and cause changes in vegetation composition, resulting in land degradation and desertification. More specifically, compaction from OHV use increases soil bulk density and decreases porosity (Assaeed et al. 2019). As soil compaction increases, the soil's ability to support vegetation diminishes because loss of porosity inhibits the growth of root systems and reduces the infiltration and availability of water. Thus, the size and abundance of native plants may be reduced. Additionally, the above-ground portions of plants may be crushed or damaged, leading to reduced photosynthetic capacity, poor reproduction, and diminished litter cover; fugitive dust from OHV

use can also disrupt photosynthetic processes, suppressing plant growth and vigor (Ouren et al. 2007). Effects from soil alteration can extend beyond the route corridor and contribute to indirect landscape effects on plants. Particularly on hillslopes, OHV use accelerates water erosion by decreasing infiltration rates, loosening surfaces, and channeling run-off (Brooks and Lair 2005). Ouren et al. conclude, "As vegetative cover, water infiltration, and soil-stabilizing crusts are diminished or disrupted, the precipitation runoff rates increase, further accelerating rates of soil erosion" (2007).

Such soil changes exacerbate the introduction and spread of invasive plant species or noxious weeds. Routes are a primary pathway for plant invasions into arid and semi-arid ecosystems (Brooks and Lair 2005). Dispersal of seeds, particularly those of nonnative species, by vehicles accelerates plant invasions and induces changes in biodiversity patterns (von der Lippe and Kowarik 2007). Along travel routes, cover of native species decreases, giving more opportunity for weeds to flourish (Assaeed et al. 2019), particularly shallow-rooted annual grasses and early successional species capable of rapid establishment and growth (Ouren et al. 2007). Overall, habitat alteration, fragmentation, and deterioration lead to competition for water, space, and nutrients, which results in decreased reproductive success for native vegetation.

Implementation activities that could affect soils and native vegetation include installing new signs or information kiosks, route maintenance (e.g., grading, installing, and maintaining water control structures, surfacing, etc.), route reclamation (including ripping the ground and planting seed, grading/recontouring), and installing fencing or barriers. Ground disturbance, loss of vegetation, and weed and invasive plant growth from new disturbance (e.g., sign installation) would be localized and temporary, as the application of BMPs in these areas—such as seeding and planting—would accelerate stabilization and reclamation. If implementation is proposed that falls outside of a previously disturbed area, additional site-specific NEPA may be required before the activity could occur. Some of these implementation actions are categorically excluded, including "Installation of routine signs, markers, culverts, ditches, waterbars, gates, or cattleguards on or adjacent to roads and trails identified in any land use or transportation plan, or eligible for incorporation in such plan" (BLM 2008a).

As impact indicators for soils, Figure 7 and Figure 8 present the miles of evaluated routes in areas with severe and moderate erosion potential.

Figure 7: Miles of Evaluated Routes in Moderate Erosion Potential

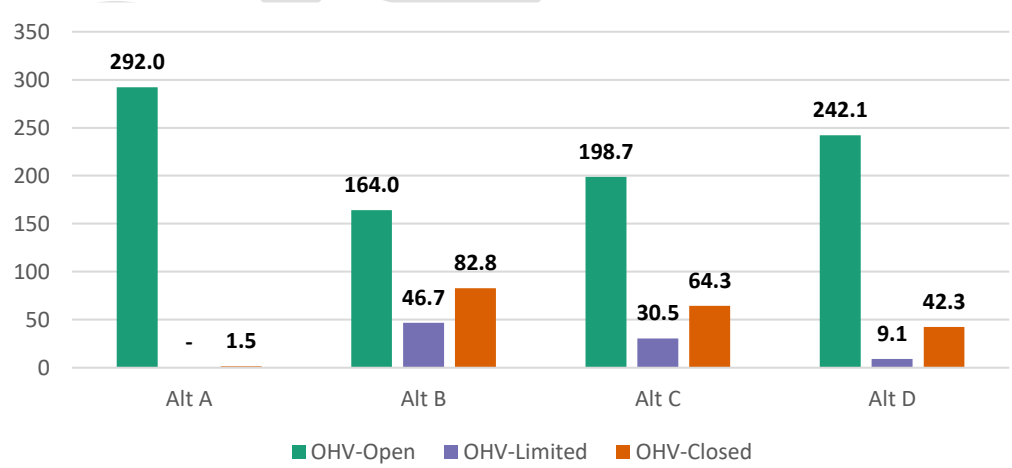


Figure 8: Miles of Evaluated Routes in Severe Erosion Potential

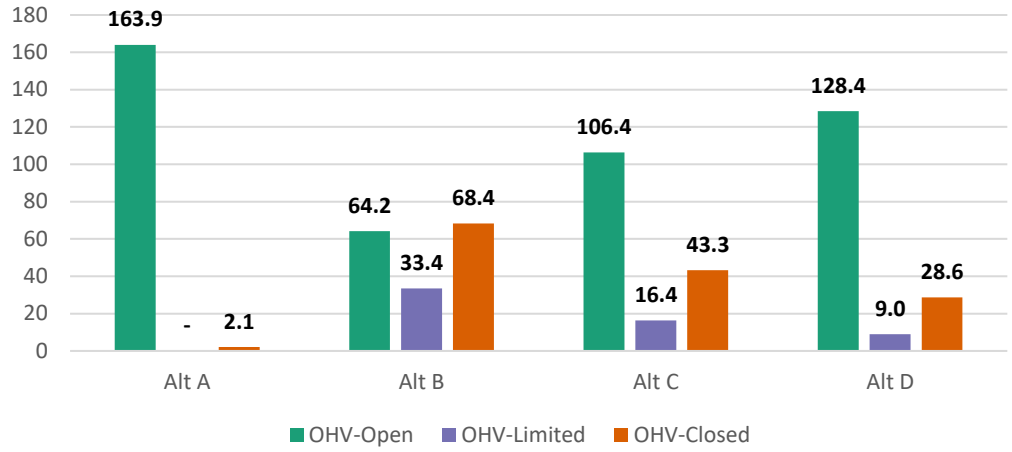


Figure 9 and Figure 10 present the miles of evaluated routes in the TMA's biotic communities as indicators of the proposed alternative travel networks to impact each biotic community.

Figure 9: Miles of Evaluated Routes in Lower Sonoran Desertscrub

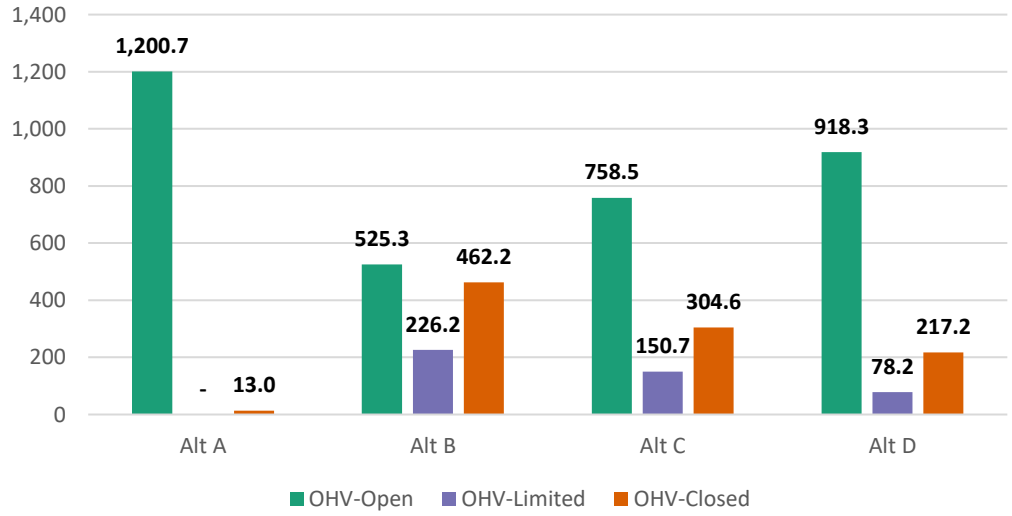


Figure 10: Miles of Evaluated Routes in Upland Sonoran Desertscrub

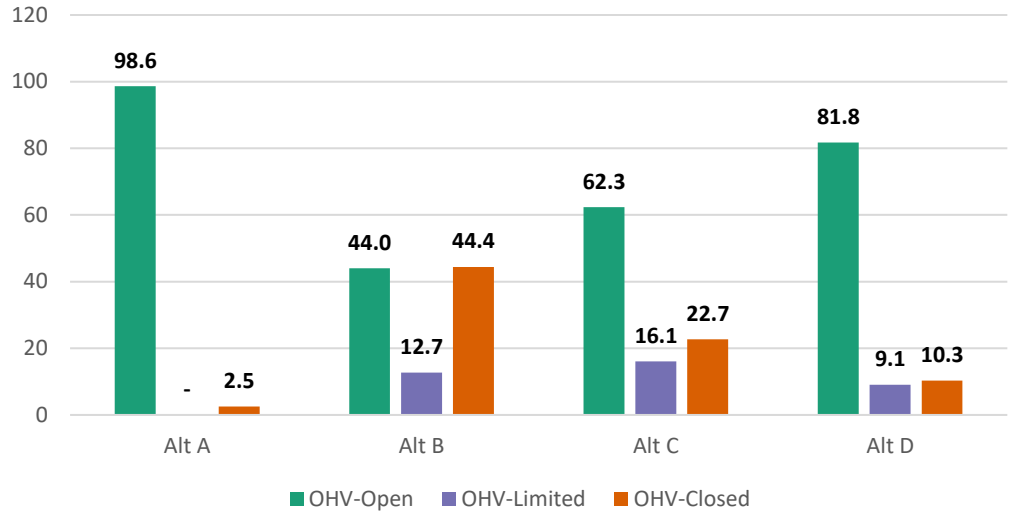


Figure 11 – Figure 13 present the miles of evaluated routes in each of the VHAs as indicators of the potential impacts from the route network alternatives on the VHAs.

Figure 11: Miles of Evaluated Routes in the Blue Sand Lily VHA

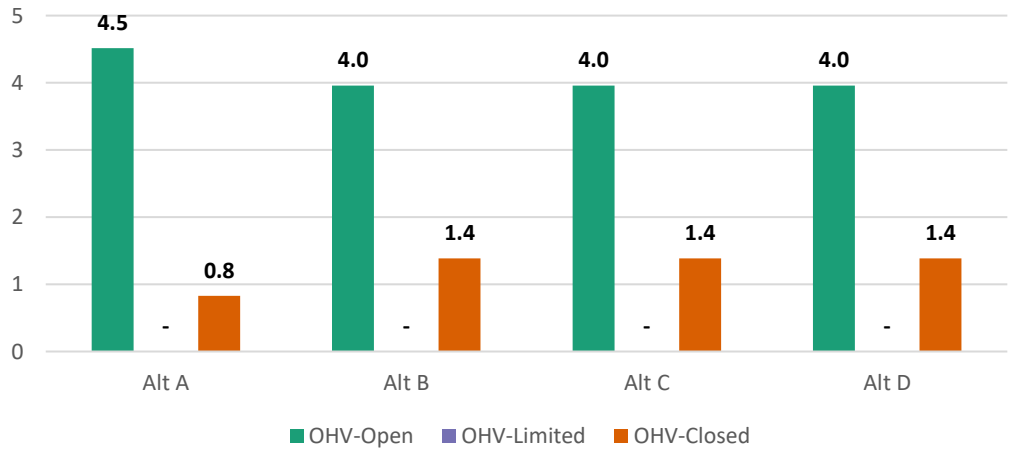


Figure 12: Miles of Evaluated Routes in the Elephant Tree VHA

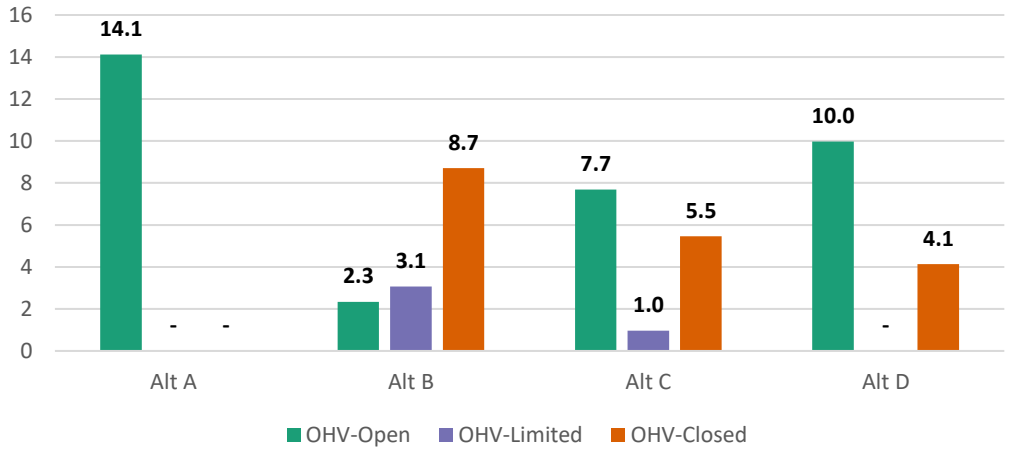
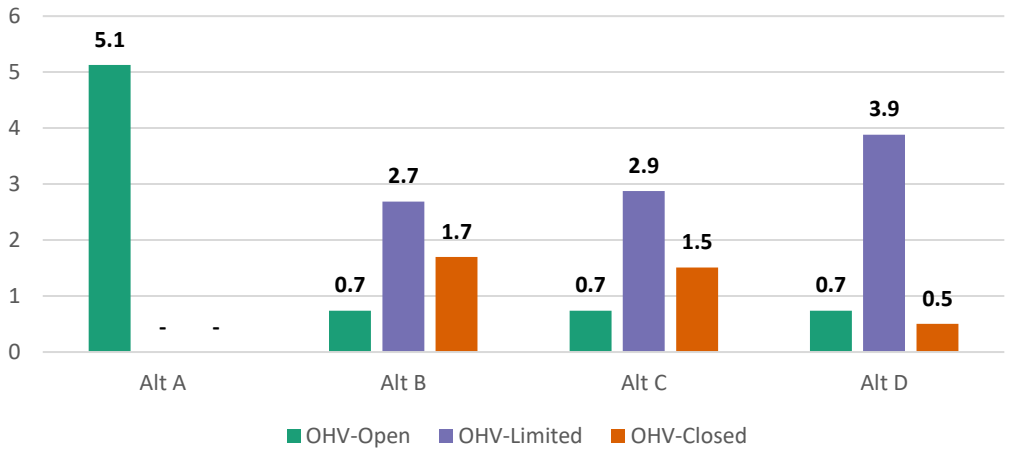


Figure 13: Miles of Evaluated Routes in the Fred J. Weiler Greenbelt VHA



As indicators of potential impacts from the proposed alternative travel networks on special status plants, Figure 14 – Figure 21 present the miles of evaluated routes in each species' habitat.

Figure 14: Miles of Evaluated Routes in Blue Sand Lily Habitat

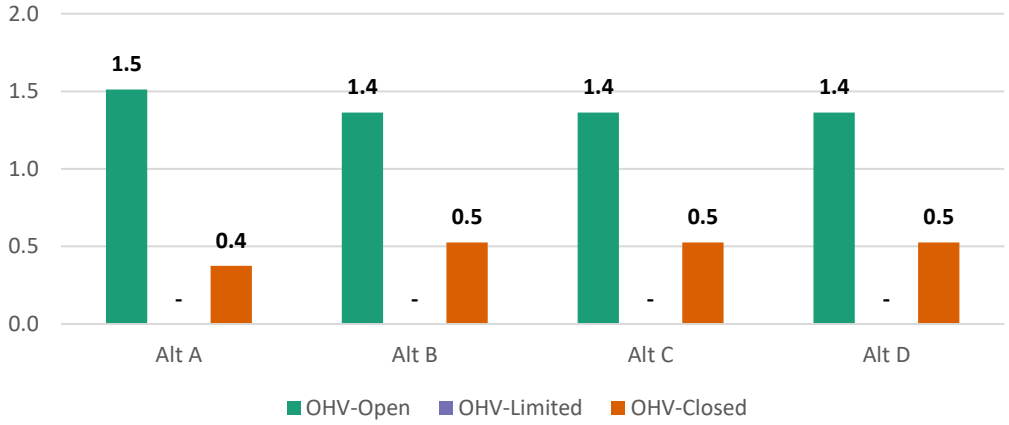


Figure 15: Miles of Evaluated Routes in Clustered Barrel Cactus Habitat

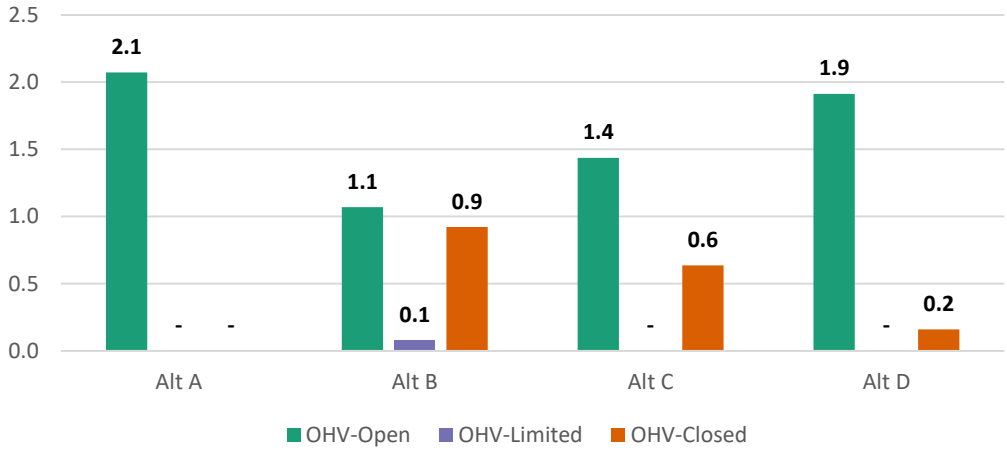


Figure 16: Miles of Evaluated Routes in Desert Rock-purslane Habitat

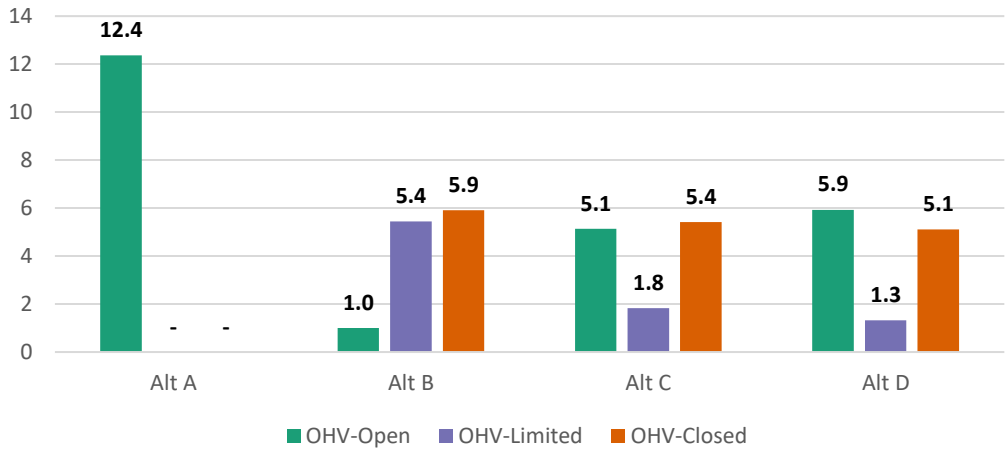


Figure 17: Miles of Evaluated Routes in Hall Shrub Spurge Habitat

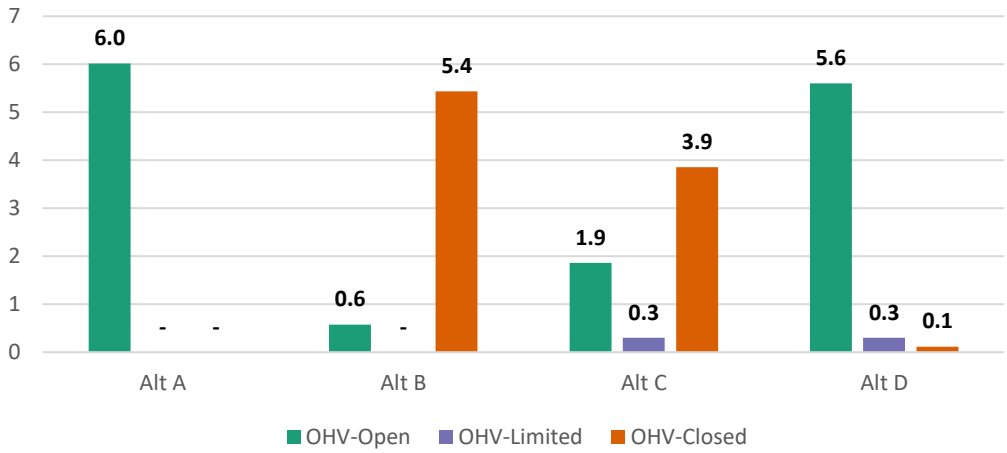


Figure 18: Miles of Evaluated Routes in Las Animas Nakedwood Habitat

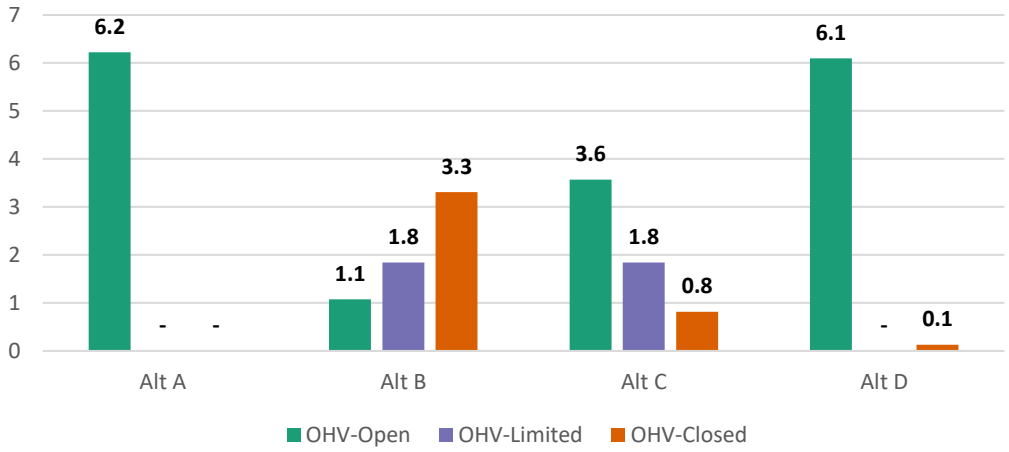


Figure 19: Miles of Evaluated Routes in Spiny Sand Spurge Habitat

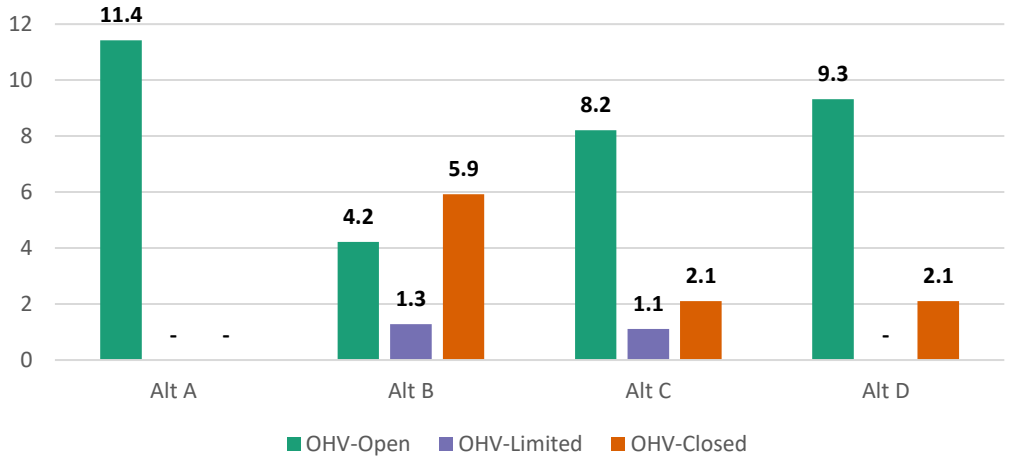


Figure 20: Miles of Evaluated Routes in Thurber Pilostyles Habitat

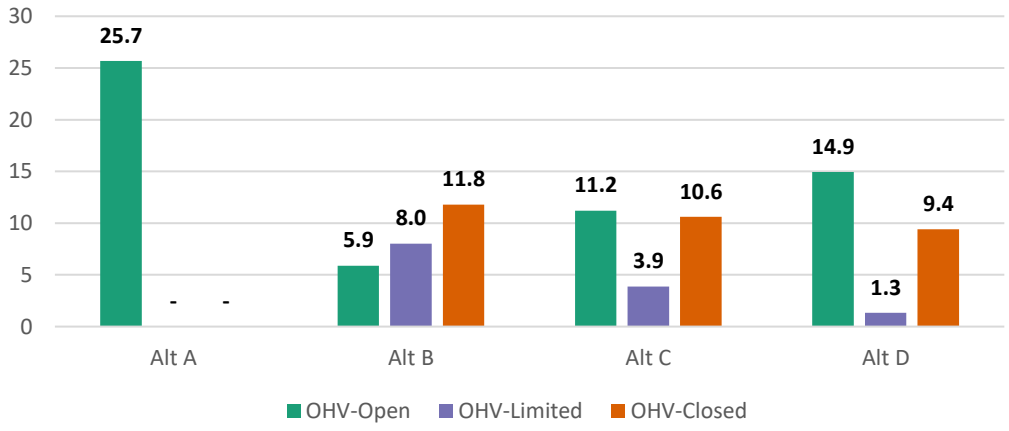
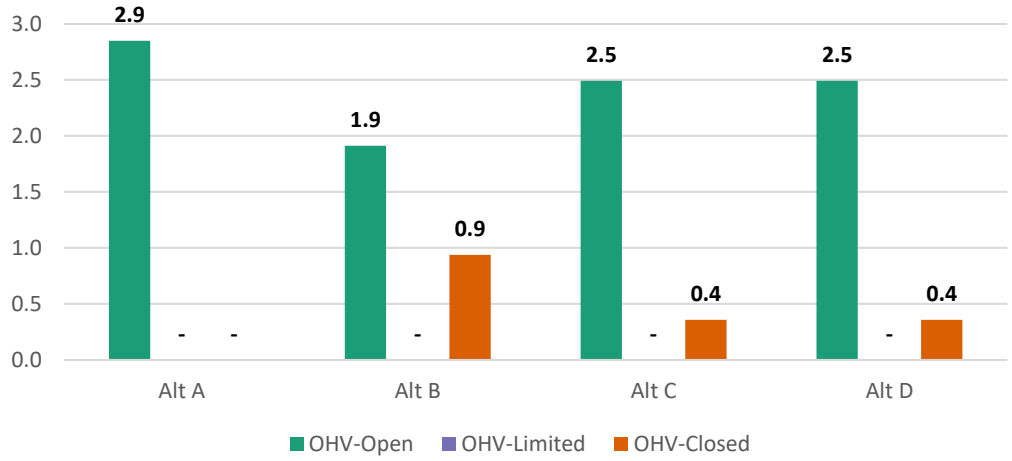


Figure 21: Miles of Evaluated Routes in Velvet Brittle-stem Habitat



Alternative A (Current Management)

Of the 166.0 miles of evaluated routes in areas with severe soil erosion potential, the existing network allows OHV use on 99% (163.9 miles); and of the 293.5 miles in areas with moderate erosion potential, the existing network also allows OHV use on 99% (292.0 miles).

With nearly all evaluated routes currently allowing for OHV use, Alternative A would extend the potential for ongoing OHV use-related impacts to vegetation in each of the TMA's biotic communities, such as crushing or trampling of plants (from driving on partially vegetated routes, roadside parking, camping, exploring, etc.) as well as general loss of plants and loss of health and vigor from travel-related dusting and disturbance along routes. In the VHAs, the Alternative A network would continue to allow OHV use on 4.5 miles in the Blue Sand Lily VHA, 14.1 miles in the Elephant Tree VHA, and 5.1 miles in the Fred J. Weiler Greenbelt VHA. The Alternative A network would continue to allow OHV use on 1.5 miles of routes in blue sand lily habitat, 2.1 miles in clustered barrel cactus habitat, 12.4 miles in desert rock-purslane habitat, 6.0 miles in hall shrub spurge habitat, 6.2 miles in Las Animas nakedwood habitat, 11.4 miles in spiny sand spurge habitat, 25.7 miles in Thurber pilostyles habitat, and 2.9 miles in velvet brittle-stem habitat.

Under this alternative, impacts to soils, biotic communities, VHAs, and special status plants from ongoing OHV use (e.g., increased soil compaction and susceptibility to erosion, surface rutting from OHV use during wet periods, increased sedimentation into waterways, increased vegetation damage or loss, spread of invasive plants and noxious weeds, etc.) would reflect a continuation of current management (i.e., existing conditions on the ground).

Alternative B (Resource Protection Emphasis)

In areas with severe soil erosion potential, Alternative B would designate 97.6 miles of evaluated routes for OHV use, a 40% reduction from Alternative A; 9.9 of these miles designated for OHV use would exclude the off-route OHV allowance (see Assumption #11 in Section 3.1.2), further protecting soils in the TMA. In areas with moderate erosion potential, Alternative B would designate 210.7 miles for OHV use, a 28% reduction from Alternative A; 28.6 of these miles designated for OHV use would exclude the off-route OHV allowance.

Within Lower Sonoran Desertscrub biotic communities, Alternative B would reduce miles of routes available for OHV use by 37% (-449.2 miles); this alternative would also exclude the off-route OHV allowance along 109.0 miles of routes in Lower Sonoran Desertscrub. Within Upland Sonoran Desertscrub biotic communities, Alternative B would reduce miles of routes available for OHV use by

42% (-41.9 miles); this alternative would also exclude the off-route OHV allowance along 12.6 miles of routes in Upland Sonoran Desertscrub.

Alternative B would reduce the miles of routes designated for OHV use in each of the VHAs, including an 11% reduction (-0.5 miles) in the Blue Sand Lily VHA, a 62% reduction (-8.7 miles) in the Elephant Tree VHA, and a 33% reduction (-1.7 miles) and exclusion of the off-route OHV allowance along 2.7 miles in the Fred J. Weiler VHA.

Alternative B would also reduce miles of routes designated for OHV use in each special status plant habitat, including a 7% reduction (-0.1 miles) in blue sand lily habitat; a 43% reduction (-0.9 miles) in clustered barrel cactus habitat; a 48% reduction (-5.9 miles) and exclusion of the off-route OHV allowance along 2.6 miles of routes in desert rock-purslane habitat; a 90% reduction (-5.4 miles) in hall shrub spurge habitat; a 53% reduction (-3.3 miles) in Las Animas nakedwood habitat; a 52% reduction (-5.9 miles) and exclusion of the off-route OHV allowance along 1.1 miles of routes in spiny sand spurge habitat; a 46% reduction (-11.8 miles) and exclusion of the off-route OHV allowance along 4.4 miles of routes in Thurber pilostyles habitat; and a 34% reduction (-0.9 miles) in velvet brittle-stem habitat.

Under Alternative B, the same types of effects from OHV use on soil stability, biotic communities, VHAs, and special status plant habitat noted above would continue to occur along those routes designated for OHV use. Overall, this alternative would have the lowest potential of any alternative for OHV-related impacts to soils and biotic communities in the TMA.

Alternative C (Multiple Use Emphasis)

In areas with severe soil erosion potential, Alternative C would designate 122.8 miles of evaluated routes for OHV use, a 25% reduction from Alternative A; 14.3 of these miles designated for OHV use would exclude the off-route OHV allowance, further protecting soils in the TMA. In areas with moderate erosion potential, Alternative C would designate 229.2 miles for OHV use, a 22% reduction from Alternative A; 29.3 of these miles designated for OHV use would exclude the off-route OHV allowance.

Within Lower Sonoran Desertscrub biotic communities, Alternative C would reduce miles of routes available for OHV use by 24% (-291.6 miles); this alternative would also exclude the off-route OHV allowance along 142.3 miles of routes in Lower Sonoran Desertscrub. Within Upland Sonoran Desertscrub biotic communities, Alternative C would reduce miles of routes available for OHV use by 20% (-20.2 miles); this alternative would also exclude the off-route OHV allowance along 16.1 miles of routes in Upland Sonoran Desertscrub.

Alternative C would reduce the miles of routes designated for OHV use in each of the VHAs, including an 11% reduction (-0.5 miles) in the Blue Sand Lily VHA, a 38% reduction (-5.5 miles) in the Elephant Tree VHA, and a 29% reduction (-1.5 miles) and exclusion of the off-route OHV allowance along 2.9 miles in the Fred J. Weiler VHA.

Alternative C would also reduce miles of routes designated for OHV use in each special status plant habitat, including a 7% reduction (-0.1 miles) in blue sand lily habitat; a 33% reduction (-0.6 miles) in clustered barrel cactus habitat; a 44% reduction (-5.4 miles) and exclusion of the off-route OHV allowance along 1.8 miles of routes in desert rock-purslane habitat; a 63% reduction (-3.9 miles) in hall shrub spurge habitat; a 13% reduction (-0.8 miles) in Las Animas nakedwood habitat; an 18% reduction (-2.1 miles) and exclusion of the off-route OHV allowance along 1.1 miles of routes in spiny sand spurge habitat; a 41% reduction (-10.6 miles) and exclusion of the off-route OHV allowance along 3.6 miles of routes in Thurber pilostyles habitat; and a 14% reduction (-0.4 miles) in velvet brittle-stem habitat.

Under Alternative C, the same types of effects from OHV use on soil stability, biotic communities, VHAs, and special status plant habitat noted above would continue to occur along those routes designated for OHV use. Overall, this alternative would have lower potential than Alternatives A and D but higher potential than Alternative B for OHV-related impacts to soils and biotic communities in the TMA.

Alternative D (Access Emphasis)

In areas with severe soil erosion potential, Alternative D would designate 137.4 miles of evaluated routes for OHV use, a 16% reduction from Alternative A; 8.9 of these miles designated for OHV use would exclude the off-route OHV allowance, further protecting soils in the TMA. In areas with moderate erosion potential, Alternative D would designate 251.2 miles for OHV use, a 14% reduction from Alternative A; 9.1 of these miles designated for OHV use would exclude the off-route OHV allowance.

Within Lower Sonoran Desertscrub biotic communities, Alternative D would reduce miles of routes available for OHV use by 17% (-204.3 miles); this alternative would also exclude the off-route OHV allowance along 77.1 miles of routes in Lower Sonoran Desertscrub. Within Upland Sonoran Desertscrub biotic communities, Alternative D would reduce miles of routes available for OHV use by 8% (-7.8 miles); this alternative would also exclude the off-route OHV allowance along 9.1 miles of routes in Upland Sonoran Desertscrub.

Alternative D would reduce the miles of routes designated for OHV use in each of the VHAs, including an 11% reduction (-0.5 miles) in the Blue Sand Lily VHA, a 29% reduction (-4.1 miles) in the Elephant Tree VHA, and a 10% reduction (-0.5 miles) and exclusion of the off-route OHV allowance along 3.9 miles in the Fred J. Weiler VHA.

Alternative D would also reduce miles of routes designated for OHV use in each special status plant habitat, including a 7% reduction (-0.1 miles) in blue sand lily habitat; a 10% reduction (-0.2 miles) in clustered barrel cactus habitat; a 42% reduction (-5.1 miles) and exclusion of the off-route OHV allowance along 1.3 miles of routes in desert rock-purslane habitat; a 2% reduction (-0.1 miles) in hall shrub spurge habitat; a 2% reduction (-0.1 miles) in Las Animas nakedwood habitat; an 18% reduction (-2.1 miles) in spiny sand spurge habitat; a 37% reduction (-9.4 miles) and exclusion of the off-route OHV allowance along 1.3 miles of routes in Thurber pilostyles habitat; and a 14% reduction (-0.4 miles) in velvet brittle-stem habitat.

Under Alternative D, the same types of effects from OHV use on soil stability, biotic communities, VHAs, and special status plant habitat noted above would continue to occur along those routes designated for OHV use. Overall, this alternative would have lower potential than Alternative A but higher potential than the other action alternatives for OHV-related impacts to soils and biotic communities in the TMA.

Cumulative Effects

The CEAA for soils and biotic communities is the TMA and adjacent soil and habitat areas since impacts on these resources could extend to the same types of habitat areas adjacent to the TMA. Impacts on soils and biotic communities from this TMP would add to potential disturbance from other actions within the TMA such as those listed in Section 3.2 (e.g., renewable energy development projects).

Under Alternative A, OHV route-related impacts on soils and biotic communities on the BLM public lands discussed above would continue to occur relative to the number of open OHV routes on the landscape in and adjacent to the TMA. These impacts would continue to add to similar impacts on soils and biotic communities resulting from disturbances occurring within and adjacent to the TMA on other jurisdictions.

Under the Action Alternatives B-D, OHV-open route designations and associated impacts on soils and biotic communities would be reduced. Reductions would occur relative to the miles of routes closed to OHV use and excluded from off-route travel. Each of these alternatives also includes a companion Implementation Guide which provides for structured operation and management (e.g., mitigation and monitoring methods, signing, BMPs, law enforcement, adaptive management, etc.) of the selected alternative travel route network. This structured operation and management would help reduce OHV route-related impacts, such as soil erosion, trampling of vegetation, etc. on the landscape. Accordingly,

each of the Action Alternatives B-D should also provide for incremental reductions in impacts to soils and biotic communities within the CEAA for these resources.

3.3.4 SPECIAL DESIGNATION AREAS

*How would the route designation alternatives impact the TMA's **specially designated areas**—that is, the cultural and recreational values of the **Juan Bautista de Anza National Historic Trail (NHT)** and the relevant and important values of the **Sears Point Area of Critical Environmental Concern (ACEC)**?*

3.3.4.1 Affected Environment

The Juan Bautista de Anza NHT, which was designated by Congress through Public Law 101-365 in 1990, extends from Mexico to California for a total length of approximately 1,200 miles in the U.S.; the trail is defined as a one-mile-wide corridor and passes through the homelands of 70+ Tribal communities. The trail retraces the route traveled by the Anza colonizing expedition in 1775–1776. The National Park Service provides oversight for coordinated management of the trail. The BLM is in the process of establishing a recreational Anza Trail inside the one-mile-wide corridor established by the National Park Service management plan. Within the Anza Trail corridor are 57.3 miles of evaluated routes.

The Sears Point ACEC encompasses 28,500 acres and includes an NRHP-listed archaeological district with extensive petroglyph displays, prominent basalt mesas, historic trail corridors, and important riparian vegetation including a mesquite bosque and the Fred J. Weiler Greenbelt. The area has been utilized for thousands of years (approximately 10,000 B.C. to A.D. 1450) by prehistoric cultures such as the Desert Archaic, Patayan, and Hohokam. These cultures left behind an assortment of cultural resources, including several thousand petroglyph images etched into the basalt mesas along the Gila River, plus other archaeological features like intaglios, trails, rock alignments, rock shelters, shrines/cairns, and lithic and ceramic scatters. A 1,400-acre portion of the ACEC core area is designated in the Yuma RMP as Closed to OHV use. Within the ACEC are 8.6 miles of evaluated routes.

3.3.4.2 Environmental Effects

OHV use on routes crossing or in proximity to the Anza NHT increases the potential for damage to the trail's historic integrity and increases the potential for disruption of travelers' vicarious experiences along the trail. Travel routes can also provide beneficial access for recreational opportunities as well as interpretive and educational opportunities for cultural resources along the trail.

Potential impacts to cultural resources within the Sears Point ACEC would be similar to those disclosed in Section 3.3.2 and include damage from trampling, theft, and vandalism; erosion and exposure of cultural resources from travel-related disturbances that leaves cultural resources more susceptible to loss and damage; and access that is beneficial for interpretive or educational opportunities.

Figure 22 shows the miles of routes in the Anza NHT corridor and is used as an indicator of potential impacts to the relevant and important values of the trail. Figure 23 shows the miles of evaluated routes in the Sears Point ACEC and is used as an indicator of potential impacts to cultural resources in the ACEC.

Figure 22: Miles of Evaluated Routes in the Juan Bautista de Anza NHT Corridor

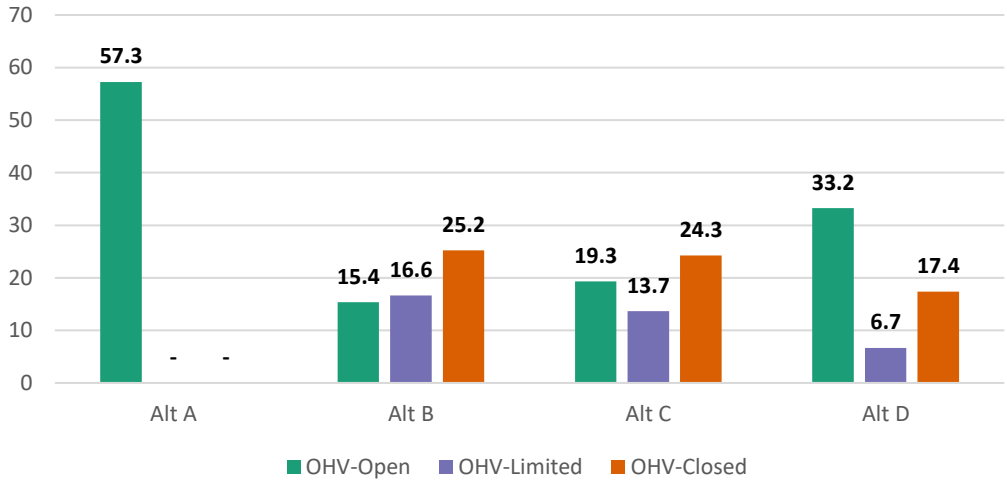
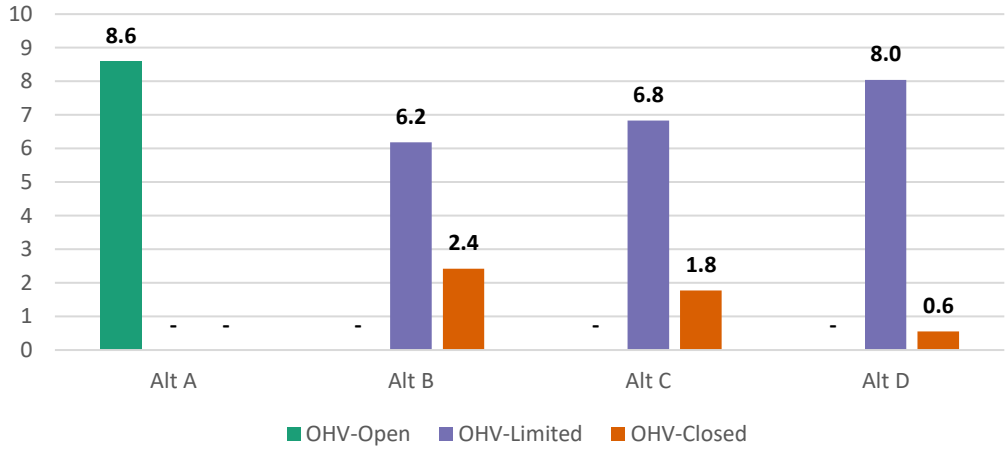


Figure 23: Miles of Evaluated Routes in Sears Point ACEC



Alternative A (Current Management)

Under Alternative A, all 57.3 miles of evaluated routes in the Anza NHT corridor would remain available for OHV use. While these routes provide access to the trail corridor, they may also leave the trail susceptible to travel-related effects which could potentially impact the resource values (e.g., historic, scientific, educational, interpretive, and recreational) that affect the purpose of the trail. Impacts would reflect a continuation of current management.

Within the Sears Point ACEC, all 8.6 miles of evaluated routes would remain available for OHV use. Impacts to the ACEC's cultural resources from ongoing OHV use (including damage from trampling, theft, and vandalism; erosion and exposure of cultural resources from travel-related disturbances that leaves cultural resources more susceptible to loss and damage; access that is beneficial for interpretive or educational opportunities, etc.) would reflect a continuation of current management.

Alternative B (Resource Protection Emphasis)

Of the evaluated within the Anza NHT corridor, Alternative B would designate 32.0 miles for OHV use, a 44% (25.2-mile) reduction from Alternative A; additionally, 11.5 miles of routes would exclude the 100-

foot off-route OHV allowance (see Assumption #11 in Section 3.1.2), further protecting the resource values of the trail. The effects noted above to the trail's purpose and integrity would continue to occur on routes designated for OHV use. Overall, the Alternative B network would provide less overall access to the trail than the other alternatives and the potential for OHV-related impacts to the NHT under Alternative B would be the lowest of any alternative.

Within the Sears Point ACEC, Alternative B would designate 6.2 miles of evaluated routes for OHV use, a 28% (2.4-mile) reduction from Alternative A; all 6.2 of these miles would exclude the 100-foot off-route OHV use allowance (see TM-013 in the Yuma RMP), further protecting cultural resources within the ACEC. Under Alternative B, the types of impacts to cultural resources from OHV use noted above would continue to occur on those routes designated for OHV use, though some of these impacts would be mitigated with the exclusion of the off-route OHV allowance. Overall, given reductions in routes designated for OHV use, this alternative would have the least potential of any alternative for OHV-related impacts to cultural resources within the ACEC.

Alternative C (Multiple Use Emphasis)

Of the evaluated within the Anza NHT corridor, Alternative C would designate 33.0 miles for OHV use, a 42% (24.3-mile) reduction from Alternative A; additionally, 12.8 miles of routes would exclude the 100-foot off-route OHV allowance, further protecting the resource values of the trail. The effects noted above to the trail's purpose and integrity would continue to occur on routes designated for OHV use. Overall, the Alternative C network would provide more access to the trail than Alternative B while still protecting the trail's resource values; the Alternative C network would provide less access to the trail than Alternatives A and D but would have lower potential for OHV-related impacts to the NHT than these alternatives.

Within the Sears Point ACEC, Alternative C would designate 6.8 miles of evaluated routes for OHV use, a 20% (1.8-mile) reduction from Alternative A; all 6.8 of these miles would exclude the 100-foot off-route OHV use allowance (see TM-013 in the Yuma RMP), further protecting cultural resources within the ACEC. Under Alternative C, the types of impacts to cultural resources from OHV use noted above would continue to occur on those routes designated for OHV use, though some of these impacts would be mitigated with the exclusion of the off-route OHV allowance. Overall, given reductions in routes designated for OHV use, this alternative would have lower potential than Alternatives A and D but slightly higher potential than Alternative B for OHV-related impacts to cultural resources within the ACEC.

Alternative D (Access Emphasis)

Of the evaluated within the Anza NHT corridor, Alternative D would designate 39.9 miles for OHV use, a 30% (17.4-mile) reduction from Alternative A; additionally, 6.7 miles of routes would exclude the 100-foot off-route OHV allowance, further protecting the resource values of the trail. The effects noted above to the trail's purpose and integrity would continue to occur on routes designated for OHV use. Overall, the Alternative D network would provide more access to the trail than Alternatives B and C while still protecting the trail's resource values more than Alternative A; the Alternative D network would provide less access to the trail than Alternative A but would have lower potential for OHV-related impacts to the NHT than Alternative A.

Within the Sears Point ACEC, Alternative D would designate 8.0 miles of evaluated routes for OHV use, a 6% (0.6-mile) reduction from Alternative A; all 8.0 of these miles would exclude the 100-foot off-route OHV use allowance (see TM-013 in the Yuma RMP), further protecting cultural resources within the ACEC. Under Alternative D, the types of impacts to cultural resources from OHV use noted above would continue to occur on those routes designated for OHV use, though some of these impacts would be mitigated with the exclusion of the off-route OHV allowance. Overall, given reductions in routes

designated for OHV use, this alternative would have lower potential than Alternative A but slightly higher potential than the other action alternatives for OHV-related impacts to cultural resources within the ACEC.

Cumulative Effects

The CEAA for the Anza NHT corridor extends along the Gila River corridor to the east beyond the TMA. Although the Sears Point ACEC is located along the Gila River within the TMA, it is located along an important historic travel corridor and shares several of the same unique resources (e.g., petroglyphs, plus other archaeological features like intaglios, trails, rock alignments, rock shelters, shrines/cairns, and lithic and ceramic scatters) found along the Gila River trail corridor extending to the east beyond the TMA into the Lower Gila Terraces and Historic Trails ACEC.

Under Alternative A, effects within the Anza NHT corridor from travel-related use on the entire 57.3 miles of OHV-open routes within the corridor would potentially impact the trail's historic integrity and resource values (e.g., historic, scientific, educational, interpretive, and recreational) that define the purpose of the trail. These effects would add to similar effects that extend beyond the TMA on OHV routes along the trail corridor. Effects from the 8.6 miles of OHV-open route use within the Sears Point ACEC would be similar to those discussed in Section 3.2.2 and would incrementally add to similar effects from open route access occurring beyond the TMA into the Lower Gila Terraces and Historic Trails ACEC.

Under the Action Alternatives B-D, OHV open access along the Anza NHT would be reduced from 30% under Alternative D to 44% under Alternative B. Within the Sears Point ACEC, current OHV-open designations would be reduced from 6% under Alternative D to 28% under Alternative B. The reductions in open OHV designations under the action alternatives in these specially designated areas would result in overall incremental reductions in impacts to these resources within their respective CEAAs. In addition, the TMP's companion Implementation Guide, which provides for structured operation and management that includes detailed mitigation and monitoring methods, signing, BMPs, law enforcement, adaptive management, etc. guidance would enhance protection and preservation of these areas, adding to the overall incremental reduction in cumulative effects with the CEAAs.

3.3.5 VISUAL RESOURCES

How might the proposed travel network alternatives impact the quality of visual resources?

3.3.5.1 Affected Environment

Visual resources in the TMA are managed in accordance with land use plans. Visual resource management (VRM) is a process the BLM uses to manage scenic values to reduce visual impacts of development or other surface-disturbing activities on public lands. There are four visual resource classes: I, II, III, and IV. Class I is assigned to areas where management decisions have been made to maintain natural landscapes; the objective of Class II is to retain the existing character of the landscape; the objective of Class III is to partially retain the existing character of the landscape; and Class IV is assigned to areas where decisions have been made to provide for activities that involve major landscape character modification. VRM classes are assigned through RMPs and are used as a basis for management (BLM 1986).

The acres and miles of evaluated routes by VRM Class in the TMA are as follows:

Table 10: Miles of Evaluated Routes by VRM Class

VRM Class	BLM Acres	Miles of Evaluated Routes
VRM Class I	106,209	26.2
VRM Class II	438,744	785.5
VRM Class III	161,605	472.6
VRM Class IV	1,033	1.8

3.3.5.2 Environmental Effects

Existing travel routes and OHV use can contribute to damage and disruption to the natural appearance of landscapes by providing opportunities for route proliferation (i.e., user-created routes extending off existing routes) resulting in new disturbances. Other travel-related surface disturbances and uses such as roadside camping can lead to expansion of invasive species and noxious weeds and subsequently higher potential for disruptive wildfire events. Routes also impact visual resources by creating contrasting lines where they do not follow natural landscape contours. User-created routes typically do not follow ground contours and can extend up slopes, leading to rilling, erosion, and easily visible contrasting lines. Changes in color and form from road cuts and fills create visible impacts. However, the formal establishment of a route network that includes operation and management components can help to minimize route proliferation and future degradation of visual resources. Under all action alternatives, the application of specified operation and management tools provided in the Implementation Guide—such as signs, route markers, and human-made barriers—would help reduce or prevent impacts to the visual elements of line, form, and color.

Regardless of the final route designation decision for each travel route, it is assumed there would be follow-up action on the ground. For permanently closed routes, implementation actions would include the placement of closure signs, reclamation, or installation of barricades. For routes designated for OHV use, maintenance actions may include the use of heavy equipment for grading and drainage maintenance or hand tools for directional signing. The effects of these actions on visual resources are expected to be minor and short-term but are included in this analysis. Overall, the route designations would result in some routes being closed, thereby eventually reducing the overall footprint of the route network. More site-specific analysis of maintenance or management actions may be needed if such actions could affect high-quality visual landscapes.

Figure 24 and Figure 25 inform the effects analysis. They present the miles of routes in VRM Classes I and II in the TMA. Analysis does not include Classes III or IV, as they allow for changes in form, line, and color and would not provide a useful comparison between alternatives.

Figure 24: Miles of Evaluated Routes in VRM Class I Areas

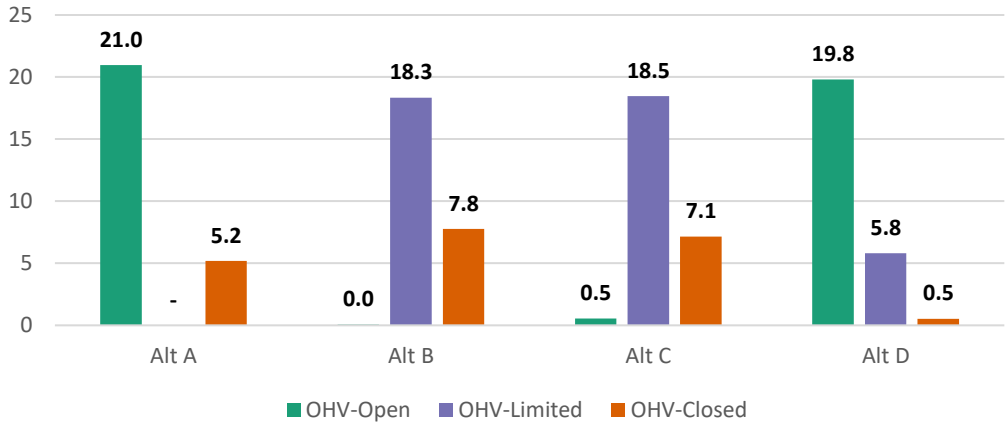
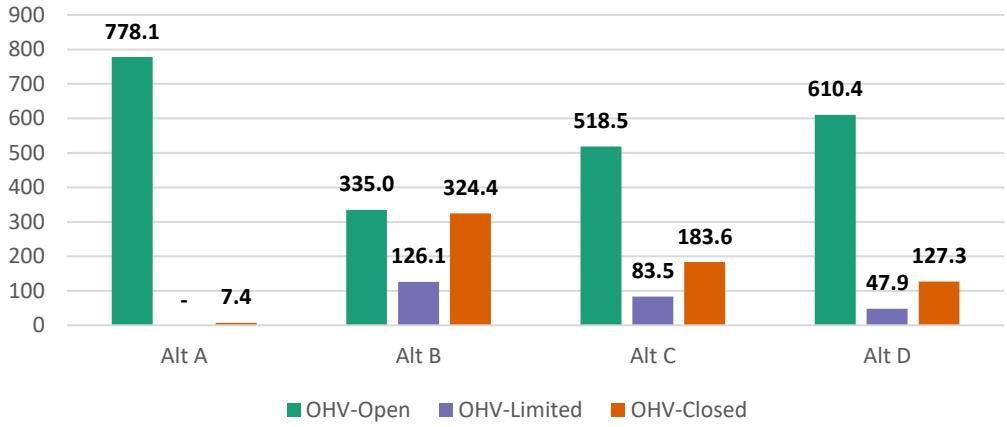


Figure 25: Miles of Evaluated Routes in VRM Class II Areas



Alternative A (Current Management)

Under Alternative A, 80% of the 26.2 miles of evaluated routes in VRM Class I areas and 99% of the 785.5 miles in VRM Class II areas would remain available for OHV use. Impacts to the TMA's visual resources (e.g., degradation of visual quality, disruption of natural appearance, etc.) would reflect a continuation of current management.

Alternative B (Resource Protection Emphasis)

In VRM Class I areas, Alternative B would designate 18.3 miles for OHV use, a 13% (2.6-mile) reduction from Alternative A. Of the 7.8 miles that would be closed to OHV use in these areas, 1.7 miles would be decommissioned and earmarked for reclamation while the rest would remain available for non-mechanized or non-motorized use or for authorized or administrative users only. In VRM Class II areas, Alternative B would designate 461.1 miles for OHV use, a 41% (317.0-mile) reduction from Alternative A. Of the 324.4 miles of evaluated routes in Class II areas that would be closed to public OHV use under this alternative, 270.3 miles would be decommissioned and earmarked for reclamation while the rest would remain available for non-mechanized or non-motorized use or for authorized or administrative users only. The same types of impacts to the TMA's visual resources from OHV use noted above would continue to occur on those routes designated for OHV use; however, given the number of routes that would be closed to OHV use as well as the number of routes that would be decommissioned and

reclaimed, Alternative B's potential for OHV use-related impacts to the TMA's visual resources would be the lowest of any alternative.

Alternative C (Multiple Use Emphasis)

In VRM Class I areas, Alternative C would designate 19.0 miles for OHV use, a 10% (2.0-mile) reduction from Alternative A. Of the 7.1 miles that would be closed to OHV use in these areas, 1.5 miles would be decommissioned and earmarked for reclamation while the rest would remain available for non-mechanized or non-motorized use. In VRM Class II areas, Alternative C would designate 601.9 miles for OHV use, a 23% (176.1-mile) reduction from Alternative A. Of the 183.6 miles of evaluated routes in Class II areas that would be closed to public OHV use under this alternative, 145.7 miles would be decommissioned and earmarked for reclamation while the rest would remain available for non-mechanized or non-motorized use or for authorized or administrative users only. The same types of impacts to the TMA's visual resources from OHV use noted above would continue to occur on those routes designated for OHV use; however, given the number of routes that would be closed to OHV use as well as the number of routes that would be decommissioned and reclaimed, Alternative C's potential for OHV use-related impacts to the TMA's visual resources would be lower than Alternatives A and D but higher than Alternative B.

Alternative D (Access Emphasis)

In VRM Class I areas, Alternative D would designate 25.6 miles for OHV use, a 22% (4.7-mile) increase from Alternative A. All of the 0.5 miles that would be closed to OHV use in these areas would remain available for non-motorized use and none would be earmarked for reclamation. In VRM Class II areas, Alternative D would designate 658.2 miles for OHV use, a 15% (119.8-mile) reduction from Alternative A. Of the 127.3 miles of evaluated routes in Class II areas that would be closed to public OHV use under this alternative, 94.0 miles would be decommissioned and earmarked for reclamation while the rest would remain available for non-motorized use or for authorized or administrative users only. The same types of impacts to the TMA's visual resources from OHV use noted above would continue to occur on those routes designated for OHV use. In VRM I areas, Alternative D would have greater potential than all other alternatives for OHV use-related impacts to visual resources. However, given the number of routes that would be closed to OHV use as well as the number of routes that would be decommissioned and reclaimed in VRM II areas, Alternative D's potential for OHV use-related impacts to the TMA's visual resources overall would be lower than Alternative A.

Cumulative Effects

The CEAA for VRM is the TMA and the effects analysis discussion is limited to VRM I and II as explained above in Environmental Effects.

Under Alternative A, 80% of OHV-open routes in VRM I and 99% of routes in VRM II areas would remain open to OHV use. These open OHV routes would continue to contribute to damage and disruption to the natural appearance of the VRM I and II landscapes by providing opportunities for route proliferation (e.g., user-created routes extending off existing routes) resulting in new disturbances. These user-created routes typically do not follow ground contours and can extend up slopes, leading to rilling, erosion, and easily visible contrasting lines. Travel-related surface disturbances and uses such as roadside camping would provide opportunities for invasive species and noxious weeds to become established and spread, leading to higher potential for disruptive wildfire events. These effects would add to visual impacts from similar disturbances occurring on private and other jurisdictional lands surrounding or adjacent to the VRM I and VRM II areas within the TMA.

Under the Action Alternatives B-D, open OHV route designations in VRM I and VRM II areas would be reduced from 11% and 15% respectively under Alternative D to 13% and 41% respectively under Alternative B. In addition to the route closures, substantial miles of existing routes in these areas would

be reclaimed over time, removing their footprints on the landscape, effectively reducing their visual impact. All the action alternatives would result in overall incremental reductions in impacts to visual quality when considered with similar impacts occurring on other jurisdictional lands within the TMA. In addition, the TMP's companion Implementation Guide would provide for mitigations to visual impacts through structured operation and management guidance that includes signing, BMPs such as maintenance measures to reduce erosion, monitoring and law enforcement to reduce/eliminate route proliferation, education, and interpretive programs to reduce impacts, etc.

3.3.6 WATER RESOURCES

What impact might the proposed travel network alternatives have on surface water flow patterns, water quality, and associated riparian habitats?

3.3.6.1 Affected Environment

Travel routes are considered sources of nonpoint pollution regarding water quality (EPA 2021), and travel route designation decisions need to ensure that water quality, surface and groundwater resources, riparian areas, and fisheries are not diminished as a result of the designations. Travel routes and their associated uses can contribute to water quality degradation, affecting beneficial uses of lakes and streams such as agricultural water supply, domestic water supply, industrial water supply, primary and secondary contact recreation, aquatic life, salmonid spawning, biodiversity, and wildlife habitat. Use and maintenance of travel routes has the potential to alter surface water flow regimes. Reduced vegetation, increased compaction, decreased infiltration, and increased erosion caused by vehicular travel increases likelihood of larger, more destructive flows through stream reaches and riparian areas during storms and runoff events.

The primary perennial waterbody in the TMA is the Gila River, which flows through the southern portion of the TMA. Many intermittent and ephemeral streams are also present in the TMA. Intermittent streams generally have flowing water during the wet season but are dry during hot summer months. Ephemeral streams only flow in response to precipitation events though they carry a locally significant amount of water annually and are an important aspect of habitat. Springs, riparian areas, and freshwater emergent wetlands are also present within the TMA. Within the TMA on BLM-managed public lands, there are zero perennial stream crossings, 243 intermittent stream crossings, and 1,192 ephemeral stream crossings.

Riparian ecosystems are defined as areas of land directly influenced by permanent (surface or subsurface) water. They form a transitional area between a water body and drier upland areas and have visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks of perennial streams are typical riparian areas. They include wetlands and those portions of floodplains and valley bottoms that support riparian vegetation (Meehan 1991). Native riparian plants and their root systems contribute to improved water quality and quantity by holding soils in place while filtering sediments, increasing ground water recharge, and protecting streambanks. Riparian areas offer value to the public by providing opportunities for a wide variety of recreation activities and aesthetic attributes. Riparian areas are crucial habitat for most species in Arizona. However, riparian ecosystems are fragile resources that are among the first indicators of impacts from disturbance. The ecosystem services provided by riparian areas bears significant weight in terms of the presence and abundance of water resources, condition of downstream ecosystems, and likelihood of risks to human health and infrastructure. The TMA has 106 acres of riparian habitat on BLM-managed lands, with 0.3 miles of evaluated routes in these areas.

3.3.6.2 Environmental Effects

The following assumptions and methodologies were applied in this analysis of potential effects on aquatic resources from the alternative travel route network designations:

- A well-planned travel route network would help conserve and protect the public land water resources of the TMA by restricting public OHV use to designated routes.
- Travel network alternatives that close more miles to motorized travel across or near aquatic habitats would provide higher levels of protection from surface disturbances and indirectly help reduce and minimize effects to aquatic resources and water quality.
- Impacts to aquatic resources would be reduced and minimized by applying BMPs for operation and maintenance of all routes designated for motorized and non-motorized use. See the Implementation Guide for a list of BMPs related to the operation and maintenance of routes.

Fisheries resources may be impacted by roads in close proximity to rivers, streams, and lacustrine habitats. Travel routes can serve as a conduit for sediment transport into watersheds during runoff events (Miniat et al. 2019). Sediment can impact aquatic invertebrates, a primary prey base for all the native fish species. Sediment may suffocate eggs, and clog or abrade fish gills and filter structures. Surface disturbances from motorized travel and stream-side road grading can also remove soil-stabilizing agents, such as vegetative cover, soil crusts, and woody debris. Loss of one or more of these agents increases potential erosion and sediment transport, elevating levels of turbidity in waterways (Ouren et al. 2007), contributing to degradation of water quality, and contributing to habitat fragmentation for aquatic organisms.

Routes which cross streams and rivers can also impact habitat and habitat connectivity. Routes that cross any water body that supports fish may injure or kill them if they are hit. Eggs and larval fish are less likely to avoid injury or death, whereas adult fish can often move out of the way. Sonora mud turtle, native toad, and native frog if present in a low-water road crossing while a vehicle crosses may also be injured or killed. Poorly located roads and trails in highly erosive soil that are proximate to, leading to, or crossing drainages can act as conduits that direct or alter the direction of surface flows, resulting in higher amounts of sediment transport and deposition in water bodies and riparian areas during storms and runoff events (Ouren et al. 2007). Culverts or diversions installed to mitigate road damage caused by water may also impede travel of wildlife, effectively fragmenting habitats. Rills and gullies unintentionally created from travel routes and draining into existing perennial or intermittent streams or riparian areas may cause declining riparian zone vegetation health, biodiversity, density, and vigor.

TMP implementation activities that could affect water quality, riparian areas, and wetlands include ground-disturbing activities such as road use, road maintenance, ripping and seeding of closed routes, and sign placement[7] (scraping away vegetation and digging post holes). These activities could contribute to short-term and long-term sedimentation and impairment by increasing the amount of soil and other materials transported into waterways. Mechanical modification to stream crossings has delayed sediment transport effects. Issues at these crossings also include soil compaction, soil surface disturbance including disturbance of vegetation, displacement of surface-armoring gravel and cobble, loosening of sediment, sediment entrainment during monsoonal and winter flows, regular saltation of loosened particles by wind, etc. Many of these effects are likely to be temporary because not all implementation actions would occur on a regular basis, and disturbed areas are expected to revegetate. Some of these effects could be long-term because flow concentration in channels can create excessive erosion that may not be mitigated early or effectively. Use of motorized vehicles on routes in the TMA increases likelihood of pollutant releases from spills, leaks, and accidents including hydrocarbons and heavy metals which can persist in roadways and adjacent areas, potentially also negatively affecting riparian and aquatic habitats and water quality.

[7] Some actions (e.g., sign and kiosk installation) are designated as CXs (BLM 2008a).

Invasive species transported into riparian areas and channels may out-compete native species, resulting in long-term declines of biodiversity and reduced habitat quality.

Figure 26 – Figure 28 inform the effects analysis that follows for water resources. The number of crossing points on intermittent and ephemeral streams and the miles of routes in riparian areas are indicators of each alternative's potential to affect water resources in the TMA.

Figure 26: Number of Crossing Points on Intermittent Streams

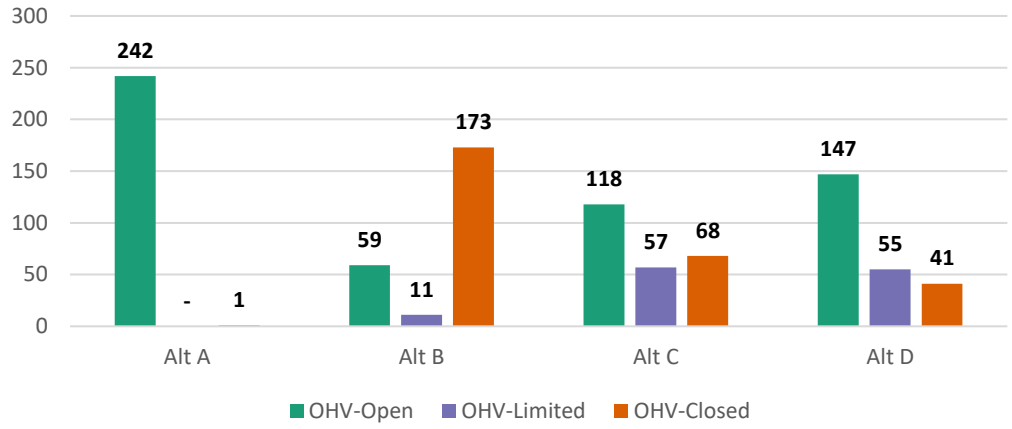


Figure 27: Number of Crossing Points on Ephemeral Streams

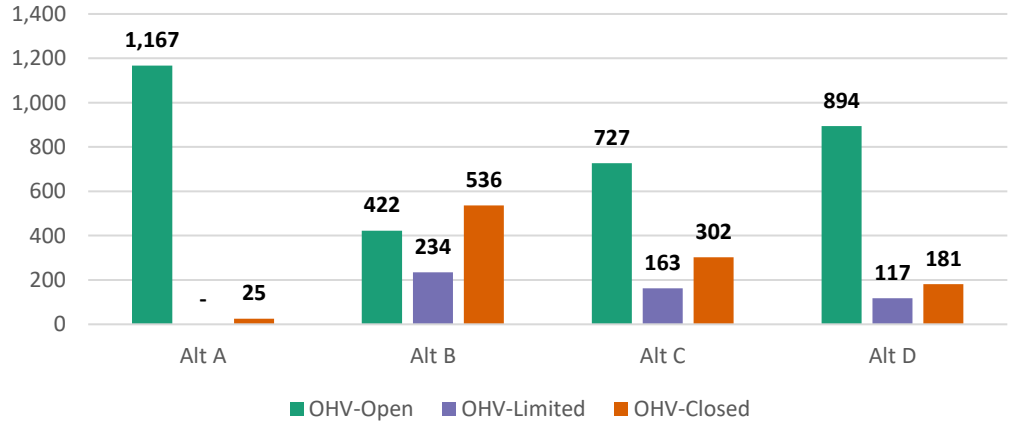
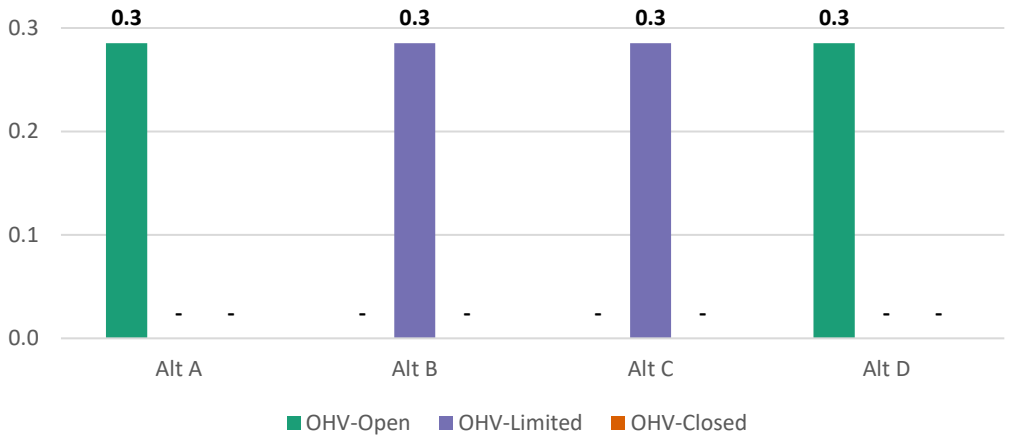


Figure 28: Miles of Evaluated Routes in Riparian Habitat



Alternative A (Current Management)

As displayed in the figures above, within the existing travel network, routes available for OHV use cross intermittent streams 242 times and ephemeral streams 1,167 times. And under this alternative, 0.3 miles of currently used routes are in riparian areas. OHV and associated human use (e.g., camping, exploring, etc.) on routes crossing or proximate to streams and riparian areas contribute to erosion, sedimentation, pollution, and loss or non-native replacement of important streamside vegetative cover. Subsequent sediment transport and deposition in streams and riparian areas leads to degradation of water quality and habitat. Changes to flow regimes (alteration of aspects of the hydrograph for any particular reach) due to changes in stream channel characteristics (vegetative cover and type, channel dimensions, etc.) are occurring and can be anticipated to continue as use of these routes continues. Given the number of routes in the current network that cross or are proximate to streams and riparian areas that would remain available to OHV use, Alternative A would have ongoing travel route-related impacts to these streams, riparian-area health, and water quality.

Alternative B (Resource Protection Emphasis)

Under Alternative B, routes designated for OHV use would cross intermittent streams 70 times, a 71% (172-crossing) reduction from Alternative A. The Alternative B network would also have 656 ephemeral stream crossings along OHV routes, a 44% (511-crossing) reduction from Alternative A. In riparian areas, Alternative B would designate 0.3 miles of evaluated routes for OHV use, the same as Alternative A; however, all 0.3 miles designated for OHV use would exclude the off-route OHV allowance (see Assumption #11 in Section 3.1.2), helping to protect riparian resources. Changes to flow regimes (alteration of aspects of the hydrograph for any particular reach) due to changes in stream channel characteristics (vegetative cover and type, channel dimensions, etc.) can be anticipated to continue relative to the use of routes crossing streams and in riparian areas. Overall, Alternative B's reductions in stream crossings and miles of routes designated for OHV use in riparian areas would result in the lowest potential for ongoing OHV-related impacts to water quality and aquatic habitat in the TMA compared to the other alternatives.

Alternative C (Multiple Use Emphasis)

Under Alternative C, routes designated for OHV use would cross intermittent streams 175 times, a 28% (67-crossing) reduction from Alternative A. The Alternative C network would also have 890 ephemeral stream crossings along OHV routes, a 24% (277-crossing) reduction from Alternative A. In riparian areas, Alternative C would designate 0.3 miles of evaluated routes for OHV use, the same as Alternative A;

however, all 0.3 miles designated for OHV use would exclude the off-route OHV allowance, helping to protect riparian resources. Changes to flow regimes (alteration of aspects of the hydrograph for any particular reach) due to changes in stream channel characteristics (vegetative cover and type, channel dimensions, etc.) can be anticipated to continue relative to the use of routes crossing streams and in riparian areas. Overall, Alternative C's reductions in intermittent and ephemeral stream crossings and miles of routes designated for OHV use in riparian areas would result in lower potential for ongoing OHV-related impacts to water quality and aquatic habitat in the TMA compared to Alternatives A and D but higher potential than Alternative B.

Alternative D (Access Emphasis)

Under Alternative D, routes designated for OHV use would cross intermittent streams 202 times, a 17% (40-crossing) reduction from Alternative A. The Alternative D network would also have 1,011 ephemeral stream crossings along OHV routes, a 13% (156-crossing) reduction from Alternative A. In riparian areas, Alternative D would designate 0.3 miles of evaluated routes for OHV use, the same as Alternative A. Changes to flow regimes (alteration of aspects of the hydrograph for any particular reach) due to changes in stream channel characteristics (vegetative cover and type, channel dimensions, etc.) can be anticipated to continue relative to the use of routes crossing streams and in riparian areas. Overall, Alternative D's reductions in intermittent and ephemeral stream crossings would result in lower potential for ongoing OHV-related impacts to water quality and aquatic habitat in the TMA compared to Alternative A but higher potential than the other action alternatives.

Cumulative Effects

The CEAA for water resources is the TMA and the Gila River corridor extending to its confluence with the Colorado River west of the TMA. Water resources in the TMA consist primarily of intermittent and ephemeral streams thus the cumulative effects analysis is accordingly focused on routes crossing or proximate to streams and riparian areas that can contribute to erosion, sedimentation, pollution, and loss or non-native replacement of important streamside vegetative cover. Subsequent sediment transport downstream leads to degradation of water quality and habitat. Under Alternative A, routes available for OHV use cross intermittent streams 242 times and ephemeral streams 1,167 times. And under this alternative, 0.3 miles of currently used routes are in riparian areas. OHV and associated human use (e.g., camping, exploring, etc.) on routes crossing or proximate to streams and riparian areas contribute to erosion, sedimentation, pollution, and loss or non-native replacement of important streamside vegetative cover. Subsequent sediment transport and deposition in streams and riparian areas leads to degradation of water quality and habitat. Changes to flow regimes (alteration of aspects of the hydrograph for any particular reach) due to changes in stream channel characteristics (vegetative cover and type, channel dimensions, etc.) are occurring and can be anticipated to continue as use of these routes continues. These impacts, added to similar impacts on other jurisdictional lands within the TMA along the Gila River corridor, are contributing to a much-diminished river and habitat system.

Under the Action Alternatives B-D, reductions in routes designated for OHV use would result in corresponding reductions in ephemeral and intermittent crossings ranging from 13% and 17% respectively under Alternative D to 44% and 71% under Alternative B. Under all alternatives these reductions in routes designated for OHV use would provide for an incremental reduction in route-related water resource effects. Proposed route closures would provide for reclamation and seeding, effectively removing route footprints and reducing or eliminating the impact of these routes on water resources over time. In addition, the TMP's companion Implementation Guide would provide for mitigations to water resource impacts through structured operation and management guidance that includes signing, drainage structure maintenance, BMPs, monitoring and law enforcement to reduce/eliminate route proliferation, education, and interpretive programs to reduce route-related impacts, etc.

3.3.7 WILDERNESS AND LANDS WITH WILDERNESS CHARACTERISTICS

How would the travel network alternatives impact designated Wilderness areas?
How would the travel network alternatives impact the size, apparent naturalness, outstanding opportunities for solitude or primitive and unconfined recreation in lands managed by the BLM to maintain their wilderness characteristics or lands inventoried by the BLM as possessing wilderness characteristics that are managed for multiple uses?

3.3.7.1 Affected Environment

Within the TMA are two designated Wilderness areas, the Muggins Mountain Wilderness and the Eagletail Mountains Wilderness. These areas possess high degrees of naturalness and provide opportunities for solitude and primitive and unconfined recreation. They are closed to public OHV use, so any OHV use within them are considered unauthorized intrusions.

The TMA also has BLM-managed lands inventoried as having wilderness characteristics; they possess high degrees of naturalness, provide opportunities for solitude and primitive and unconfined recreation, and may have supplemental values (ecological, geological, or other scientific, educational, or historical values). They also contain at least 5,000 contiguous roadless acres or are of sufficient size to allow for their preservation and use in an unimpaired condition (BLM 2012b). The Yuma RMP identifies two units that are managed to maintain their wilderness characteristics: Little Horn Mountains and Palomas Mountains. The TMA also has five additional units that are inventoried as having wilderness characteristics but that are managed for multiple uses: Clanton Hills, East Clanton Hills, Face Mountain, Little Horn Mountains West, and Tank Mountains. See Table 11 and Table 12, below, showing each unit's acres and miles of evaluated routes.

Table 11: Units Managed to Maintain Wilderness Characteristics

Unit Name	Acres on BLM Lands	Miles of Evaluated Routes in Unit
Little Horn Mountains	35,700	9.1
Palomas Mountains	12,251	1.9

Table 12: Units Inventoried but Not Managed for Wilderness Characteristics

Unit Name	Acres on BLM Lands	Miles of Evaluated Routes in Unit
Clanton Hills	5,700	3.5
East Clanton Hills	12,677	8.7
Face Mountain	2,050	1.6
Little Horn Mountains West	10,217	8.6
Tank Mountains	10,410	3.8

3.3.7.2 Environmental Effects

Potential effects that OHV use may have on Wilderness, lands managed to maintain wilderness characteristics, and lands inventoried but not managed for wilderness characteristics include degradation or loss of naturalness, sufficient size, and outstanding opportunities for solitude and/or primitive and unconfined recreation, all key components of wilderness character. OHV use is not allowed in the Muggins Mountain or Eagletail Mountains Wilderness areas, so any impacts to these areas would be from unauthorized intrusions. Designations allowing ongoing OHV use in units identified for their wilderness characteristics (either managed to maintain those characteristics or not) may contribute to degradation or loss of these components as a result of OHV-related impacts such as vehicle noise, wheel tracks,

dispersed camp sites, resource damage on or along travel routes, and expanded human presence. OHV access and the presence of OHVs may also lead to a loss of solitude and opportunity to experience primitive recreation. Resource damage can occur along routes from parking, passing, staging, authorized roadside camping, fire-wood gathering, etc. resulting in degradation of naturalness; however, users are expected to comply with 43 CFR 8341.1 and not operate an OHV "In a manner causing, or likely to cause significant, undue damage to or disturbance of the soil, wildlife, wildlife habitat, improvements, cultural, or vegetative resources or other authorized uses of the public lands." Designating routes as OHV-Closed and earmarking routes for decommissioning and reclamation could help reduce the overall network footprint within or near units identified with wilderness characteristics. Also, travel networks that provide for a variety of OHV opportunities could help reduce OHV user inclination to travel off-route and degrade natural character. Continuation of OHV use on designated routes would confine soil and vegetation disturbance caused by motor vehicles to those routes and may result in no additional change to the natural character of the units. TMP implementation actions such as placement of barriers for closed routes, signing, and route maintenance could result in localized disturbances that would temporarily contribute to degradation of naturalness (see the TMP Implementation Guide).

Figure 29 and Figure 30 show the miles of evaluated routes in units identified as possessing wilderness characteristics. For a unit-by-unit breakdown of alternative designations, see Appendix B.

Figure 29: Miles of Evaluated Routes in Units Managed to Maintain Wilderness Characteristics

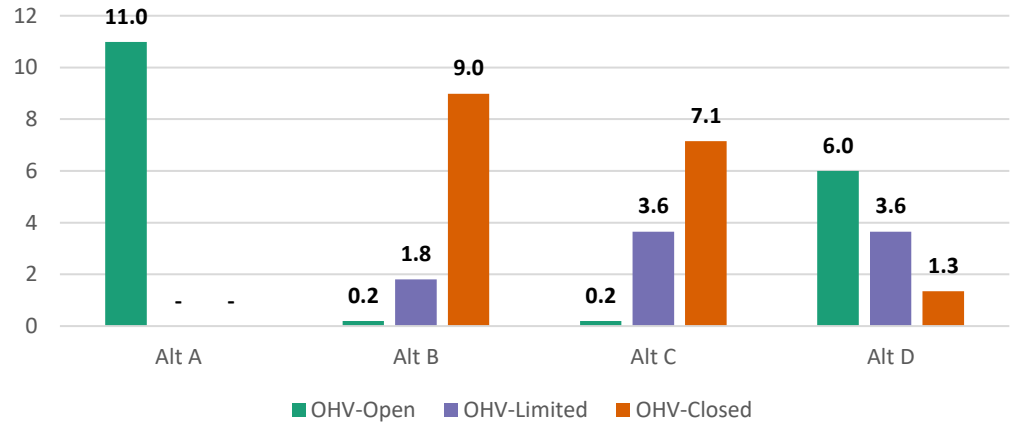
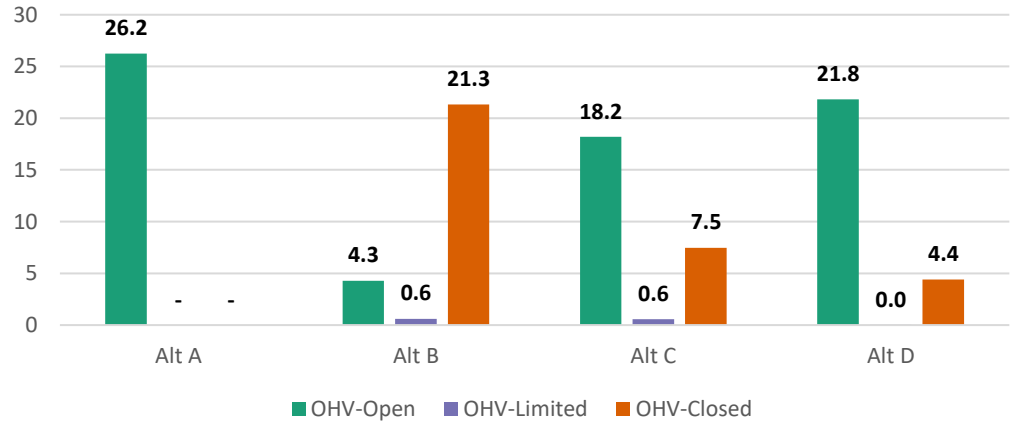


Figure 30: Miles of Evaluated Routes in Units Inventoried but Not Managed for Wilderness Characteristics



Alternative A (Current Management)

Under Alternative A, all 11.0 miles of evaluated routes in units managed to maintain wilderness characteristics and all 26.2 miles of evaluated routes in units identified but not managed for wilderness characteristics would remain available for OHV use, which may result in dust, noise, and user conflicts (i.e., OHV vs. primitive recreation users), potentially diminishing these areas' characteristics of naturalness and potential for solitude and primitive recreation. Impacts to Wilderness areas and units identified for wilderness characteristics within the TMA would reflect a continuation of current management.

Alternative B (Resource Protection Emphasis)

Along routes adjacent to designated Wilderness, Alternative B would help clarify the public OHV route network, minimizing potential impacts from unauthorized intrusions into Wilderness areas. Alternative B would designate 2.0 miles of evaluated routes for OHV use in units managed to maintain wilderness characteristics, an 82% (9-mile) reduction from Alternative A; of the closed routes in these units under this alternative, 6.2 miles would be earmarked for reclamation. In units identified but not managed for wilderness characteristics, this alternative would designate 4.9 miles for OHV use, an 81% (21.3-mile) reduction from Alternative A; of the closed routes in these units, 16.8 miles would be earmarked for reclamation. Alternative B's OHV route closures in units with wilderness characteristics, particularly for those routes earmarked for reclamation, would reduce the impacts of OHV travel on the fundamental components of wilderness characteristics. Overall, Alternative B is not expected to impact designated Wilderness areas, and this alternative's potential for OHV use-related impacts noted above to wilderness characteristics of units managed to maintain those characteristics and units identified but not managed for those characteristics would be lower than all other alternatives.

Alternative C (Multiple Use Emphasis)

Along routes adjacent to designated Wilderness, Alternative C would help clarify the public OHV route network, minimizing potential impacts from unauthorized intrusions into Wilderness areas. Alternative C would designate 3.8 miles of evaluated routes for OHV use in units managed to maintain their wilderness characteristics, a 65% (7.1-mile) reduction from Alternative A; of the closed routes in these units under this alternative, 6.2 miles would be earmarked for reclamation. In units identified but not managed for wilderness characteristics, this alternative would designate 18.8 miles for OHV use, an 28% (7.4-mile) reduction from Alternative A; of the closed routes in these units, 3.6 miles would be earmarked for reclamation. Alternative C's OHV route closures in units with wilderness characteristics, particularly for those routes earmarked for reclamation, would reduce the impacts of OHV travel on the fundamental components of wilderness characteristics. Overall, Alternative C is not expected to impact designated Wilderness areas, and this alternative's potential for OHV use-related impacts noted above to wilderness characteristics of units managed to maintain those characteristics and units identified but not managed for those characteristics would be lower than Alternatives A and D but higher than Alternative B.

Alternative D (Access Emphasis)

Along routes adjacent to designated Wilderness, Alternative D would help clarify the public OHV route network, minimizing potential impacts from unauthorized intrusions into Wilderness areas. Alternative D would designate 9.6 miles of evaluated routes for OHV use in units managed to maintain their wilderness characteristics, a 13% (1.4-mile) reduction from Alternative A; of the closed routes in these units under this alternative, 1.3 miles would be earmarked for reclamation. In units identified but not managed for these characteristics, this alternative would designate 21.8 miles for OHV use, a 17% (4.4-mile) reduction from Alternative A; of the closed routes in these units, 0.5 miles would be earmarked for reclamation. Alternative D's OHV route closures in units with wilderness characteristics, particularly for those routes earmarked for reclamation, would reduce the impacts of OHV travel on the fundamental components of

wilderness characteristics. Overall, Alternative D is not expected to impact designated Wilderness areas, and this alternative's potential for OHV use-related impacts noted above to wilderness characteristics of units managed to maintain those characteristics and units identified but not managed for those characteristics would be lower than Alternative A but higher than the other action alternatives.

Cumulative Effects

The CEAA for Wilderness and lands with wilderness characteristics is the TMA plus other BLM lands in the surrounding southwest Arizona region (see Recreation Use in Section 3.2) that contain wilderness characteristics. BLM lands beyond the TMA in this region include 314,964 acres of Wilderness, 211,789 acres of lands managed to maintain wilderness characteristics, and 223,929 acres of lands identified but not managed for wilderness characteristics.

Under Alternative A, all 11.0 miles of evaluated routes in units managed for wilderness characteristics and all 26.2 miles of evaluated routes in units identified but not managed for wilderness characteristics would remain available for OHV use, resulting in dust, noise, and user conflicts. (i.e., OHV vs. primitive recreation users). Impacts to wilderness characteristics units within the TMA (i.e., loss of visitor opportunity to experience naturalness, solitude, and primitive recreation) would add to similar impacts in other wilderness characteristics areas where OHV use occurs throughout the region.

Under the Action Alternatives B-D, routes designated for OHV use in lands with wilderness characteristics areas within the TMA would be reduced, ranging from 13% in units managed to maintain those characteristics and 17% in units identified but not managed for wilderness characteristics under Alternative D to 82% and 81% respectively under Alternative B. In addition, several miles of current OHV-Open routes would be decommissioned and earmarked for reclamation, returning the landscape in the area of these routes to its natural character over time. The TMP's companion Implementation Guide would provide for additional protections to lands with wilderness characteristics through structured operation and management guidance that includes signing, monitoring, and law enforcement to reduce/eliminate route proliferation, education, and interpretive programs, etc.

3.3.8 WILDLIFE: SPECIAL STATUS TERRESTRIAL SPECIES

How might disturbance and habitat fragmentation from use of the proposed travel network alternatives and the presence of travel routes impact special status wildlife?

3.3.8.1 Affected Environment

ESA-Listed Terrestrial Animal Species

The terrestrial wildlife species below, listed as Threatened or Endangered under the ESA, have the potential to occur in the TMA.

Birds

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

The southwestern willow flycatcher is a small neotropical migratory bird that exclusively nests in dense tree and shrub riparian habitats. It was listed as endangered on February 27, 1995 (USFWS 1995). The historical range of the species included Arizona, California, Colorado, New Mexico, Texas, and Utah. The current range is similar but the quantity of suitable habitat within that range has been greatly reduced. Although often considered to use only cottonwood-willow associations, it is known to nest in various exotic species in the southwest, such as tamarisk and Russian olive. In general, its distribution follows its riparian habitat: relatively small, isolated, widely dispersed locales. The southwestern willow flycatcher breeds in patchy to dense riparian habitats. Occupied sites usually consist of patch interiors of dense

vegetation or an aggregate of dense patches interspersed with openings (USFWS 2002). Threats to the southwestern willow flycatcher are numerous and complex but the primary factors include habitat loss and modification, invasive species in breeding habitats, brood parasitism, vulnerability of small population numbers, stresses during migration and in wintering habitats. For more details on habitat, threats, and trends, see the Southwestern Willow Flycatcher Recovery Plan (USFWS 2002).

No designated critical habitat exists on BLM- or Reclamation-managed lands within the TMA, though the species has the potential to occur within the TMA during breeding season. Within the TMA, 93 acres of potential rail habitat exists on BLM-managed lands or Reclamation lands on which the BLM manages recreation, but zero miles of currently used routes are in this habitat. Because zero miles of currently used routes are in southwestern willow flycatcher potential habitat, the species will not be analyzed further.

Western Yellow-Billed Cuckoo (*Coccyzus americanus*)

The western yellow-billed cuckoo was listed as threatened on October 3, 2014 (USFWS 2014). It is a riparian-obligate species found intermittently throughout the western United States that nests in low to moderate elevation deciduous riparian woodlands (Halterman et al. 2016). The species' use of an area is tied to the area's habitat condition and food resources. Habitat conditions through much of its range are dynamic and may change depending on environmental conditions, vegetation growth, tree regeneration, plant maturity, stream dynamics, and sediment movement and deposition; likewise, the cuckoo's main food resources, insects, also vary in abundance and distribution. The variability in habitat conditions and food availability may cause the cuckoo to move between areas in its wintering or breeding grounds (USFWS 2021). Much of the western yellow-billed cuckoo riparian habitat has been converted to farmland and housing, leading to population declines. The cuckoo was listed due to loss of riparian habitat from agricultural use, water use, road development, and urban development. Ongoing threats include habitat destruction and degradation from the invasion of tamarisk, which is exacerbated by livestock use of riparian areas, water withdrawals, and human development (Halterman et al. 2016).

No designated critical habitat exists within the TMA. Potential cuckoo habitat on BLM-managed lands or Reclamation lands on which the BLM manages recreation in the TMA totals 72 acres, and zero miles of currently used routes are in this habitat. Because zero miles of currently used routes are in western yellow-billed cuckoo potential habitat, the species will not be analyzed further.

Yuma Ridgway's Rail (*Rallus obsoletus yumanensis*)

The Yuma Ridgway's rail is a marsh bird the size of a chicken, with long legs and a short tail. It was listed as endangered on March 11, 1967 (USFWS 1967).

Historically, cattail and bulrush marshes in the Colorado River Delta were likely the primary habitat for the species, but the virtual elimination of freshwater flows to the Delta due to river diversions for agriculture and municipal uses destroyed that habitat. Current habitats are primarily human-made or formed behind dams and diversions on the Lower Colorado River. Habitat includes freshwater marshes dominated by cattail and bulrush with a mix of riparian tree and shrub species along the marshes' shorelines. Optimum rail habitat consists of a mosaic of emergent vegetation, shallow open water areas either as channels or pools with minimal daily water fluctuation, open dry ground between water, vegetation, or mash edge for foraging and movement, and a band of riparian vegetation providing cover and buffer areas on the higher ground along the fringes of the marsh (USFWS 2009). The Yuma Ridgway's rail likely nests on dry hummocks or in small shrubs among dense cattails or bulrushes along the edges of shallow ponds in freshwater marshes with stable water levels (NSE 2024). The greatest threat to the species is permanent loss of its habitat areas. Other threats include floodplain changes, human activities, environmental contaminants, and connectivity reductions between core habitat areas (USFWS 2009).

Within the TMA, 46 acres of potential rail habitat exists in marshes found along the margins of the lower Gila River and wetted floodplain on BLM-managed lands or Reclamation lands on which the BLM manages recreation. Just 0.2 miles of evaluated routes are in this habitat.

Mammals

Sonoran Pronghorn (*Antilocapra americana sonoriensis*)

The Sonoran pronghorn was listed as endangered on March 11, 1967 (USFWS 1967). Its habitat is characterized by broad alluvial valleys separated by block-faulted mountains. The valleys are partially filled with clay, silt, and alluvium deposited from sheet erosion and ephemeral stream, and are fairly level, with drainage through a braided wash system. These wash systems support vegetation that is more structurally diverse than their surroundings regardless of vegetation type, and they provide thermal cover and retain quality forage longer than other areas; the washes are especially important during the hot and dry season. Pronghorn prefer gentle slopes and hills and avoid rugged slopes and mountains. Sonoran pronghorn need large expanses of habitat due to the patchy precipitation throughout its range resulting in continuously shifting distribution of forage and water. The expanses of habitat required need to be free of barriers so pronghorn can move freely between areas as conditions change (USFWS 2016).

Sonoran pronghorn are found exclusively in the Sonoran desertscrub biome and select areas less than 10 kilometers (6.2 miles) from water. Historically, the Gila River was one that flowed within Sonoran pronghorn habitat and was potentially important in the survival of the species, part of a greenbelt that may have provided water and green forage during times of the year with limited availability otherwise. With the exception of the Colorado River, the rivers forming this greenbelt are now dry or ephemeral and support little to no native riparian vegetation usable as forage by the Sonoran pronghorn. They have been unable to reach the Gila River since the construction of Interstate 8 and State Route 85. Other natural water sources include playas, springs, seeps, tinajas, and ephemeral pools created by runoff from heavy rain. Man-made water sources include charcos, guzzlers, craters created by military activities, and wildlife water catchments (USFWS 2016).

The Sonoran pronghorn's population decline is primarily attributed to loss of habitat, habitat fragmentation, climate change, and drought (NSE 2024). Habitat attributes identified by the Sonoran pronghorn Recovery Team include amount of habitat, habitat connectivity, forage quality, succulent foods, availability of water, access to water, and a variety of vegetation communities and structures (USFWS 2016).

Sonoran pronghorn potential habitat in the TMA includes 20,549 acres on BLM-managed lands or Reclamation lands on which the BLM manages recreation, and 59.6 miles of currently used routes are in this habitat.

Table 13: ESA-Listed Terrestrial Wildlife Species

Species	Federal Status	Habitat in TMA	Acres of Habitat on BLM	Miles of Designated Routes within Habitat
Birds				
Southwestern willow flycatcher (*Empidonax traillii extimus*)	Endangered	Potential	93	0.0
Western yellow-billed cuckoo (*Coccyzus americanus*)	Threatened	Potential	72	0.0
Yuma Ridgway's rail (*Rallus obsoletus yumanensis*)	Endangered	Potential	46	0.2
Mammals				
Sonoran pronghorn (*Antilocapra americana sonoriensis*)	Endangered	Potential	20,549	59.6

BLM Sensitive Animal Species

The BLM Sensitive wildlife species in Table 14 have habitat in the TMA that could potentially be impacted by evaluated routes.

Table 14: BLM Sensitive Terrestrial Wildlife Species

Species	Habitat[8]	Acres of Habitat on BLM	Miles of Evaluated Routes within Habitat
Birds[9]			
Golden eagle (*Aquila chrysaetos*)	Potential to occur year-round in the TMA. Suitable nesting habitat includes open and semi-open country such as prairies, sagebrush, arctic and alpine tundra, savannah or sparse woodland, and barren areas. Nesting habitat includes rock ledges of cliffs, large trees, rock outcroppings, and large trees. The species forages over most vegetation types.	46	0.1
LeConte's thrasher (*Toxostoma lecontei*)	Habitat includes sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills having a high proportion of saltbush or shadscale or cylindrical cholla cactus. Only 5 acres of habitat exist on BLM-managed lands in the TMA and no routes intersect this habitat, so the species is unlikely to be affected by any of the route network alternatives.	5	0.0
Mammals			
California leaf-nosed bat (*Macrotus californicus*)	Suitable habitat includes lowland desert scrub. The species may roost in caves and mines.	54	0.7

[8] Habitat descriptions come from BLM specialists and NSE 2024.
[9] BLM Sensitive bird species are analyzed with other migratory bird species collectively in Section 3.3.9.0

Species	Habitat[8]	Acres of Habitat on BLM	Miles of Evaluated Routes within Habitat
Reptiles			
Sonoran Desert tortoise (*Gopherus morafkai*)	Occurs in upland habitats of Sonoran desertscrub in areas with rocky outcrops and palo verde-saguaro cactus communities and ecotonal desert grasslands. It generally occurs along rocky slopes or bajadas of desert mountain ranges. Low density populations may occur along alluvial fans and in intermountain valleys where desert washes provide suitable habitat and shelter. The TMA contains both Category 2 and Category 3 habitat. Goals for Category 2 habitat are to maintain stable, viable populations and halt further declines in tortoise habitat values. Goals for Category 3 habitat areas are to limit tortoise habitat and population declines to the extent possible by mitigating impacts.	Category 2: 152,545	Category 2: 133.2
		Category 3: 55,586	Category 3: 136.5

The species listed in Table 15 are likely to be occur in the TMA but no formal habitat data exists and the species are unlikely to be affected by this TMP.

Table 15: BLM Sensitive Terrestrial Species Likely Present but No Formal Habitat Data Exists

Species	Habitat[10]
Birds	
Ferruginous hawk (*Buteo regalis*)	This species is known to inhabit grasslands, agricultural areas, shrub lands, and the periphery of pinyon-juniper forests, breeding in semiarid open country, typically near prairie dog colonies.
Gilded flicker (*Colaptes auratus*)	Habitat includes stands of giant cactus, Joshua tree, and riparian groves of cottonwood and tree willows in warm desert lowlands and foothills.
Peregrine falcon (*Falco peregrinus*)	Habitat includes open areas from tundra, moorlands, steppe, and seacoasts, especially with suitable nesting cliffs, to mountains, open forested regions, and human population centers. Nests are often on ledges or holes on the faces of rocky cliffs or crags, usually with a sheltering overhang.
Western burrowing owl (*Athene cunicularia hypugaea*)	Suitable nesting habitat includes small mammal burrows at sites that occur in a variety of shrub-dominated habitats, often in sparsely vegetated areas. The species forages over open grassland and shrubland.
Invertebrates	
Monarch (*Danaus plexippus*)	Monarchs tend to be associated with riparian habitat; they rely on milkweed for their reproductive success, so they may occur in sandy washes that support the plant.

[10] Habitat descriptions come from BLM specialists and NSE 2024.

Species	Habitat[10]
Reptiles	
Flat-tailed horned lizard (*Phrynosoma mcallii*)	Habitat includes sandy desert flatlands with sparse vegetation and low plant species diversity. The species often occurs where surface soils contain loose or windblown sand, but it rarely occurs on dunes. In Arizona, it is most abundant in areas with galleta grass, sandy soil, and many active black harvester ant nests.

3.3.8.2 Environmental Effects

During the route evaluation process, the IDT considered special status wildlife species and their habitat in addressing designation criterion 8342.1 (b): "Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect Endangered or Threatened species and their habitats." This attention to special status wildlife species and their habitat as a potential resource conflict is noted in the route reports and informed the IDT's formulation of alternative route networks. The action alternatives include measures to minimize impacts to special status wildlife species and their habitats, such as proposing routes for closure or seasonal limitations. (A sample route report is found in Appendix C. The full set of route reports can be found on this project's ePlanning website.)

OHV and recreation use have been shown to have adverse effects on special status wildlife species and their habitats. Such effects as direct mortality from encounters with OHVs or recreational shooting that results in deliberate targeting of animals can occur. Recreation users traveling off designated routes (e.g., by foot, OHV, horse) can lead to the alteration or destruction of foraging, burrowing, or nesting habitats. Because of this, travel routes adjacent to nesting, burrowing, or riparian areas are of particular concern. Even when users remain on established routes or previously disturbed areas, disturbance from other access-related recreation uses can cause behavioral changes resulting in flight and vigilance, and disruption or displacement of breeding, nesting, and foraging activities (Ouren et al. 2007; Brooks and Lair 2005).

An example of an indirect impact from OHV and recreation use that can alter behavior is the noise produced, which can negatively impact birds by affecting nest-site selection or masking biologically important sounds, including mating calls or predator and prey sounds (Ortega 2012). Many animal species also respond to human presence in the same manner they respond to predator presence. This results in increased expenditures of time and energy towards avoiding humans and decreased expenditures of time and energy towards beneficial activities like foraging or caring for young. These behavioral changes can cause declines in abundance and occupancy, reduced reproductive success, and altered species richness and community composition (Larson et al. 2016). Other indirect effects include habitat fragmentation from road networks or other development, loss of woody habitat from firewood cutting, loss of hydrologic function in riparian habitat areas from travel route compaction, and the introduction of noxious weeds and invasive species (from OHV and recreation-related impacts to soils), which can outcompete native vegetation used for foraging, security and thermal cover, nesting, etc.

TMP implementation activities that can affect special status animals and their habitats include road maintenance (grading, installing water control structures, etc.), route reclamation (including ripping the ground and planting seed, grading/recontouring), or installing signs or fencing or barriers (digging post holes). Seeding and planting on closed routes can also accelerate reclamation and help to reestablish habitat. If implementation is proposed that falls outside of the previously disturbed area, additional site-specific NEPA may be required before the activity could occur[11].

[11] Some actions (e.g., sign and kiosk installation) are designated as CXs (BLM 2008a).

Route networks with open or limited designations can contribute to the perpetuation of OHV use-related effects as discussed above. Conversely, closed and limited designations that prohibit OHV use wholly or in part can reduce or eliminate the perpetuation of the OHV-use effects, thereby benefiting wildlife species.

Figure 31 and Figure 32 show the miles of evaluated routes in T&E terrestrial wildlife species habitats.

Figure 31: Miles of Evaluated Routes in Yuma Ridgway's Rail Habitat

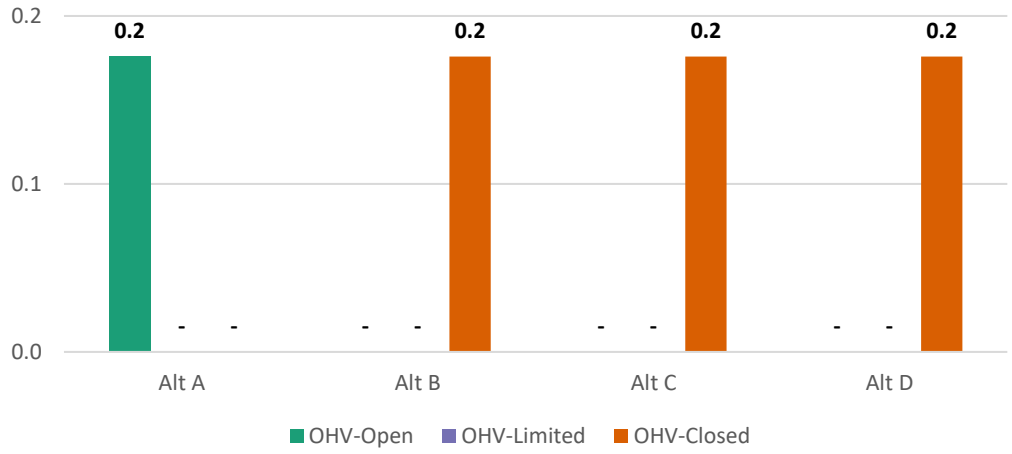


Figure 32: Miles of Evaluated Routes in Sonoran Pronghorn Habitat

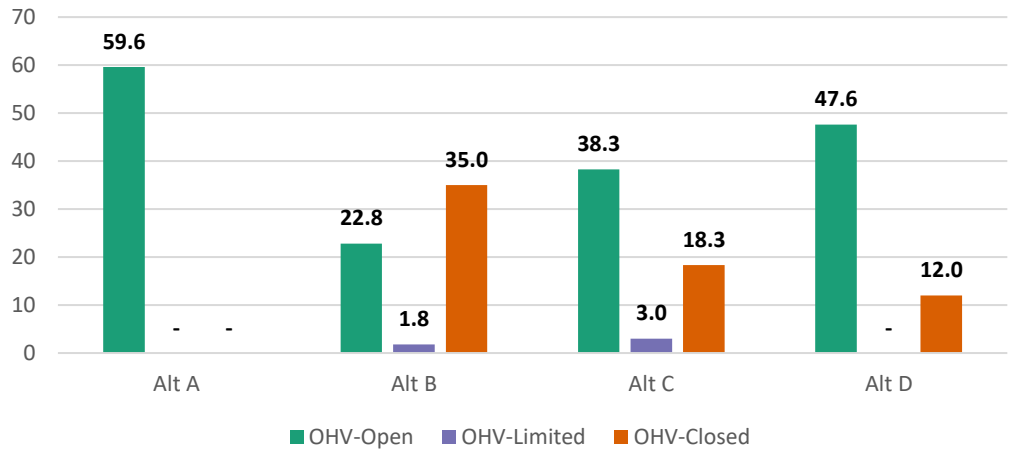


Figure 33 – Figure 35 show the miles of evaluated routes in BLM Sensitive terrestrial wildlife species habitats.

Figure 33: Miles of Evaluated Routes in Golden Eagle Habitat

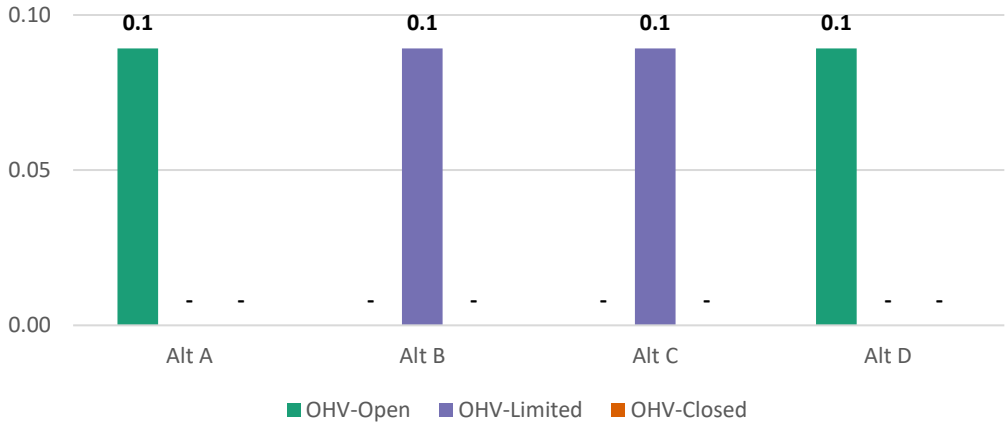


Figure 34: Miles of Evaluated Routes in California Leaf-Nosed Bat Habitat

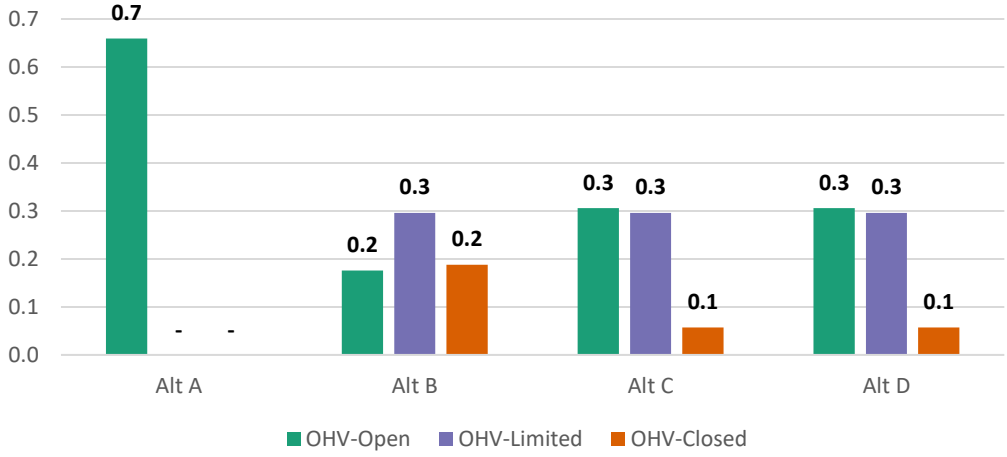


Figure 35: Miles of Evaluated Routes in Sonoran Desert Tortoise Category 2 Habitat

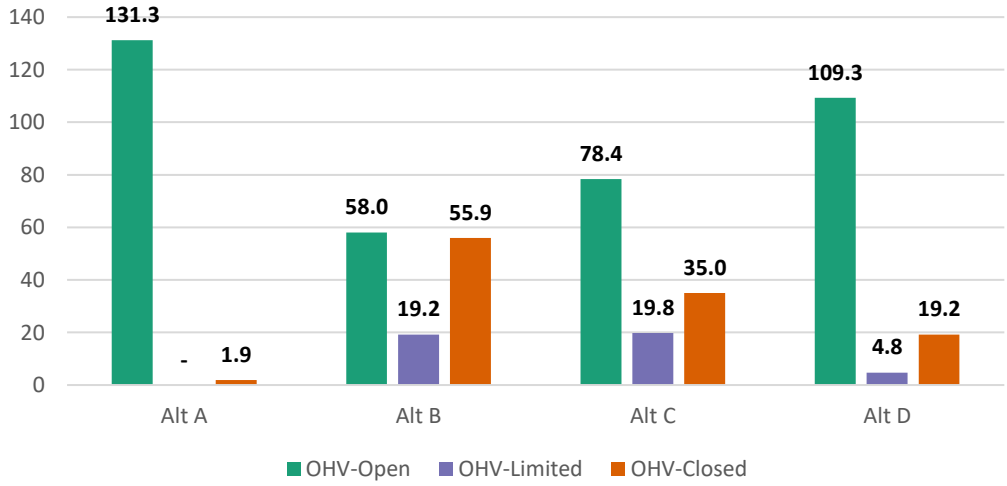
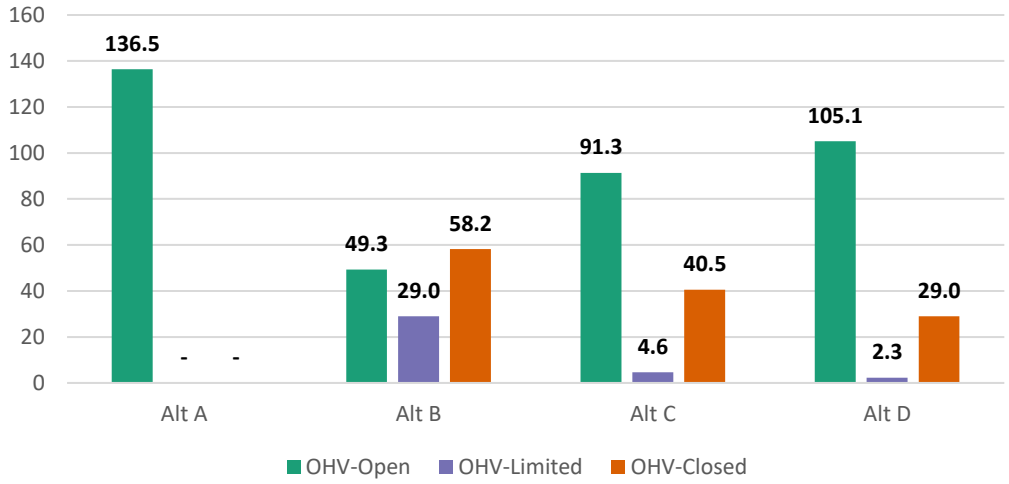


Figure 36: Miles of Evaluated Routes in Sonoran Desert Tortoise Category 3 Habitat



Alternative A (Current Management)

Under Alternative A, all routes in T&E terrestrial species (Yuma Ridgway's rail and Sonoran pronghorn) habitats would remain available for OHV use. For BLM Sensitive species, all routes in golden eagle habitat, California leaf-nosed bat habitat, and Sonoran desert tortoise Category 3 habitat would remain available for OHV use as well; in Sonoran desert tortoise Category 2 habitat, 99% of the miles would remain available for OHV use. The effects described above from the evaluated routes and related use and maintenance would continue to occur on existing routes. Impacts to the TMA's special status terrestrial species from the routes and ongoing related use (e.g., direct mortality, injury, behavioral modifications, habitat alteration, habitat fragmentation, etc.) would reflect a continuation of current management.

Alternative B (Resource Protection Emphasis)

Alternative B would see reductions in route miles designated for OHV use in most special status terrestrial species habitat in the TMA. For T&E species, this includes an elimination of routes available for OHV use in Yuma Ridgway's rail habitat (-0.2 miles) and a 59% reduction (-35.0 miles) in Sonoran pronghorn habitat. For BLM Sensitive species, this includes reductions in California leaf-nosed bat habitat (-0.2 miles, a 29% reduction), Sonoran desert tortoise Category 2 habitat (-54.0 miles, a 59% reduction), and Sonoran desert tortoise Category 3 habitat (-58.2 miles, a 43% reduction). Under this alternative, the 0.1 miles of evaluated routes in golden eagle habitat would be designated for OHV use, the same as Alternative A.

The effects described above from travel routes and related use and maintenance would continue to occur on those routes designated for OHV use. Overall, Alternative B would have the lowest potential of any alternative for OHV use-related impacts to special status terrestrial wildlife habitat within the TMA.

Alternative C (Multiple Use Emphasis)

Alternative C would reduce route miles designated for OHV use in most special status terrestrial species habitat in the TMA. For T&E species, this includes an elimination of routes available for OHV use in Yuma Ridgway's rail habitat (-0.2 miles) and a 31% reduction (-18.3 miles) in Sonoran pronghorn habitat. For BLM Sensitive species, this includes reductions in California leaf-nosed bat habitat (-0.1 miles, a 14% reduction), Sonoran desert tortoise Category 2 habitat (-33.0 miles, a 25% reduction), and Sonoran desert tortoise Category 3 habitat (-40.5 miles, a 30% reduction). Under this alternative, the 0.1

miles of evaluated routes in golden eagle habitat would be designated for OHV use, the same as Alternative A.

The effects described above from travel routes and related use and maintenance would continue to occur on those routes designated for OHV use. Overall, Alternative C would have lower potential than Alternatives A and D but higher potential than Alternative B for OHV use-related impacts to special status terrestrial wildlife habitat within the TMA.

Alternative D (Access Emphasis)

Alternative D would reduce route miles designated for OHV use in most special status terrestrial species habitat in the TMA. For T&E species, this includes an elimination of routes available for OHV use in Yuma Ridgway's rail habitat (-0.2 miles) and a 20% reduction (-12.0 miles) in Sonoran pronghorn habitat. For BLM Sensitive species, this includes reductions in California leaf-nosed bat habitat (-0.1 miles, a 14% reduction), Sonoran desert tortoise Category 2 habitat (-17.2 miles, a 13% reduction), and Sonoran desert tortoise Category 3 habitat (-29.0 miles, a 21% reduction). Under this alternative, the 0.1 miles of evaluated routes in golden eagle habitat would be designated for OHV use, the same as Alternative A.

The effects described above from travel routes and related use and maintenance would continue to occur on those routes designated for OHV use. Overall, Alternative D would have lower potential than Alternative A but higher potential than the other action alternatives for OHV use-related impacts to special status terrestrial wildlife habitat within the TMA.

Cumulative Effects

The CEAA for special status terrestrial wildlife species extends beyond the TMA into similar adjoining habitat used by these species, as described in Section 3.3.8.1. Impacts on special status wildlife from this TMP would add to potential disturbance from other actions within the TMA such as those listed in Section 3.2 (e.g., renewable energy development projects).

Under Alternative A, all routes in T&E terrestrial species (Yuma Ridgway's rail and Sonoran pronghorn) habitats would remain available for OHV use. For BLM Sensitive species, all routes in golden eagle habitat, California leaf-nosed bat habitat, and Sonoran desert tortoise Category 3 habitat would remain available for OHV use; in Sonoran desert tortoise Category 2 habitat, 99% of the miles would remain available for OHV use. Impacts to the TMA's special status terrestrial species from routes and ongoing related use (e.g., direct mortality, injury, behavioral modifications, habitat alteration, habitat fragmentation, etc.) would continue to occur. These effects, when added to effects resulting from surface and habitat disturbing development, recreation, etc. on other jurisdictional lands within and adjacent to the TMA would continue to incrementally hinder habitat and species restoration efforts.

Under the Action Alternatives B-D, proposed reductions in routes available for OHV use along with route closures would accordingly reduce impacts to special status terrestrial species and habitats relative to each alternative network's proposed closures on the TMA's public lands. The TMP's companion Implementation Guide with its structured route network operation and management guidelines would help mitigate remaining route-related habitat and species impacts through such measures as signing to keep users on designated routes, BMPs, interpretive and educational programs, law-enforcement, etc. Overall, each of the proposed alternatives would result in incremental reductions in impacts when added to other ongoing jurisdictional actions and activities in the CEAA.

3.3.9 WILDLIFE: GENERAL WILDLIFE AND MIGRATORY BIRDS

How might disturbance and habitat fragmentation from use of the proposed travel network alternatives and the presence of travel routes impact general wildlife species and migratory birds?

3.3.9.1 Affected Environment

The TMA provides habitat for a variety of T&E, BLM Sensitive, big game, migratory birds, and other general wildlife species. Special status species are considered in Section 3.3.7. The affected environment for big game, migratory birds, and other general wildlife is discussed below. Although the BLM is responsible for managing and protecting *wildlife habitat* on BLM-managed public lands within the TMA, the Arizona Game and Fish Department (AZGFD) generally retains management responsibility for *wildlife*. For analysis of general wildlife, see the discussion of biotic communities in Section 3.3.3. The species associated with each biotic community are listed in Table 16 and Table 17, below. Species listed in these tables do not represent all species found within the TMA but only those for which data are available.

Table 16: General Wildlife Associated with Lowland Sonoran Desertscrub Communities

Amphibians	• Couch's spadefoot (*Scaphiopus couchii*) • Lowland burrowing treefrog (*Smilisca fodiens*) • Sinaloan narrow-mouthed toad (*Gastrophryne mazatlanensis*) • Sonoran desert toad (*Incilius alvarius*) • Sonoran green toad (*Anaxyrus retiformis*)
Birds	• Bald eagle (*Haliaeetus leucocephalus*) • Bendire's thrasher (*Toxostoma bendirei*) • Black-tailed gnatcatcher (*Polioptila melanura*) • California black rail (*Laterallus jamaicensis coturniculus*) • Costa's hummingbird (*Calypte costae*) • Gambel's quail (*Callipepla gambelii*) • Golden eagle (*Aquila chrysaetos*) • LeConte's thrasher (*Toxostoma lecontei*) • Lesser nighthawk (*Chordeiles acutipennis*) • Loggerhead shrike (*Lanius ludovicianus*) • Mourning dove (*Zenaida macroura*) • Ridgway's rail (*Rallus obsoletus yumanensis*) • Southwestern willow flycatcher (*Empidonax traillii extimus*) • Verdin (*Auriparus flaviceps*) • Western screech-owl (*Megascops kennicottii*) • Western yellow-billed cuckoo (*Coccyzus americanus*) • White-winged dove (*Zenaida asiatica*)
Invertebrates	• Eastern desertsnail (*Eremarionta rowelli*) • Phoenix talussnail (*Sonorella allynsmithi*)
Mammals	• Antelope jackrabbit (*Lepus alleni*) • California leaf-nosed bat (*Macrotus californicus*) • Canyon bat (*Parastrellus Hesperus*) • Cave myotis (*Myotis velifer*) • Desert bighorn sheep (*Ovis canadensis mexicana*) • Desert cottontail (*Sylvilagus audubonii*) • Greater western mastiff bat (*Eumops perotis californicus*) • Harris's antelope squirrel (*Ammospermophilus harrisii*) • Lesser long-nosed bat (*Leptonycteris yerbabuenae*) • Mexican free-tailed bat (*Tadarida brasiliensis*)

	• Mule deer (*Odocoileus hemionus*) • Pallid bat (*Antrozous pallidus*) • Pocketed free-tailed bat (*Nyctinomops femorosaccus*) • Sonoran pronghorn (*Antilocapra americana sonoriensis*) • Western red bat (*Lasiurus frantzii* (*Lasiurus blossevillii*)) • Western yellow bat (*Lasiurus xanthinus*)
Reptiles	• Arizona mud turtle (*Kinosternon arizonense*) • Common chuckwalla (*Sauromalus ater*) • Desert iguana (*Dipsosaurus dorsalis*) • Flat-tailed horned lizard (*Phrynosoma mcallii*) • Gila monster (*Heloderma suspectum*) • Goode's horned lizard (*Phrynosoma goodei*) • Mohave fringe-toed lizard (*Uma scoparia*) • Mohave rattlesnake (*Crotalus scutulatus*) • Mohawk Dunes fringe-toed lizard (*Uma thurmanae*) • Resplendent shovel-nosed snake (*Sonora annulate*) • Sidewinder (*Crotalus cerastes*) • Sonoran collared lizard (*Crotaphytus nebrius*) • Sonoran coralsnake (*Micruroides euryxanthus*) • Sonoran desert tortoise (*Gopherus morafkai*) • Speckled rattlesnake (*Crotalus pyrrhus* (Tinajas Altas Population)) • Three-lined boa (*Lichanura trivirgata*) • Yuman desert fringe-toed lizard (*Uma rufopunctata*)

Table 17: General Wildlife Associated with Upland Sonoran Desertscrub Communities

Amphibians	• American bullfrog (*Lithobates catesbeianus*) • Arizona toad (*Anaxyrus microscaphus*) • Couch's spadefoot (*Scaphiopus couchii*) • Lowland burrowing treefrog (*Smilisca fodiens*) • Lowland leopard frog (*Rana yavapaiensis*) • Red-spotted toad (*Anaxyrus punctatus*) • Sinaloan narrow-mouthed toad (*Gastrophryne mazatlanensis*) • Sonoran desert toad (*Incilius alvarius*) • Sonoran green toad (*Anaxyrus retiformis*)
Birds	• Bald eagle (*Haliaeetus leucocephalus*) • Black-throated sparrow (*Amphispiza bilineata*) • Brown-crested flycatcher (*Myiarchus tyrannulus*) • Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) • Cactus wren (*Campylorhynchus brunneicapillus*) • Canyon towhee (*Melozone fusca*) • Common poorwill (*Phalaenoptilus nuttallii*) • Costa's hummingbird (*Calypte costae*) • Curve-billed thrasher (*Toxostoma curvirostre*) • Elf owl (*Micrathene whitneyi*) • Gila woodpecker (*Melanerpes uropygialis*) • Gilded flicker (*Colaptes chrysoides*) • Golden eagle (*Aquila chrysaetos*) • Greater roadrunner (*Geococcyx californianus*) • Lucy's warbler (*Leiothlypis luciae*) • Rufous-winged sparrow (*Peucaea carpalis*) • Song sparrow (*Melospiza melodia*) • Southwestern willow flycatcher (*Empidonax traillii extimus*)

	• Western purple martin (*Progne subis arboricola*) • Western yellow-billed cuckoo (*Coccyzus americanus*)
Fish	• Longfin dace (*Agosia chrysogaster*) • Sonoyta pupfish (*Cyprinodon eremus*)
Invertebrates	• Bylas springsnail (*Pyrgulopsis arizonae*) • Gila tryonia (*Tryonia gilae*) • Montezuma Well springsnail (*Pyrgulopsis montezumensis*) • Phoenix talussnail (*Sonorella allynsmithi*) • Quitobaquito tryonia (*Tryonia quitobaquitae*) • Superstition Mountains talussnail (*Sonorella superstitionis*)
Mammals	• Antelope jackrabbit (*Lepus alleni*) • Bailey's pocket mouse (*Chaetodipus baileyi*) • Black-tailed jackrabbit (*Lepus californicus*) • Bobcat (*Lynx rufus*) • California leaf-nosed bat (*Macrotus californicus*) • California myotis (*Myotis californicus*) • Canyon bat (*Parastrellus Hesperus*) • Cave myotis (*Myotis velifer*) • Collared peccary or javelina (*Pecari tajacu*) • Coyote (*Canis latrans*) • Desert bighorn sheep (*Ovis canadensis mexicana*) • Desert cottontail (*Sylvilagus audubonii*) • Desert pocket mouse (*Chaetodipus penicillatus*) • Harris's antelope squirrel (*Ammospermophilus harrisii*) • Lesser long-nosed bat (*Leptonycteris yerbabuenae*) • Merriam's deermouse (*Peromyscus merriami*) • Mexican free-tailed bat (*Tadarida brasiliensis*) • Mexican long-tongued bat (*Choeronycteris mexicana*) • Mule deer (*Odocoileus hemionus*) • Pale Townsend's big-eared bat (*Corynorhinus townsendii pallescens*) • Pallid bat (*Antrozous pallidus*) • Pocketed free-tailed bat (*Nyctinomops femorosaccus*) • Ringtail (*Bassariscus astutus*) • Sonoran pronghorn (*Antilocapra americana sonoriensis*) • Underwood's mastiff bat (*Eumops underwoodi*) • Western yellow bat (*Lasiurus xanthinus*) • White-nosed coati (*Nasua narica*)
Reptiles	• Arizona night lizard (*Xantusia arizonae*) • Bezy's night lizard (*Xantusia bezyi*) • Black-necked gartersnake (*Thamnophis cyrtopsis*) • Common chuckwalla (*Sauromalus ater*) • Gila monster (*Heloderma suspectum*) • Mexican gartersnake (*Thamnophis eques*) • Regal horned lizard (*Phrynosoma solare*) • Rosy boa (*Lichanura roseofusca*) • Saddled leaf-nosed snake (*Phyllorhynchus browni*) • Sonora mud turtle (*Kinosternon sonoriense sonoriense*) • Sonoran coralsnake (*Micruroides euryxanthus*) • Sonoran desert tortoise (*Gopherus morafkai*) • Sonoran shovel-nosed snake (*Chionactis palarostris*) • Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*) • Speckled rattlesnake (*Crotalus pyrrhus* (Tinajas Altas Population))

	• Three-lined boa (*Lichanura trivirgata*) • Tiger rattlesnake (*Crotalus tigris*) • Variable sandsnake (*Chilomeniscus cinctus* (*Chilomeniscus stramineus*))

Migratory Birds

This section provides general discussion of migratory bird occurrence and habitat use within the TMA. Those migratory species that are of particular concern are noted in Section 3.3.7 as BLM Sensitive species. Migratory birds, which include several species of waterfowl, shorebirds, songbirds, and raptors, use the TMA for foraging, roosting, and nesting. Raptors are widely accepted to be indicator species of environmental health because of their position at the top of food chains. Romin and Muck state, "Each raptor nest, its offspring, and supporting habitats are considered important to the long-term viability of raptor populations and are vulnerable to disturbance by many human activities" (USFWS 1999). The BLM follows guidance presented in Information Bulletin 2022-036[12] ("Addendum to BLM and U.S. Fish and Wildlife Memorandum of Understanding To Promote the Conservation of Migratory Birds") in evaluating the effects of the BLM's actions on migratory birds during the NEPA process, if any.

Migratory birds occur throughout the TMA. In particular, riparian habitats of streams provide nesting and stopover habitat as well as migration corridors. Migratory Birds of Conservation Concern (BCC), as listed in USFWS's IPaC system, are shown in Table 18.

Table 18: Migratory Birds of Conservation Concern

Name	Scientific Name	Level of Concern[13]	Breeding Season
American Avocet	*Recurvirostra americana*	BCC - BCR	Apr 21 to Aug 10
Bald Eagle	*Haliaeetus leucocephalus*	Non-BCC Vulnerable	Oct 15 to Aug 31
Bendire's Thrasher	*Toxostoma bendirei*	BCC Rangewide (CON)	Mar 15 to Jul 31
Black-chinned Sparrow	*Spizella atrogularis*	BCC Rangewide (CON)	Apr 15 to Jul 31
Clark's Grebe	*Aechmophorus clarkii*	BCC Rangewide (CON)	Jun 1 to Aug 31
Costa's Hummingbird	*Calypte costae*	BCC - BCR	Jan 15 to Jun 10
Gila Woodpecker	*Melanerpes uropygialis*	BCC - BCR	Apr 1 to Aug 31
Golden Eagle	*Aquila chrysaetos*	Non-BCC Vulnerable	Dec 1 to Aug 31
Lawrence's Goldfinch	*Spinus lawrencei*	BCC Rangewide (CON)	Mar 20 to Sep 20
Leconte's Thrasher	*Toxostoma lecontei*	BCC Rangewide (CON)	Feb 15 to Jun 20
Long-eared Owl	*Asio otus*	BCC Rangewide (CON)	Mar 1 to Jul 15
Marbled Godwit	*Limosa fedoa*	BCC Rangewide (CON)	Breeds elsewhere
Mountain Plover	*Charadrius montanus*	BCC Rangewide (CON)	Breeds elsewhere
Western Grebe	*Aechmophorus occidentalis*	BCC Rangewide (CON)	Jun 1 to Aug 31
Willet	*Tringa semipalmata*	BCC Rangewide (CON)	Breeds elsewhere

Wildlife Habitat Management Areas (WHAs)

Five wildlife-related special interest areas were designated in the Yuma RMP, four of which are in the TMA: Colorado and Gila River Riparian WHA, Desert Mountains WHA, Palomas Plain WHA, and Wildlife Movement Corridors WHA. These WHAs were designated to promote terrestrial, aquatic, and

[12] https://www.blm.gov/policy/ib-2022-036

[13] **Non-BCC Vulnerable:** This is not a BCC in this area, but warrants attention because of the Eagle Act.
BCC Rangewide (CON): This is a BCC throughout its range in the continental USA and Alaska.
BCC – BCR: This is a BCC only in particular Bird Conservation Regions (BCRs) in the continental U.S.

riparian ecosystems for biological diversity, ecological integrity and sustainability, and social and cultural needs.

Table 19: WHAs in the TMA

WHA	Description of WHA	Acres on BLM Lands	Miles of Evaluated Routes in WHA
Colorado and Gila River Riparian Area	Includes riparian areas along the Colorado and Gila rivers. In the desert southwest, wildlife use riparian areas disproportionately more than other types of habitat, and many species are riparian obligates.	15,153	7.0
Desert Mountains	Includes the overlapping habitat areas of desert bighorn sheep and desert tortoise. Provides important habitat for these and other wildlife species that could not survive on the arid plains of lower elevations. Mountain ranges provide some of the best remaining bighorn sheep habitat in the southwest.	384,524	589.2
Palomas Plain	This area is the largest unfragmented habitat in southwest Arizona for a myriad of wildlife, including bighorn sheep and mule deer. It contains braided channel floodplains and mixed cacti paloverde communities on rocky slopes and bajadas. The large, contiguous, unfragmented habitat is significant to the hunting community.	578,102	908.6
Wildlife Movement Corridors	Includes areas identified by AZGFD and the Arizona Wildlife Linkages Group as being used by wildlife to move between habitats. Migration corridors are traditional movement paths between adjacent mountain ranges.	88,125	100.8

3.3.9.2 Environmental Effects

The nature and type of impacts on general wildlife and wildlife habitat from recreation and OHV uses can include habitat avoidance and abandonment, interference of daily movement and foraging, increased physical stress that can result in decreased health and parturition, and direct vehicle encounters resulting in injury or mortality (Ouren et al. 2007; Ortega 2012). Recreational disturbance from motorized and non-motorized activities affects big game behavior by causing wildlife to increase travel time to avoid human activity, which decreases feeding and resting time (Naylor et al. 2009). Avoidance of human disturbance can also cause indirect habitat loss and impair forage availability (Dwinnell et al. 2019). Species avoidance is strongest for mountain biking and motorized vehicles (Naidoo and Burton 2020). These impacts can escalate seasonally during sensitive birthing, rearing, and breeding seasons and during extreme weather regimes such as drought, extreme heat or cold, or heavy snowfall. Route proliferation, habitat loss and fragmentation are indirect impacts resulting from recreation and travel-related surface disturbances from motorized and non-motorized vehicle travel. Other impacts include:

- Soil erosion and direct loss of important foraging, breeding, and security cover habitat.
- Surface disturbances that promote growth and spread of invasive plants and noxious weeds into native vegetative communities, reducing habitat quality, foraging availability, and thermal and security cover.
- Dusting of native vegetation resulting in plant mortality, and subsequent reduction of habitat quality, foraging availability, and thermal and security cover.

- Invasive plants and noxious weed establishment in disturbed areas which in turn increases the potential and frequency for wildland fire and subsequent habitat loss.

The potential for direct and indirect impacts on big game from recreation and OHV use can be estimated by comparing public OHV access and related recreation use in terms of number of routes in or near big game habitats. However, a designated travel route network can also provide access for and benefit resource management activities such as vegetation monitoring, wildlife monitoring, wildlife habitat improvement projects, interpretive projects, hunting and legal game retrieval, invasive species treatment, and wildland fire suppression. Hunting and game retrieval access serves to support AZGFD management efforts where hunting is used as a management tool to control populations of big game species.

The nature and type of impacts on migratory birds, including raptors, and their habitat suitability from travel route designations and route-related uses include disturbance, mortality or injury from collision, and trampling or damage of brooding, nesting, foraging, and cover habitat. Travel route use can also cause disturbance or interference with courtship, nesting, brood-rearing, or fledging activities. Because of sensitivity and fidelity to nest territory, abandonment of nest sites due to nearby human disturbances is of particular concern. Habitat-associated indirect risk factors of travel routes and related use include damage, loss, or fragmentation through isolation of habitats, establishment or spread of invasive weeds, and increased wildfire potential. Indirect effects also include altering or influencing of prey species (e.g., rodents, lizards, snakes) behavior as a result of disturbance to cover vegetation (USFWS 1999).

Implementation activities that could affect big game and migratory birds and their habitats include installing new information kiosks and signs, road, trail and parking area maintenance or improvements, route decommissioning or reclamation (including ripping the ground and planting seed, grading/recontouring), and installing fencing or barriers. However, ground disturbance and loss of habitat from implementation activities (e.g., kiosk installation) would be very minor, localized, and temporary, as BMPs such as seeding or planting of disturbed areas could effectively accelerate reclamation and help to reestablish habitat. If implementation is proposed that falls outside of the previously disturbed area, additional site-specific NEPA may be required before the activity could occur.

Route networks with open or limited designations can contribute to prolonging OHV use-related effects as previously disclosed. Closed and Limited designations that prohibit OHV use wholly or in part can reduce or eliminate the prolonged OHV-use effects, thereby benefiting wildlife species.

The analysis below focuses on the WHAs within the TMA. For more analysis of general wildlife and migratory birds based on their associated biotic communities within the TMA, see Section 3.3.3.

Figure 37 – Figure 40 display the miles of evaluated routes in each WHA under each alternative. These figures are used as indicators of potential impacts from the route network alternatives on the WHAs.

Figure 37: Miles of Evaluated Routes in the Colorado and Gila River Riparian WHA

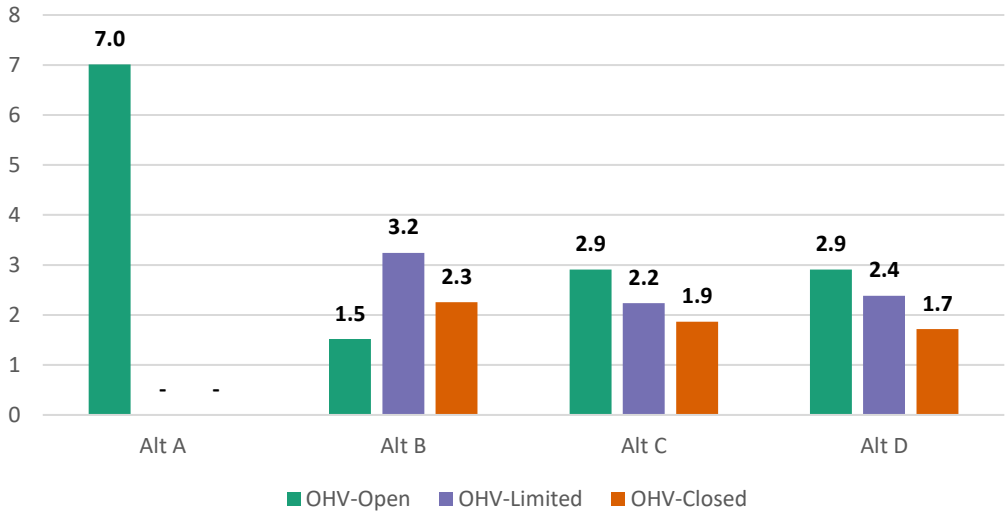


Figure 38: Miles of Evaluated Routes in the Desert Mountains WHA

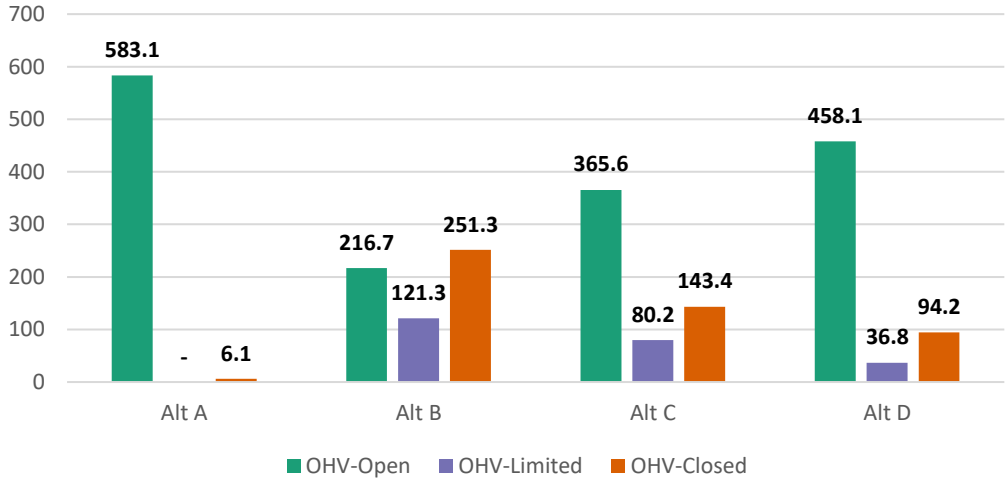


Figure 39: Miles of Evaluated Routes in the Palomas Plain WHA

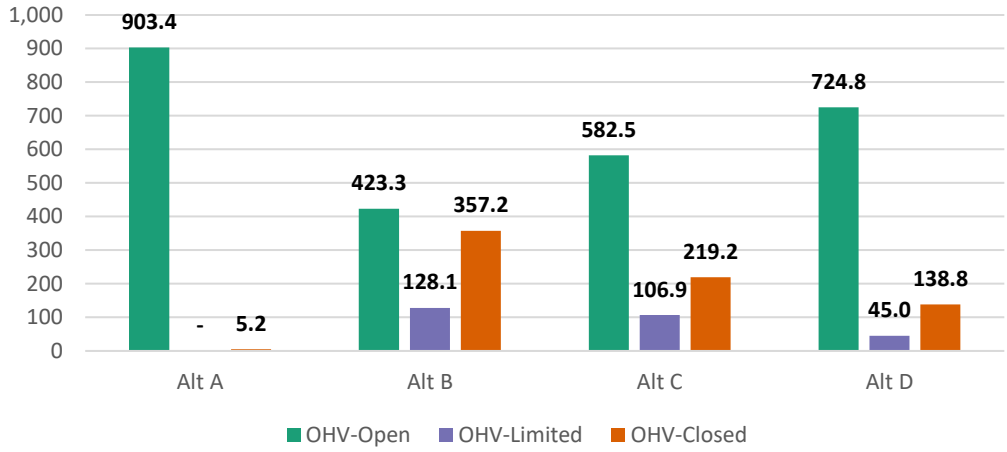
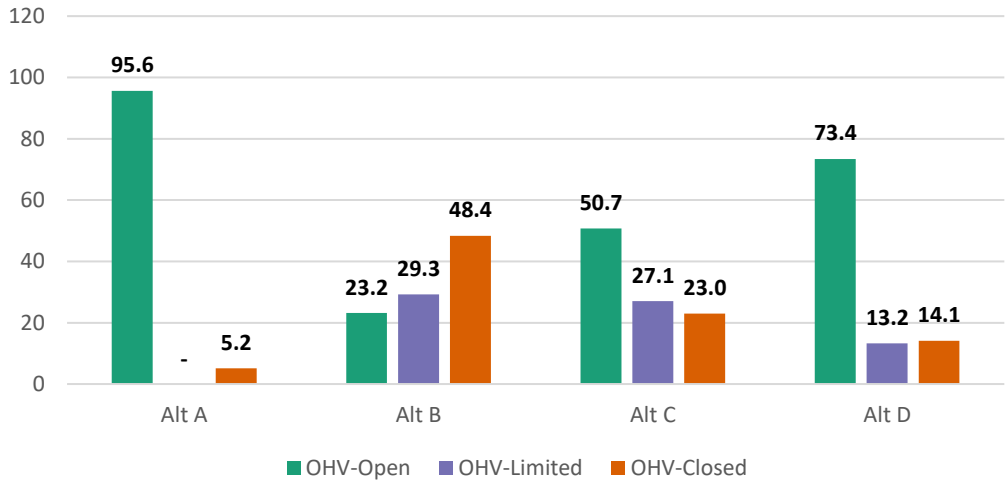


Figure 40: Miles of Evaluated Routes in the Wildlife Movement Corridors WHA



Alternative A (Current Management)

Under Alternative A, all routes in the Colorado and Gila River Riparian WHA would remain available for OHV use. In the Desert Mountains WHA and the Palomas Plain WHA, 99% of the evaluated routes would remain available for OHV use. And in the Wildlife Movement Corridors WHA, 95% of the evaluated routes would remain available for OHV use. Impacts to the TMA's general wildlife species from the routes and ongoing related use (e.g., direct mortality, injury, behavioral modifications, habitat alteration, habitat fragmentation, etc.) would reflect a continuation of current management.

Alternative B (Resource Protection Emphasis)

Alternative B would see reductions in route miles designated for OHV use in each of the WHAs. This includes a 33% reduction (-2.3 miles) in the Colorado and Gila River Riparian Area WHA, a 42% reduction (-245.2 miles) in the Desert Mountains WHA, a 39% reduction (-352.0 miles) in the Palomas Plain WHA, and a 45% reduction (-43.1 miles) in the Wildlife Movement Corridors WHA. The effects described above from travel routes and related use and maintenance would continue to occur on those routes designated for OHV use. Overall, Alternative B would have the lowest potential of any alternative for OHV use-related impacts to WHAs and general wildlife habitat within the TMA.

Alternative C (Multiple Use Emphasis)

Alternative C would also see reductions in route miles designated for OHV use in each of the WHAs. This includes a 27% reduction (-1.9 miles) in the Colorado and Gila River Riparian Area WHA, a 24% reduction (-137.3 miles) in the Desert Mountains WHA, a 24% reduction (-214.0 miles) in the Palomas Plain WHA, and a 19% reduction (-17.8 miles) in the Wildlife Movement Corridors WHA. The effects described above from travel routes and related use and maintenance would continue to occur on those routes designated for OHV use. Overall, Alternative C would have lower potential than Alternatives A and D but higher potential than Alternative B for OHV use-related impacts to WHAs and general wildlife habitat within the TMA.

Alternative D (Access Emphasis)

Alternative D would also reduce route miles designated for OHV use in each of the WHAs. This includes a 24% reduction (-1.7 miles) in the Colorado and Gila River Riparian Area WHA, a 15% reduction (-88.2 miles) in the Desert Mountains WHA, a 15% reduction (-133.6 miles) in the Palomas Plain WHA, and a 9% reduction (-9.0 miles) in the Wildlife Movement Corridors WHA. The effects described above from travel routes and related use and maintenance would continue to occur on those routes designated for OHV use. Overall, Alternative D would have lower potential than Alternative A but higher potential than the other action alternatives for OHV use-related impacts to WHAs and general wildlife habitat within the TMA.

Cumulative Effects

The CEAA for general wildlife and migratory birds, like the preceding Special Status Species section, extends beyond the TMA to include adjacent species habitats as described in Section 3.3.9.1. Impacts on general wildlife and migratory birds from this TMP would add to potential disturbance from other actions within the TMA such as those listed in Section 3.2 (e.g., renewable energy development projects). Potential impacts to these habitats from travel routes and related use are discussed in terms of impacts on their associated biotic communities of Lower Sonoran Desert Scrub and Upper Sonoran Desert Scrub; for a complete cumulative effects discussion of Alternative A and the impacts from Action Alternatives B-D on general wildlife and migratory birds, see Section 3.3.3.

3.4 Potential Impacts to Recreation User Opportunities and Experiences

3.4.1 RECREATION

- *How would the proposed travel network alternatives impact motorized and non-motorized recreation opportunities and experiences?*
- *How would the proposed travel network alternatives impact recreation user conflicts?*
- *How would the proposed travel network alternatives impact public health and safety of recreation users?*

3.4.1.1 Affected Environment

Motorized and non-motorized recreation along established routes is a key component of TMA recreation overall. Although the BLM Manual 1626 and Handbook H-8342 direct that travel management plans be comprehensive (i.e., consider access needs for all uses, including authorized and administrative), recreation has been the primary driver of, and has the biggest effects on, travel and transportation management.

The TMA offers a range of recreational opportunities for diverse recreation within environments ranging from mountain ranges to desert washes. Popular recreation activities in the TMA include camping, hiking, OHV riding, hunting, shooting, wildlife viewing, rock hounding, and vehicle exploring. Recreation use in the area tends to be seasonal: users migrate to the area from northern states in the winter months, and local residents use the area for hunting, camping, and trail-based recreation activities. Recreational routes in the TMA are primarily low-standard, unpaved roads that are not actively maintained and often require high clearance and/or four-wheel drive vehicles. Routes in the northwest portion of the TMA provide access to Kofa National Wildlife Refuge. Access to the Muggins Mountain Wilderness and Eagletail Mountains Wilderness is important to non-motorized recreation users.

While there are no Superfund sites and no identified hazardous wastes within the TMA, there are Formerly Used Defense Sites (FUDS) located on or adjacent to BLM lands within the TMA. The U.S. Army and Department of Defense are dedicated to protecting human health and the environment by investigating and, if required, cleaning up potential contamination or munitions that may remain on these properties from past Department of Defense activities. The U.S. Army Corps of Engineers executes the FUDS program on behalf of the U.S. Army and Department of Defense. Route designation and implementation of the TMP would be a continuation of low potential for the introduction of wastes in the TMA through accidental spills. Route use would be a continuation of opportunity for the introduction of household wastes on BLM administered lands.

Table 20 shows the number of existing travel routes currently providing access to various types of recreation destinations. Undeveloped campsites may exist throughout the TMA; the data used for this analysis is based on the best available information at the time of route evaluation.

Table 20: Number of Evaluated Routes Currently Providing Access to Recreation Destinations[14]

Destination	# Routes Providing Access
Undeveloped Campsite	199
Trailhead	7
Undeveloped Parking Area	3
Undeveloped Recreational Shooting Area	2
Information Kiosk	2
Interpretive Site	1
Developed Recreational Shooting Site	1

3.4.1.2 Environmental Effects

Direct effects that travel networks and their use have on recreation include direct loss of or added gains in access for desired recreation opportunities and experiences. Recreation access can also result in direct encounters or conflicts and safety concerns with users seeking different experiences (e.g., equestrian users on open OHV routes encountering dirt bike users). Indirect impacts or effects include the actual gain or loss of the opportunities and safe recreation experiences available on public lands.

It is highly likely that recreation visitor numbers in the TMA will continue to increase (BLM 2023), with visitors continuing to seek a diverse mix of motorized and non-motorized opportunities. Users seeking quiet, non-motorized recreation experiences (e.g., hiking, biking, hunting, and horseback riding) may in some cases benefit from a travel network that closes more OHV routes, as these users may encounter fewer conflicts with motorized users. Conversely, users seeking OHV opportunities and maximum dispersed camping options would benefit from a network with more open route designations. Providing for a broad variety of motorized and non-motorized opportunities would also enhance user safety by, at times,

[14] Note: Some routes provide access to more than one recreation destination.

separating motorized users from non-motorized users (e.g., reducing or eliminating encounters between motorcycle and equestrian or mountain bike users). A travel route network that is proactively managed for and provides for a wide variety of structured motorized and non-motorized opportunities and experiences may reduce user inclination to travel off-route; however, even well-planned and managed route systems will induce some detrimental resource effects, including illegal trail creation and disturbance of habitats (Lucas 2020). Areas with high route density can provide quantity but low quality of recreation opportunities, detracting from visual quality, confusing visitors, and providing relatively few routes of actual quality or diversity (BLM 2012). A travel network that closes and reclaims more routes to year-round OHV use would provide for higher quality recreation experiences for non-motorized users than a network that designates more routes as open to OHV use.

The BLM, in collaboration with the U.S. Army Corps of Engineers, mitigates the potential impacts from FUDS properties in and adjacent to the TMA via signing and other measures. Travel network alternatives with more routes open to public OHV use pose slightly more risk to human health and safety from FUDS locations and hazardous waste. However, this TMP is not proposing the construction of new routes. Because all evaluated routes are already existing and are currently or previously used, the BLM does not anticipate impacts to human health and safety from FUDS properties under any alternative.

TMP implementation actions could affect recreation access and experiences. Road maintenance that involves ground-disturbing activities can temporarily block OHV access to recreation opportunities. However, maintenance actions would likely also enhance access and safety for recreation experiences, while helping to control and mitigate road prism drainage and rilling (shallow channeling) or deeper and wider rutting caused by OHV use during seasonal wet periods. Decommissioning and reclamation of closed roads could adversely affect access to some recreation opportunities, while sign installation along designated OHV routes would benefit users by directing them to destinations more easily.

Indicators of potential travel route designation impacts on recreation opportunities include the overall miles of routes available for recreation use in the TMA (Figure 41) and the number of routes providing access for the various recreation destinations available in the TMA (Figure 42).

Figure 41: Miles of Evaluated Routes by Alternative

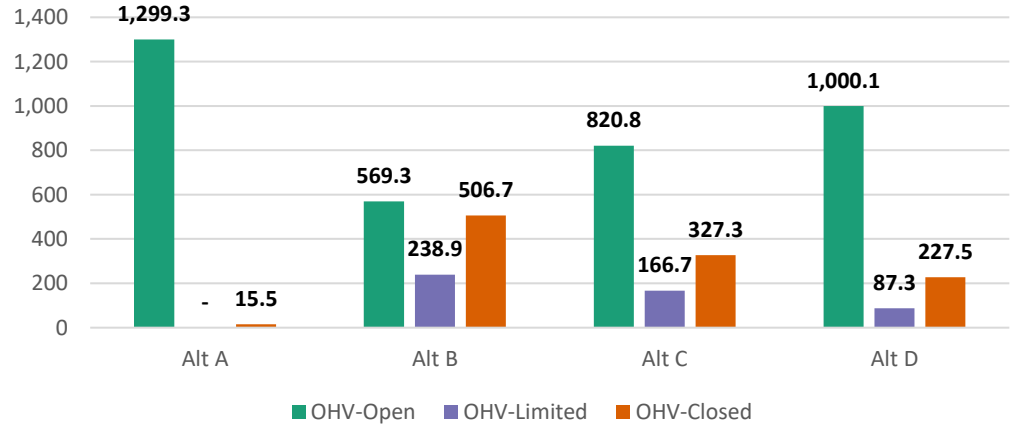
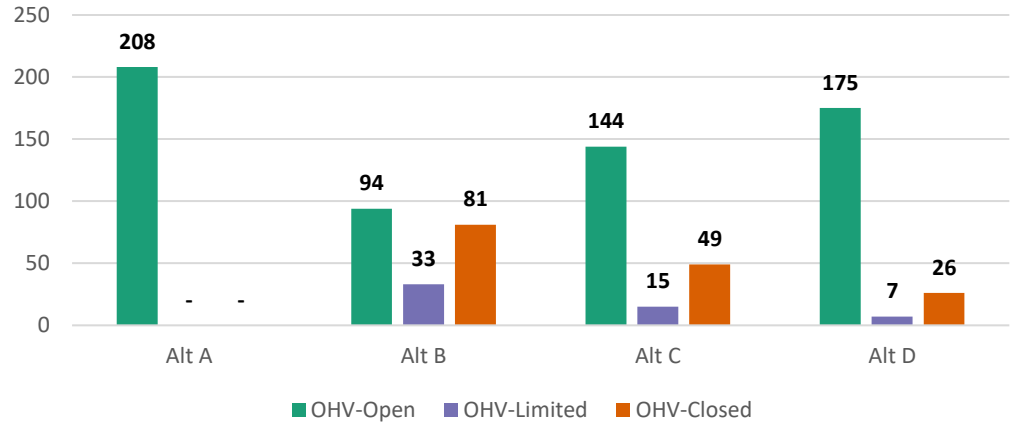


Figure 42: Number of Evaluated Routes by Alternative Providing Access to Recreation Destinations



Alternative A (Current Management)

Most evaluated routes in the existing travel network provide access for a variety of recreation activities. Approximately 16% of the evaluated routes in the TMA provide primary access to particular recreation destinations listed in Table 20, above. Under Alternative A, nearly all evaluated routes accessing recreation destinations and opportunities would remain available for OHV use.

With all routes in this alternative remaining available for OHV use, impacts to user access, conflicts of use (between motorized and non-motorized recreation users and authorized users), route-finding confusion, route proliferation, and human health and safety would reflect a continuation of current management,

Alternative B (Natural Resource Emphasis)

Compared to Alternative A, the Alternative B travel network would result in reductions in public recreation access within the TMA, including an overall 38% reduction in miles designated for public OHV use. Alternative B would also reduce OHV access to particular recreation destinations in the TMA listed in Table 20, above, by 39%.

Overall, Alternative B would have the lowest potential of any alternative for conflicts between motorized and non-motorized users, and between recreation users and authorized users; Alternative B would also have the least likelihood of impacts to human health and safety. However, it would also provide substantially less OHV-facilitated access for recreation opportunities and could increase OHV user concentration on the remaining open routes compared to the other alternatives.

Alternative C (Multiple Use Emphasis)

Compared to Alternative A, the Alternative C travel network would result in reductions in public recreation access within the TMA, including an overall 24% reduction in miles designated for public OHV use. Alternative C would also reduce OHV access to particular recreation destinations in the TMA listed in Table 20, above, by 24%.

Overall, Alternative C would have lower potential than Alternative A but higher potential than Alternative B for conflicts between motorized and non-motorized users, and between recreation users and authorized users; Alternative C would also have lower potential than Alternatives A and D but higher potential than Alternative B for impacts to human health and safety. However, it would also provide less OHV-facilitated access for recreation opportunities and could increase OHV user concentration on the remaining open routes compared to Alternative A.

Alternative D (Access Emphasis)

Compared to Alternative A, the Alternative D travel network would result in reductions in public recreation access within the TMA, including an overall 16% reduction in miles designated for public OHV use. Alternative D would also reduce OHV access to particular recreation destinations in the TMA listed in Table 20, above, by 13%.

Overall, Alternative D would have lower potential than Alternative A but higher potential than the other action alternatives for conflicts between motorized and non-motorized users, and between recreation users and authorized users; Alternative D would also have lower potential than Alternative A but higher potential than the other action alternatives for impacts to human health and safety. However, it would also provide less OHV-facilitated access for recreation opportunities and could increase OHV user concentration on the remaining open routes compared to Alternative A.

Cumulative Effects

The CEAA for recreation extends beyond the TMA to include the Kofa National Wildlife Refuge, Imperial National Wildlife Refuge, Yuma Proving Ground, and other area Reclamation, state lands, and state wildlife areas. Recreational routes in the TMA are primarily low-standard, unpaved roads that are not actively maintained and often require high clearance and/or four-wheel drive vehicles. Routes in the northwest portion of the TMA provide access to Kofa National Wildlife Refuge. Access to the Muggins Mountain Wilderness and Eagletail Mountains Wilderness is important to non-motorized recreation users. All these areas serve as recreation destinations, and many are accessed via TMA OHV routes. There are also numerous recreation management areas and recreation management zones in and adjacent to the TMA which are focused on providing specific recreation opportunities and experiences to visitors. In fact, the entire southwest Arizona region offers expanded recreation opportunities for visitors.

Under Alternative A, nearly all routes in the existing travel network provide beneficial access for a wide variety of recreation activities within the TMA and several provide access to the other jurisdictional destinations noted above. Approximately 16% of the routes in the TMA provide primary access to primary recreation destinations such as undeveloped campsites, trailheads, recreational shooting areas, etc. With all routes in Alternative A remaining available for OHV use, recreation-related impacts such as conflicts of use (between motorized and non-motorized recreation users and authorized users), route-finding confusion, route proliferation, and human health and safety would reflect a continuation of current management. These recreation-related impacts are not unique to the TMA, and they would add to similar impacts on public lands throughout the region.

Under the Action Alternatives B-D, reductions in access would range from 16% in miles available for OHV recreation use, 29-51% for popular recreation activities such as equestrian use and sightseeing, and 13% to popular destinations under Alternative D, to 38% in miles available for OHV recreation use, 58-83% for bicycling and wildlife watching, and 39% to popular destinations under Alternative B. These reductions in access would add to similar reductions throughout the region on other public lands where travel management plans have been completed or are in various stages of planning (see Section 3.2 Cumulative Impacts Scenario). Despite the reductions, access has and will continue to be sustained for popular recreation activities and destinations throughout the region. Adverse impacts such as user conflicts, route proliferation, and impacts to health and human safety would be incrementally reduced with implementation of any of the action alternatives. The TMP's Implementation Guide would serve to provide operation and management guidance to mitigate or eliminate many of these impacts through the application of signing, user maps, BMPs, interpretive and educational programs, law enforcement, etc.

3.4.2 LIVESTOCK GRAZING

3.4.2.1 Affected Environment

How would the route designation alternatives impact livestock grazing operations in the TMA?

Note: Authorized access for grazing operations in the TMA is not changed by any OHV designations resulting from this project. This section will focus on how public OHV use would be managed while still protecting authorized-use grazing operations that may or may not be compatible with OHV use.

Livestock permittees have operated within the TMA for decades. Many travel network routes provide access to range improvement projects and facilities like storage tanks, stock ponds, troughs, wells, pipelines, fencelines, and cattleguards. These routes support the management of livestock within the grazing allotments. Travel routes are utilized by the grazing permittees and the BLM to administer the allotments and promote rangeland health standards.

Table 21: Number of Evaluated Routes Accessing Range Improvement Locations

Range Improvement	# Routes
Tank/Trough	42
Guzzler	31
Allotment Fence	26
Well	19
Gate	14
Corral	12
Pond/Dam/Reservoir	8
Cattleguard	6
Water Haul Site	4
Pipeline	3
Dike	3
Exclosure Fence	1

3.4.2.2 Environmental Effects

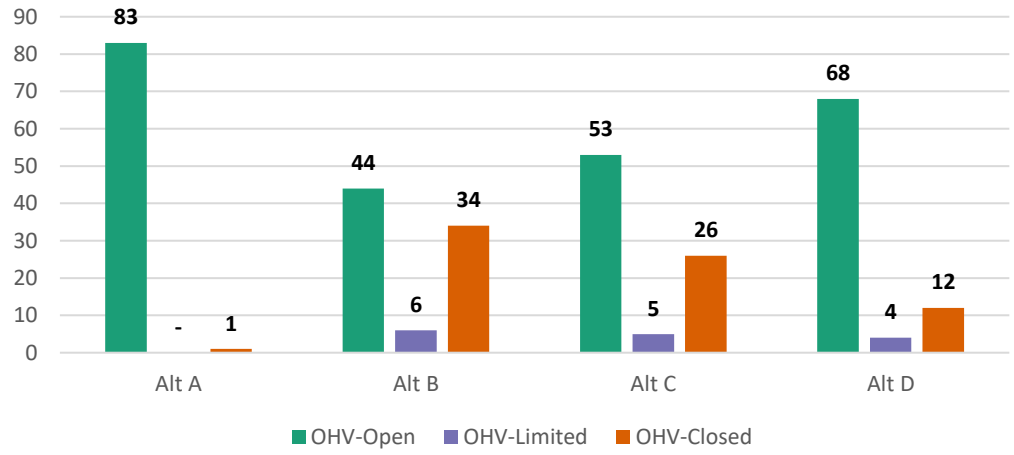
None of the route network alternatives would result in the loss or gain of access for authorized uses such as livestock grazing operations, and even roads that are designated OHV-Closed (i.e., closed to public use) could remain available for authorized use. All the alternatives could result in conflicts between recreation users and livestock operators such as vandalism to facilities, open gates, OHV collisions with grazing animals, and disturbance and displacement of grazing animals from OHV and recreation use. OHV traffic can directly interfere with vehicles used to administer to the allotment or livestock (e.g., blocking access to range improvements). OHV use of routes can also indirectly contribute to proliferation of invasive species and noxious weeds in rangelands via transportation of weed seeds on OHV undercarriages and tires. These invasive species and weeds can change a landscape by outcompeting native vegetation for available nutrients and impair forage quality for grazing, and some of these species are toxic to livestock. Other potential indirect effects include lost time and revenue associated with repairs or replacement of vandalized range improvements or facilities, displacement of livestock from opened gates and subsequent retrieval, livestock mortality, etc. Closing or limiting OHV use on a particular route can minimize or eliminate potential conflicts between the grazing permittee and OHV users by removing or reducing the OHV use on the route. Closure of a route to OHV use would not necessarily close the

route to authorized use, such as permittee access to a range facility, because the permittee is authorized to use and maintain authorized range improvements within the grazing allotment they are permitted to graze.

Implementation activities that could affect livestock grazing include route maintenance (surface and ditch grading and drainage structure replacement or installation, etc.); road, trail, and parking area maintenance or development; ripping and seeding closed routes; and sign, kiosk, barrier, and vault toilet installations. Active reclamation of closed routes can accelerate reclamation and help to reestablish forage for livestock but can also limit a permittee's ability to readily access straying or displaced livestock. Routes that have a primary purpose and need for authorized uses, such as access to livestock facilities, would not be reclaimed. In such a case, sign installation would direct recreation users to their destinations and inform users of allowable uses for a particular route. If implementation is proposed that falls outside of previously disturbed areas, additional site-specific NEPA would be required before the activity could occur.

Figure 43 informs the effects analysis by presenting the number of evaluated routes providing primary access to range improvements such as fences, gates, corrals, wells, troughs, pipelines, etc. These evaluated routes are an indicator of the continuation or reduction of effects the alternatives may have on both range improvements and livestock itself, which may often be concentrated at or near certain improvements (e.g., water troughs).

Figure 43: Number of Evaluated Routes Providing Primary Access to Range Improvement Locations



Alternative A (Current Management)

Under Alternative A, 83 of the 84 routes accessing range improvement locations would remain available for public OHV use. Impacts to livestock grazing operations from ongoing OHV use such as conflicts between recreation users and livestock operators (e.g., vandalism to facilities, open gates, OHV collisions with grazing animals, disturbance and displacement of grazing animals), spread of invasive species and noxious weeds, etc. would reflect a continuation of current management. Overall, Alternative A would extend the potential for impacts from OHV use on grazing operations.

Alternative B (Natural Resource Emphasis)

Alternative B would designate 50 routes for OHV use that access specific range improvement locations, a 40% reduction compared to Alternative A. Impacts on livestock grazing operations from ongoing OHV use would continue to occur on the routes designated for OHV use. Overall, this alternative has the lowest potential of any alternative for the types of OHV use-related conflicts with livestock grazing operations

and other impacts to rangeland management noted above. Conversely, this alternative would have less ease of access for allotment management compared to the other alternatives.

Alternative C (Multiple Use Emphasis)

Alternative C would designate 58 routes for OHV use that access specific range improvement locations, a 30% reduction compared to Alternative A. Impacts on livestock grazing operations from ongoing OHV use would continue to occur on the routes designated for OHV use. Overall, this alternative has lower potential than Alternatives A and D for the types of OHV use-related conflicts with livestock grazing operations and other impacts to rangeland management noted above. Conversely, this alternative would have less ease of access for allotment management compared to Alternatives A and D.

Alternative D (Access Emphasis)

Alternative D would designate 72 routes for OHV use that access specific range improvement locations, a 13% reduction compared to Alternative A. Impacts on livestock grazing operations from ongoing OHV use would continue to occur on the routes designated for OHV use. Overall, this alternative has lower potential than Alternative A but higher potential than the other action alternatives for the types of OHV use-related conflicts with livestock grazing operations and other impacts to rangeland management noted above. Conversely, this alternative would have less ease of access for allotment management compared to Alternative A.

Cumulative Effects

The CEAA for Livestock Grazing is the TMA plus adjacent BLM lands to the north where livestock grazing is authorized and operations may be conducted by a common permittee. Many travel network routes provide access to range improvement projects and facilities like storage tanks, stock ponds, troughs, wells, pipelines, fencelines, and cattleguards within the TMA. These routes support the livestock operations within the grazing allotments; however, none of the route network alternatives would result in the loss or gain of access for authorized uses such as livestock grazing operations, and even roads that are designated OHV-Closed (i.e., closed to public use) could remain available for authorized use. Travel routes are utilized by the grazing permittees and the BLM to administer the allotments and promote rangeland health standards. OHV user-related impacts to grazing operations include vandalism to facilities, open gates, OHV collisions with grazing animals, and disturbance and displacement of grazing animals from OHV and recreation use. OHV traffic can directly interfere with vehicles used to administer to the allotment or livestock (e.g., blocking access to range improvements). OHV use of routes can also indirectly contribute to proliferation of invasive species and noxious weeds in rangelands via transportation of weed seeds on OHV undercarriages and tires.

Under Alternative A, all of the evaluated routes providing access to range improvement locations would remain open. Impacts to livestock grazing operations from ongoing OHV use such as conflicts noted above between recreation users and livestock operators could continue. For adjoining allotment(s), operators could experience the same types of conflicts and impacts to their operations.

Under the Action Alternatives B-D, reductions in TMA OHV access would range from 13% under Alternative D to 40% under Alternative B, resulting in reductions in conflicts relative to the OHV access reductions. The TMP companion Implementation Guide would add to reduction in potential conflicts through structured operation and management of the selected route network with such applications as route user maps, signing, interpretive and educational programs, law enforcement, etc. These actions would all combine to reduce the potential for conflicts in and around authorized grazing allotments in the CEAA.

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4 CONSULTATION AND COORDINATION

4.1 Public Review

The BLM held a public information period seeking input on the route inventory from January 22 to February 21, 2024. The BLM held two virtual public meetings via Zoom on January 23 and 24, 2024, to provide information on the project. The BLM adjusted the route inventory based on information provided by the public.

The BLM will provide a 30-day public review of this EA, including two public meetings,

4.2 Consultation

4.2.1 ENDANGERED SPECIES ACT SECTION 7

Coordination and communication with the USFWS is ongoing.

4.2.2 NATIONAL HISTORIC PRESERVATION ACT (NHPA) SECTION 106

In accordance with Section 106 of the National Historic Preservation Act, BLM Handbook H-8110-1, and the 2018 Programmatic Agreement for BLM-Arizona Travel Management Plans in Arizona and Portions of California (2018 Travel PA[15]) between the BLM and the Arizona State Historic Preservation Office, the BLM will consider an undertaking's effect to cultural resources prior to project implementation. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and interested parties (e.g., State Historic Preservation Officer, Tribes, etc.) during project planning. Tribes consulted during this process include the following:

- Ak-Chin Indian Community
- Chemehuevi Indian Tribe
- Cocopah Indian Tribe
- Colorado River Indian Tribes
- Fort Mojave Indian Tribe
- Fort Yuma Quechan Tribe
- Gila River Indian Community
- The Hopi Tribe
- Pueblo of Zuni
- Salt River Pima-Maricopa Indian Community
- Tohono O'Odham Nation
- Yavapai-Apache Tribe
- Yavapai-Prescott Indian Tribe.

15 https://www.blm.gov/sites/blm.gov/files/BLM%20AZ%20Travel%20Management%20Programmatic%20Agreement%20EXECUTED%209%2018%202018.pdf

4.3 List of Preparers

4.3.1 Bureau of Land Management

The following staff assisted with assembling this EA and the Implementation Guide it supports. Additional staff contributed to the route evaluation that supports the EA and TMP Implementation Guide.

Name	Title
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4.3.2 Advanced Resource Solutions, Inc. (ARS)

The following contractor staff supported the BLM in developing the TMP and EA:

Name	Title
Cameron Gale	Environmental and Travel Management Planner
Dennis Gale	Environmental and Travel Management Planner
Derek Givens	Travel Management Planner/GIS Specialist
Cole Weeks	Travel Management Planner
Les Weeks	Company Owner

APPENDIX A. RESOURCES NOT ANALYZED IN DETAIL

Resource/Use	Present Yes/No	May Be Affected Yes/No	Rationale for Not Analyzing
Environmental Justice	Yes	No	Route designation and implementation of the TMP would have no impact on communities with Environmental Justice concerns. The designation of routes on BLM-administered lands in the long-term would benefit low or minority populations in the area by providing access to these lands for activities such as recreation, hunting, fishing, OHV use, and other land uses.
Farmlands – Prime/Unique	Yes	No	U.S. Department of Agriculture Natural Resources Conservation Service designated prime or unique farmlands may be present in the TMA. These areas are unlikely to occur on BLM-managed lands. Routes are unlikely to affect these areas and so further analysis is not warranted.
Fire Management	Yes	No	While the resource and program management are present within the TMA, access for the administration of fuels and response to fires would not be restricted based on route determinations. Additionally, route determinations would not create new impact to the fuels and fire management program.
Fish Habitat	No	No	Not present on BLM-managed lands within the TMA.
Forestry Resources and Woodland Products	No	No	Not present on BLM-managed lands within the TMA.
Land Use Authorizations/Access	Yes	No	No modifications to existing authorizations were proposed or considered as part of this effort. No new authorizations were proposed as part of this effort. Any new authorizations would be subject to separate site-specific environmental analysis at that time.
Mineral Resources	Yes	No	There are numerous locatable mining claims and abandoned mine land features (adits, shafts, excavations, etc.) located within the analysis area. Access to these sites would not be affected by this effort. There are also multiple salable mining operations, public works pits, and community pits within the analysis area. No impacts to these sites or the access to them by authorized personnel is anticipated.
Paleontological Resources	Yes	No	Paleontological resources would not be adversely affected by designations of existing routes. Any new routes would be evaluated for paleontological resources and mitigation would occur on an as needed basis.
Socioeconomics	Yes	No	Any impacts on socioeconomic resources would be miniscule relative to the overall economy of the planning area. The proposed action would designate existing roads as closed, open, or limited; however, authorized uses such as access to range improvements would continue to be allowed. No new roads would be constructed, and recreation use of the area is projected to increase as a baseline condition regardless of alternative. Therefore, no change to the social or economic status of the counties or communities is anticipated from this project's alternatives.

Resource/Use	Present Yes/No	May Be Affected Yes/No	Rationale for Not Analyzing
Water Resources (including water rights)	Yes	No	Many water rights are located within the TMA. None would be affected. No further analysis is warranted.
Water Quality (Surface/ Ground)	Yes	No	The proposed action is to designate a system of roads and trails in the TMA. Because this proposed action is restricted to the surface of the landscape and would not involve new construction of routes, no new interruption of groundwater is expected.
Wild and Scenic Rivers	No	No	Not present within the TMA.
Wild Horses and Burros	Yes	No	The planning area includes portions of the Cibola-Trigo Herd Area and Herd Management Area. The designation of existing routes would not impact burro management in this area.

APPENDIX B. ADDITIONAL TABLES

Table 22: Miles of Evaluated Routes in PM-10 Nonattainment Areas by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	75.8	22.4	-53.4	38.9	-36.9	45.9	-29.9
Excludes off-route travel (OHV-Limited)	-	5.7	+5.7	9.0	+9.0	7.9	+7.9
Limited by vehicle type (OHV-Limited)	-	-	-	0.3	+0.3	0.4	+0.4
Limited by season (OHV-Limited)	-	20.8	+20.8	3.7	+3.7	-	-
Limited to authorized users (OHV-Closed)	-	8.0	+8.0	7.6	+7.6	6.2	+6.2
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	1.1	20.1	+19.0	17.4	+16.4	16.5	+15.5

Table 23: Number of Evaluated Routes Proximate to Native American Use Sites by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	100	10	-90	18	-82	35	-65
Excludes off-route travel (OHV-Limited)	0	21	+21	28	+28	22	+22
Limited by vehicle type (OHV-Limited)	0	0	-	0	-	0	-
Limited by season (OHV-Limited)	0	8	+8	2	+2	0	-
Limited to authorized users (OHV-Closed)	0	6	+6	8	+8	6	+6
Limited to non-motorized use (OHV-Closed)	0	0	-	0	-	2	+2
Limited to non-mechanized use (OHV-Closed)	0	0	-	0	-	0	-
Closed (OHV-Closed)	7	62	+55	51	+44	42	+35

Table 24: Number of Evaluated Routes Proximate to Traditional Cultural Properties by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	23	1	-22	3	-20	3	-20
Excludes off-route travel (OHV-Limited)	0	8	+8	9	+9	11	+11
Limited by vehicle type (OHV-Limited)	0	0	-	0	-	0	-
Limited by season (OHV-Limited)	0	1	+1	0	-	0	-
Limited to authorized users (OHV-Closed)	0	3	+3	3	+3	2	+2
Limited to non-motorized use (OHV-Closed)	0	0	-	0	-	2	+2
Limited to non-mechanized use (OHV-Closed)	0	0	-	0	-	0	-
Closed (OHV-Closed)	7	17	+10	15	+8	12	+5

Table 25: Number of Evaluated Routes Crossing Listed National Register Sites by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	12	1	-11	1	-11	1	-11
Excludes off-route travel (OHV-Limited)	0	3	+3	4	+4	6	+6
Limited by vehicle type (OHV-Limited)	0	0	-	0	-	0	-
Limited by season (OHV-Limited)	0	0	-	0	-	0	-
Limited to authorized users (OHV-Closed)	0	1	+1	1	+1	0	-
Limited to non-motorized use (OHV-Closed)	0	0	-	0	-	2	+2
Limited to non-mechanized use (OHV-Closed)	0	0	-	0	-	0	-
Closed (OHV-Closed)	0	7	+7	6	+6	3	+3

Table 26: Number of Evaluated Routes Crossing Eligible or Unevaluated Cultural Sites by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	299	66	-233	89	-210	138	-161
Excludes off-route travel (OHV-Limited)	0	29	+29	36	+36	24	+24
Limited by vehicle type (OHV-Limited)	0	0	-	1	+1	1	+1
Limited by season (OHV-Limited)	0	25	+25	3	+3	0	-
Limited to authorized users (OHV-Closed)	0	68	+68	71	+71	57	+57
Limited to non-motorized use (OHV-Closed)	0	0	-	2	+2	3	+3
Limited to non-mechanized use (OHV-Closed)	0	0	-	0	-	0	-
Closed (OHV-Closed)	7	118	+111	104	+97	83	+76

Table 27: Miles of Evaluated Routes in Areas with Moderate Soil Erosion Potential by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	292.0	164.0	-128.0	198.7	-93.3	242.1	-49.9
Excludes off-route travel (OHV-Limited)	-	28.6	+28.6	29.3	+29.3	9.1	+9.1
Limited by vehicle type (OHV-Limited)	-	-	-	0.1	+0.1	0.1	+0.1
Limited by season (OHV-Limited)	-	18.0	+18.0	1.1	+1.1	-	-
Limited to authorized users (OHV-Closed)	1.5	23.1	+21.6	19.3	+17.8	14.1	+12.6
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	1.6	+1.6	1.6	+1.6	-	-
Closed (OHV-Closed)	-	58.2	+58.2	43.4	+43.4	28.2	+28.2

Table 28: Miles of Evaluated Routes in Areas with Severe Soil Erosion Potential by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	163.9	64.2	-99.7	106.4	-57.5	128.4	-35.5
Excludes off-route travel (OHV-Limited)	-	9.9	+9.9	14.3	+14.3	8.9	+8.9
Limited by vehicle type (OHV-Limited)	-	-	-	0.0	+0.0	0.1	+0.1
Limited by season (OHV-Limited)	-	23.5	+23.5	2.1	+2.1	-	-
Limited to authorized users (OHV-Closed)	1.8	19.4	+17.5	18.3	+16.5	12.6	+10.7
Limited to non-motorized use (OHV-Closed)	-	1.3	+1.3	2.5	+2.5	1.3	+1.3
Limited to non-mechanized use (OHV-Closed)	-	1.8	+1.8	1.8	+1.8	-	-
Closed (OHV-Closed)	0.3	45.9	+45.6	20.7	+20.4	14.8	+14.5

Table 29: Miles of Evaluated Routes in Lower Sonoran Desertscrub Biotic Communities by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	1,200.7	527.8	-672.9	761.1	-439.7	920.9	-279.9
Excludes off-route travel (OHV-Limited)	-	106.4	+106.4	139.7	+139.7	74.5	+74.5
Limited by vehicle type (OHV-Limited)	-	-	-	1.0	+1.0	1.1	+1.1
Limited by season (OHV-Limited)	-	117.2	+117.2	7.4	+7.4	-	-
Limited to authorized users (OHV-Closed)	2.7	90.8	+88.2	75.3	+72.6	54.4	+51.7
Limited to non-motorized use (OHV-Closed)	-	1.7	+1.7	3.1	+3.1	2.0	+2.0
Limited to non-mechanized use (OHV-Closed)	-	3.5	+3.5	3.5	+3.5	-	-
Closed (OHV-Closed)	10.3	366.2	+355.9	222.7	+212.3	160.9	+150.5

Table 30: Miles of Evaluated Routes in Upland Sonoran Desertscrub Biotic Communities by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	98.6	44.0	-54.6	62.3	-36.3	81.8	-16.8
Excludes off-route travel (OHV-Limited)	-	12.6	+12.6	16.1	+16.1	9.1	+9.1
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.1	+0.1	-	-	-	-
Limited to authorized users (OHV-Closed)	2.5	11.1	+8.6	7.7	+5.2	5.4	+2.9
Limited to non-motorized use (OHV-Closed)	-	0.2	+0.2	0.2	+0.2	0.2	+0.2
Limited to non-mechanized use (OHV-Closed)	-	2.5	+2.5	2.5	+2.5	-	-
Closed (OHV-Closed)	-	30.5	+30.5	12.3	+12.3	4.7	+4.7

Table 31: Miles of Evaluated Routes in the Blue Sand Lily VHA by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	4.5	4.0	-0.6	4.0	-0.6	4.0	-0.6
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	0.8	1.4	+0.6	1.4	+0.6	1.4	+0.6

Table 32: Miles of Evaluated Routes in the Elephant Tree VHA by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	14.1	2.3	-11.8	7.7	-6.4	10.0	-4.1
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	3.1	+3.1	1.0	+1.0	-	-
Limited to authorized users (OHV-Closed)	-	0.2	+0.2	1.0	+1.0	0.9	+0.9
Limited to non-motorized use (OHV-Closed)	-	1.3	+1.3	2.6	+2.6	1.4	+1.4
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	7.2	+7.2	1.8	+1.8	1.8	+1.8

Table 33: Miles of Evaluated Routes in the Fred J. Weiler Greenbelt VHA by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	5.1	0.7	-4.4	0.7	-4.4	0.7	-4.4
Excludes off-route travel (OHV-Limited)	-	2.7	+2.7	2.9	+2.9	3.9	+3.9
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	0.9	+0.9	0.9	+0.9	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	0.2	+0.2
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	0.8	+0.8	0.6	+0.6	0.3	+0.3

Table 34: Miles of Evaluated Routes in Blue Sand Lily Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	1.5	1.4	-0.2	1.4	-0.2	1.4	-0.2
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	0.4	0.5	+0.2	0.5	+0.2	0.5	+0.2

Table 35: Miles of Evaluated Routes in Clustered Barrel Cactus Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	2.1	1.1	-1.0	1.4	-0.6	1.9	-0.2
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.1	+0.1	-	-	-	-
Limited to authorized users (OHV-Closed)	-	0.4	+0.4	0.5	+0.5	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	0.6	+0.6	0.2	+0.2	0.2	+0.2

Table 36: Miles of Evaluated Routes in Desert Rock-purslane Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	12.4	1.0	-11.4	5.1	-7.2	5.9	-6.4
Excludes off-route travel (OHV-Limited)	-	2.6	+2.6	1.8	+1.8	1.3	+1.3
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	2.8	+2.8	-	-	-	-
Limited to authorized users (OHV-Closed)	-	1.8	+1.8	1.6	+1.6	1.6	+1.6
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	4.1	+4.1	3.8	+3.8	3.5	+3.5

Table 37: Miles of Evaluated Routes in Hall Shrub Spurge Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	6.0	0.6	-5.4	1.9	-4.2	5.6	-0.4
Excludes off-route travel (OHV-Limited)	-	-	-	0.3	+0.3	0.3	+0.3
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	0.3	+0.3	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	5.1	+5.1	3.9	+3.9	0.1	+0.1

Table 38: Miles of Evaluated Routes in Las Animas Nakedwood Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	6.2	1.1	-5.2	3.6	-2.7	6.1	-0.1
Excludes off-route travel (OHV-Limited)	-	1.8	+1.8	1.8	+1.8	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	3.3	+3.3	0.8	+0.8	0.1	+0.1

Table 39: Miles of Evaluated Routes in Spiny Sand Spurge Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	11.4	4.2	-7.2	8.2	-3.2	9.3	-2.1
Excludes off-route travel (OHV-Limited)	-	1.1	+1.1	1.1	+1.1	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.2	+0.2	-	-	-	-
Limited to authorized users (OHV-Closed)	-	0.7	+0.7	0.9	+0.9	0.9	+0.9
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	5.2	+5.2	1.2	+1.2	1.2	+1.2

Table 40: Miles of Evaluated Routes in Thurber Pilostyles Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	25.7	5.9	-19.8	11.2	-14.5	14.9	-10.7
Excludes off-route travel (OHV-Limited)	-	4.4	+4.4	3.6	+3.6	1.3	+1.3
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	3.6	+3.6	0.3	+0.3	-	-
Limited to authorized users (OHV-Closed)	-	2.4	+2.4	2.2	+2.2	1.7	+1.7
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	9.4	+9.4	8.4	+8.4	7.7	+7.7

Table 41: Miles of Evaluated Routes in Velvet Brittle-stem Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	2.9	1.9	-0.9	2.5	-0.4	2.5	-0.4
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	0.0	+0.0	0.0	+0.0	0.0	+0.0
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	0.9	+0.9	0.3	+0.3	0.3	+0.3

Table 42: Miles of Evaluated Routes in the Juan Bautista de Anza NHT Corridor by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	57.3	15.4	-41.9	19.3	-37.9	33.2	-24.0
Excludes off-route travel (OHV-Limited)	-	11.5	+11.5	12.8	+12.8	6.7	+6.7
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	5.1	+5.1	0.9	+0.9	-	-
Limited to authorized users (OHV-Closed)	-	9.8	+9.8	10.3	+10.3	5.1	+5.1
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	15.5	+15.5	13.9	+13.9	12.3	+12.3

Table 43: Miles of Evaluated Routes in the Sears Point ACEC by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	8.6	-	-8.6	-	-8.6	-	-8.6
Excludes off-route travel (OHV-Limited)	-	6.2	+6.2	6.8	+6.8	8.0	+8.0
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	1.1	+1.1	1.1	+1.1	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	0.2	+0.2
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	1.3	+1.3	0.7	+0.7	0.3	+0.3

Table 44: Miles of Evaluated Routes in VRM Class I Areas by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	21.0	0.0	-20.9	0.5	-20.4	19.8	-1.2
Excludes off-route travel (OHV-Limited)	-	17.5	+17.5	18.3	+18.3	5.8	+5.8
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.9	+0.9	0.2	+0.2	-	-
Limited to authorized users (OHV-Closed)	5.2	0.4	-4.7	-	-5.2	-	-5.2
Limited to non-motorized use (OHV-Closed)	-	0.5	+0.5	0.5	+0.5	0.5	+0.5
Limited to non-mechanized use (OHV-Closed)	-	5.2	+5.2	5.2	+5.2	-	-
Closed (OHV-Closed)	0.0	1.7	+1.6	1.5	+1.4	0.0	+0.0

Table 45: Miles of Evaluated Routes in VRM Class II Areas by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	778.1	336.3	-441.7	519.8	-258.3	611.7	-166.4
Excludes off-route travel (OHV-Limited)	-	54.1	+54.1	76.8	+76.8	45.8	+45.8
Limited by vehicle type (OHV-Limited)	-	-	-	0.6	+0.6	0.7	+0.7
Limited by season (OHV-Limited)	-	70.7	+70.7	4.7	+4.7	-	-
Limited to authorized users (OHV-Closed)	-	51.7	+51.7	34.1	+34.1	31.6	+31.6
Limited to non-motorized use (OHV-Closed)	-	1.4	+1.4	2.9	+2.9	1.7	+1.7
Limited to non-mechanized use (OHV-Closed)	-	0.9	+0.9	0.9	+0.9	-	-
Closed (OHV-Closed)	7.4	270.3	+262.9	145.7	+138.3	94.0	+86.6

Table 46: Number of Intermittent Stream Crossing Points by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	242	59	-183	118	-124	147	-95
Excludes off-route travel (OHV-Limited)	0	4	+4	57	+57	55	+55
Limited by vehicle type (OHV-Limited)	0	0	-	0	-	0	-
Limited by season (OHV-Limited)	0	7	+7	0	-	0	-
Limited to authorized users (OHV-Closed)	0	60	+60	28	+28	27	+27
Limited to non-motorized use (OHV-Closed)	0	0	-	0	-	0	-
Limited to non-mechanized use (OHV-Closed)	0	0	-	0	-	0	-
Closed (OHV-Closed)	1	113	+112	40	+39	14	+13

Table 47: Number of Ephemeral Stream Crossing Points by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	1167	422	-745	727	-440	894	-273
Excludes off-route travel (OHV-Limited)	0	90	+90	154	+154	115	+115
Limited by vehicle type (OHV-Limited)	0	0	-	2	+2	2	+2
Limited by season (OHV-Limited)	0	144	+144	7	+7	0	-
Limited to authorized users (OHV-Closed)	2	92	+90	50	+48	47	+45
Limited to non-motorized use (OHV-Closed)	0	0	-	3	+3	0	-
Limited to non-mechanized use (OHV-Closed)	0	2	+2	2	+2	0	-
Closed (OHV-Closed)	23	442	+419	247	+224	134	+111

Table 48: Miles of Evaluated Routes in Riparian Areas by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	0.3	-	-0.3	-	-0.3	0.3	-
Excludes off-route travel (OHV-Limited)	-	0.3	+0.3	0.3	+0.3	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	-	-	-	-	-	-

Table 49: Miles of Evaluated Routes in the Little Horn Mountains Wilderness Characteristics Unit[16] by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	9.1	0.2	-8.9	0.2	-8.9	6.0	-3.1
Excludes off-route travel (OHV-Limited)	-	-	-	1.8	+1.8	1.8	+1.8
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	2.8	+2.8	0.9	+0.9	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	6.1	+6.1	6.1	+6.1	1.2	+1.2

[16] The Little Horns Mountains unit is managed to maintain its wilderness characteristics.

Table 50: Miles of Evaluated Routes in the Palomas Mountains Wilderness Characteristics Unit[17] by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	1.9	-	-1.9	-	-1.9	-	-1.9
Excludes off-route travel (OHV-Limited)	-	-	-	1.8	+1.8	1.8	+1.8
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	1.8	+1.8	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	0.1	+0.1	0.1	+0.1	0.1	+0.1

Table 51: Miles of Evaluated Routes in the Clanton Hills Wilderness Characteristics Unit[18] by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	3.5	0.1	-3.4	2.1	-1.4	3.2	-0.4
Excludes off-route travel (OHV-Limited)	-	-	-	0.0	+0.0	0.0	+0.0
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	0.0	+0.0	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	3.4	+3.4	1.4	+1.4	0.3	+0.3

[17] The Palomas Mountains unit is managed to maintain its wilderness characteristics.
[18] The Clanton Hills unit has been identified but is not managed for its wilderness characteristics.

Table 52: Miles of Evaluated Routes in the East Clanton Hills Wilderness Characteristics Unit[19] by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	8.7	0.8	-7.9	4.5	-4.1	5.1	-3.6
Excludes off-route travel (OHV-Limited)	-	0.5	+0.5	0.5	+0.5	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.1	+0.1	-	-	-	-
Limited to authorized users (OHV-Closed)	-	4.5	+4.5	3.6	+3.6	3.6	+3.6
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	2.8	+2.8	-	-	-	-

Table 53: Miles of Evaluated Routes in the Face Mountain Wilderness Characteristics Unit[20] by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	1.6	1.6	-	1.6	-	1.6	-
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	-	-	-	-	-	-

[19] The East Clanton Hills unit has been identified but is not managed for its wilderness characteristics.
[20] The Face Mountain unit has been identified but is not managed for its wilderness characteristics.

Table 54: Miles of Evaluated Routes in the Little Horn Mountains West Wilderness Characteristics Unit[21] by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	8.6	0.3	-8.4	8.3	-0.3	8.3	-0.3
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	0.3	+0.3	0.3	+0.3
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	8.4	+8.4	-	-	-	-

Table 55: Miles of Evaluated Routes in the Tank Mountains Wilderness Characteristics Unit[22] by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	3.8	1.5	-2.3	1.6	-2.2	3.6	-0.2
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	2.3	+2.3	2.2	+2.2	0.2	+0.2

[21] The Little Horn Mountains West unit has been identified but is not managed for its wilderness characteristics.
[22] The Tank Mountains unit has been identified but is not managed for its wilderness characteristics.

Table 56: Miles of Evaluated Routes in Yuma Ridgway's Rail Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	0.2	-	-0.2	-	-0.2	-	-0.2
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	0.2	+0.2	0.2	+0.2	0.2	+0.2
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	-	-	-	-	-	-

Table 57: Miles of Evaluated Routes in Sonoran Pronghorn Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	59.6	22.8	-36.8	38.3	-21.3	47.6	-12.0
Excludes off-route travel (OHV-Limited)	-	1.8	+1.8	3.0	+3.0	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	4.2	+4.2	2.2	+2.2	0.8	+0.8
Limited to non-motorized use (OHV-Closed)	-	1.3	+1.3	1.3	+1.3	1.3	+1.3
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	29.5	+29.5	14.8	+14.8	9.9	+9.9

Table 58: Miles of Evaluated Routes in Golden Eagle Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	0.1	-	-0.1	-	-0.1	0.1	-
Excludes off-route travel (OHV-Limited)	-	-	-	0.1	+0.1	-	-
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.1	+0.1	-	-	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	-	-	-	-	-	-

Table 59: Miles of Evaluated Routes in California Leaf-nosed Bat Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	0.7	0.2	-0.5	0.3	-0.4	0.3	-0.4
Excludes off-route travel (OHV-Limited)	-	-	-	-	-	0.3	+0.3
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.3	+0.3	0.3	+0.3	-	-
Limited to authorized users (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	0.2	+0.2	0.1	+0.1	0.1	+0.1

Table 60: Miles of Evaluated Routes in Sonoran Desert Tortoise Category 2 Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	131.3	58.0	-73.2	78.4	-52.9	109.3	-22.0
Excludes off-route travel (OHV-Limited)	-	19.2	+19.2	19.8	+19.8	4.8	+4.8
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	0.0	+0.0	-	-	-	-
Limited to authorized users (OHV-Closed)	1.9	16.6	+14.7	13.4	+11.5	10.8	+8.9
Limited to non-motorized use (OHV-Closed)	-	0.3	+0.3	0.3	+0.3	0.2	+0.2
Limited to non-mechanized use (OHV-Closed)	-	1.9	+1.9	1.9	+1.9	-	-
Closed (OHV-Closed)	-	37.1	+37.1	19.3	+19.3	8.1	+8.1

Table 61: Miles of Evaluated Routes in Sonoran Desert Tortoise Category 3 Habitat by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	136.5	49.3	-87.2	91.3	-45.2	105.1	-31.3
Excludes off-route travel (OHV-Limited)	-	1.0	+1.0	1.8	+1.8	2.0	+2.0
Limited by vehicle type (OHV-Limited)	-	-	-	0.3	+0.3	0.4	+0.4
Limited by season (OHV-Limited)	-	28.1	+28.1	2.5	+2.5	-	-
Limited to authorized users (OHV-Closed)	-	12.0	+12.0	11.8	+11.8	6.2	+6.2
Limited to non-motorized use (OHV-Closed)	-	1.3	+1.3	2.7	+2.7	1.4	+1.4
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	44.8	+44.8	25.9	+25.9	21.4	+21.4

Table 62: Miles of Evaluated Routes in the Colorado and Gila River Riparian Area WHA by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	7.0	1.5	-5.5	2.9	-4.1	2.9	-4.1
Excludes off-route travel (OHV-Limited)	-	3.2	+3.2	2.2	+2.2	2.4	+2.4
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	-	-	-	-	-	-
Limited to authorized users (OHV-Closed)	-	1.9	+1.9	1.9	+1.9	1.7	+1.7
Limited to non-motorized use (OHV-Closed)	-	-	-	-	-	-	-
Limited to non-mechanized use (OHV-Closed)	-	-	-	-	-	-	-
Closed (OHV-Closed)	-	0.4	+0.4	-	-	-	-

Table 63: Miles of Evaluated Routes in the Desert Mountains WHA by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	583.1	216.7	-366.4	365.6	-217.5	458.1	-125.0
Excludes off-route travel (OHV-Limited)	-	55.2	+55.2	73.0	+73.0	36.0	+36.0
Limited by vehicle type (OHV-Limited)	-	-	-	0.7	+0.7	0.8	+0.8
Limited by season (OHV-Limited)	-	66.1	+66.1	6.4	+6.4	-	-
Limited to authorized users (OHV-Closed)	5.2	61.6	+56.4	43.1	+37.9	32.9	+27.7
Limited to non-motorized use (OHV-Closed)	-	1.9	+1.9	3.4	+3.4	1.9	+1.9
Limited to non-mechanized use (OHV-Closed)	-	6.0	+6.0	6.0	+6.0	-	-
Closed (OHV-Closed)	0.9	181.8	+180.8	90.9	+90.0	59.4	+58.5

Table 64: Miles of Evaluated Routes in the Palomas Plain WHA by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	903.4	423.3	-480.1	582.5	-320.9	724.8	-178.7
Excludes off-route travel (OHV-Limited)	-	76.7	+76.7	103.7	+103.7	44.3	+44.3
Limited by vehicle type (OHV-Limited)	-	-	-	0.7	+0.7	0.7	+0.7
Limited by season (OHV-Limited)	-	51.4	+51.4	2.4	+2.4	-	-
Limited to authorized users (OHV-Closed)	5.2	75.9	+70.7	57.5	+52.4	43.4	+38.2
Limited to non-motorized use (OHV-Closed)	-	0.6	+0.6	0.6	+0.6	0.5	+0.5
Limited to non-mechanized use (OHV-Closed)	-	6.0	+6.0	6.0	+6.0	-	-
Closed (OHV-Closed)	-	274.7	+274.7	155.1	+155.1	94.9	+94.9

Table 65: Miles of Evaluated Routes in the Wildlife Movement Corridors WHA by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Miles	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)	Miles	Change from Alt A (miles)
Open to all use (OHV-Open)	95.6	23.2	-72.5	50.7	-44.9	73.4	-22.2
Excludes off-route travel (OHV-Limited)	-	25.5	+25.5	27.0	+27.0	13.2	+13.2
Limited by vehicle type (OHV-Limited)	-	-	-	-	-	-	-
Limited by season (OHV-Limited)	-	3.7	+3.7	0.1	+0.1	-	-
Limited to authorized users (OHV-Closed)	5.2	11.6	+6.4	8.6	+3.4	9.0	+3.9
Limited to non-motorized use (OHV-Closed)	-	-	-	1.4	+1.4	0.1	+0.1
Limited to non-mechanized use (OHV-Closed)	-	5.2	+5.2	5.2	+5.2	-	-
Closed (OHV-Closed)	-	31.6	+31.6	7.9	+7.9	5.1	+5.1

Table 66: Number of Evaluated Routes Accessing Recreation Destinations by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	208	94	-114	144	-64	175	-33
Excludes off-route travel (OHV-Limited)	0	5	+5	10	+10	6	+6
Limited by vehicle type (OHV-Limited)	0	0	-	1	+1	1	+1
Limited by season (OHV-Limited)	0	28	+28	4	+4	0	-
Limited to authorized users (OHV-Closed)	0	20	+20	16	+16	6	+6
Limited to non-motorized use (OHV-Closed)	0	0	-	1	+1	1	+1
Limited to non-mechanized use (OHV-Closed)	0	0	-	0	-	0	-
Closed (OHV-Closed)	0	61	+61	32	+32	19	+19

Table 67: Number of Evaluated Routes Accessing Range Improvement Locations by Detailed Designation

	Alt. A	Alt. B		Alt. C		Alt. D	
Designation	Routes	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)	Routes	Change from Alt A (routes)
Open to all use (OHV-Open)	83	44	-39	53	-30	68	-15
Excludes off-route travel (OHV-Limited)	0	5	+5	4	+4	3	+3
Limited by vehicle type (OHV-Limited)	0	0	-	1	+1	1	+1
Limited by season (OHV-Limited)	0	1	+1	0	-	0	-
Limited to authorized users (OHV-Closed)	1	21	+20	17	+16	9	+8
Limited to non-motorized use (OHV-Closed)	0	0	-	0	-	0	-
Limited to non-mechanized use (OHV-Closed)	0	1	+1	1	+1	0	-
Closed (OHV-Closed)	0	12	+12	8	+8	3	+3

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APPENDIX C. ROUTE REPORTS

Following completion of the travel route inventory and adjustments to existing BLM GIS data, a BLM IDT met for several week-long planning sessions to systematically review and evaluate each of the inventoried travel routes. During route evaluation, the BLM IDT used the ARS Route Evaluation software and GIS to systematically review, discuss, and document each route's location, physical characteristics, current management, operation and maintenance, authorized and permitted uses, public uses, associated biomes, all known natural and cultural resources, proximity to resources of concern, specially designated areas, and resource issues. Each intensive evaluation session included ongoing interactive IDT discussions of each route's resource and resource use concerns, as well as any route-specific public scoping information available at the time of the evaluation process.

For each route, the IDT also considered and addressed the 43 CFR 8342.1 Designation Criteria, selecting applicable rationale demonstrating how the route would minimize impacts for each of the route's preliminary alternative designations. The process resulted in extremely thorough data capture, produced a preliminary range of reasonable designation alternatives for each route based on the alternative themes, and created a complete record of the process as documented in the route reports. This initial route evaluation process occurred over a number of weeks.

The full collection of route reports is available on the BLM's ePlanning site. Route reports provide a record of the BLM Identification Team (IDT) evaluation of each route identified during the route inventory. The header of each page of a route report displays the number that was used to identify the route during evaluation (e.g., YG1273). The number placed on published maps and used on route signs may not be the same. Each route report includes three sections: "General Background," "Evaluation Information," and "Designation Alternatives."

General Background

The first part of the "General Background" section of a route report shows the route's evaluation session date, the name of the session's contracted facilitator (in this case, planners working for BLM's contractor), and the BLM resource specialists (biologists, archaeologists, recreation planners, etc.) responsible for evaluation of the route. The second part of the "General Background" section provides physical information about the route such as length, width, use, jurisdictions over which it passes, and origin (if known). This section also discloses the level of maintenance a route receives, if any. Routes that are noted as *bladed* or *regularly maintained* are likely to see a higher level of use and, because they are bladed and tend to be wider as a result of routine blading, minimize the need for vehicles to travel off-route for the purposes of passing or parking. Routes that are *infrequently maintained* or for which no maintenance is recorded in the route report may occasionally receive light maintenance but tend to be narrower user-created two-track type routes. Other information may also be included along with citizen comments and proposals, as applicable.

Route Report for YG1273

Facilitator(s):	Cole Weeks	**Initial Evaluation Date:**	8/31/2023

Evaluators: **Tammy Pike**, State Travel Lead; **Cristina Francois**, Botanist; **Joliviette Sloan**, IDT member; **Doug Whitbeck**, Rangeland Management Specialist; **Keenan Murray**, Geologist; **Rachel Luu**, GIS Specialist; **Geoff Walsh**, Wildlife Biologist; **Lee Shenk**, IDT member; **Matt Basham**, Archeologist

TMA:	Yuma East/Gila River			
Length: 0.3 mi.	**Width:** Dual Track	**Class:**	Primitive Roads	**Use Level:** Low
Route Type(s):	Spur			
Surface:	None identified by IDT	**Maintained:**	Minimally	
Origin:	None identified by IDT	**Constructed:**	None identified by IDT	
Jurisdictions:	BLM			

Additional Information: None.

General Evaluation Questions

Does this route:	
• either wholly or in part, have a right-of-way grant or is it simply an officially-recognized route maintained by a county or another government agency?	**NO**
• provide commercial, private property, or administrative access, e.g., via permit, ingress/egress rights or other jurisdictional responsibility?	**NO**
• provide a principal means of connectivity within a Travel Management Area or Management Zone?	**NO**
• exist as a result of a previous agency land use or implementation-level planning document decision and is managed as a transportation facility asset?	**NO**
• provide an important linkage between Travel Management Areas or Management Zones?	**NO**
Does this route provide network connectivity that contributes to recreational opportunities, access to specific recreation sites, public safety, or other public multi-use access opportunities enumerated in agency Organic laws?	**YES**
Might the continued use of this route potentially impact:	
• State or Federal special status species or their habitat?	**YES**
• cultural or any other specially-protected resources or objects identified in Agency planning documents?	**YES**
• any special area designations, e.g., National Monuments?	**YES**
• any other resources of concern?	**YES**
Can the anticipated potential impacts to the identified resources be avoided, minimized, i.e., reduced to acceptable levels, or be mitigated?	**YES**
Can the commercial, private property, recreation or public uses of this route be adequately met by another route or routes that may minimize impacts to the resources identified as part of this evaluation or that may minimize cumulative effects on various other resources?	**NO**

Evaluation Information

Evaluation information in a route report is divided into three colored boxes that address the topics of Commercial, Administrative, Property, and Economics (yellow), public uses (blue), and special resource concerns (green).

Commercial, Administrative, Property, and Economics

The first part of the "Evaluation Information" section focuses on commercial, administrative, property, and economics issues. In this section, the general issue questions for commercial, administrative,

property, and economics are answered, and a listing of facilities and access is provided. There are three types of access identified:

- Primary = Main access
- Alternate = Secondary or backdoor access
- Link = Route necessary for use of the primary access

Evaluation Information

Commercial, Administrative, Property and Economics

The following items help to identify the purpose and need of this route. This route provides access to the following facilities and/or jurisdictions for the purpose of carrying out administrative and/or authorized operations or for jurisdictional access.

Primary Access *(leads directly to the listed jurisdiction or facility, and IS the main route used for access)*

Type	Description
None identified by IDT	

Alternate Access *(leads directly to the listed jurisdiction or facility, but IS NOT the main route used for access)*

Type	Description
None identified by IDT	

Link Access *(does not lead directly to the listed jurisdiction or facility, but is required to access a primary access route)*

Type	Description
None identified by IDT	

Recreational Uses

The second part of the "Evaluation Information" section focuses on public uses and provides a list identifying the facilities, modes of transportation, and activities associated with the route. If a facility, mode of transportation, or activity was not identified as associated with the route, it is not listed. As in the previous section, facility access is listed using the categories of "Primary," "Alternate," and "Link." Mode of transportation and activity are indicated by:

- Primary = Main mode or activity on the route
- Secondary = Other common modes and activities
- Infrequent = Uncommon modes or activities

Recreational Uses

The following items help to identify the purpose and need of this route. This route:
- provides public travel access to the listed recreation sites using the listed travel modes, and/or
- provides for recreational activity and experience opportunities in the area, and/or
- provides important route network connectivity for recreational access between two or more other routes.

Primary Access/Uses *(main route used to access the destinations or use activities listed)*

Type	Description
Activities	Wildlife Watching
	Vehicle Exploring
	Camping
	Bicycling/Mountain Biking
	Birding
	Hiking
	Hunting
Modes of Transportation	Stock 4 Wheel Drive
	Modified 4 Wheel Drive
	UTV
	ATV
	Motorcycle
	2WD vehicle

Alternate Access / Secondary Uses *(used to access the destinations or use activities listed, but not considered the main route)*

Type	Description
Modes of Transportation	By Horse
	By Foot
	Bicycle

Link Access / Infrequent Uses *(rarely used to access the destinations or use activities listed)*

Type	Description
None identified by IDT	

Resource and Use Issues

The third part of the "Evaluation Information" section focuses on special resource concerns. General issue questions for special resource concerns are answered. Then resources and concerns are identified. These are grouped into general categories such as:

- Biomes
- Special status animals
- Managed species
- Resource issues, etc.

In the "Resource and Use Issues" box, routes are characterized as:

- In = Route or a portion of the route is in the resource area or area of concern
- Leads To = Route provides access to the resource area or area of concern but is not in the resource or area
- Crosses = Route crosses the resource (e.g., a route crossing a stream or a cultural site directly on the route)
- Prox = Proximate to; the route is near the resource or area of concern as indicated by the distance

Resource and Use Issues

The following items help to identify potential natural and cultural resource issues associated with the location and use of this route. This route is located in, leads to, crosses, or is within a set distance of the following resources or issues.

Resource Type	Description
Biomes	In Lower Colorado Subdivision Sonoran Desertscrub
Special Status Animals	In Sonoran pronghorn (A. americana sonoriensis) habitat (E)
	In Western burrowing owl (A. cunicularia hypugaea) habitat (S)
	In American peregrine falcon (F. peregrinus anatum) habitat (S)
	In California leaf-nosed bat (Macrotus californicus) habitat (S)
	In Yellow-billed cuckoo (Coccyzus americanus) habitat (T)
	In Leconte's thrasher (Toxostoma lecontei) habitat (S)
Managed Species	In Mourning dove habitat
	In Mule deer habitat
	In Gambel's quail habitat
	In Javelina habitat
	In White-winged dove habitat
	In Mountain lion habitat
	In Mexicana desert bighorn sheep habitat
Cultural Resources	In Other (Cultural resources subject to WAPA Programmatic Agreement)
VRM/RSC	In Rural
	In VRM Class III - Partially Retain existing char.
Special Management Areas	In National Historic Trail (Juan Bautista de Anza NHT; Butterfield Overland NHT
	Butterfield Overland NHT)
	In RMZ - Recreation Management Zone (Southwest Desert Communities RMZ)
	In SRMA - Special Recreation Management Area (Greater Yuma Destination SRMA)
	In Wildlife Habitat Area
Misc. Resources	In PFYC - Unknown

Note: *Specific sensitive resources, such as cultural resources, paleontological resources, or threatened or endangered species are not listed in this report for their protection, but were considered during the evaluation of this route.*

Designation Alternatives

The route report also contains the IDT's evaluation of alternative designations for each route. Alternative A (No Action/Current Management) simply states the current management of a route and its area designation (no color). The action alternatives (Alternatives B, C, and D in this example) are color-coded to "Open w/Management" or "Open" (green), "Limited w/Management" or "Limited" (orange), and "Closed" (pink).

For Open and Limited designations, "w/ Management" indicates that there are types of limitations, and that there would be adaptive management or other specific mitigation, maintenance, and/or monitoring that was identified during evaluation. The "w/ Management" portion of Limited and Open designation labels are route specific; it is not used in designation labels found earlier in this document. If there is management assigned to the selected designation for the route, that management will be required as part of the TMP.

Limited alternatives include specific limitations regarding route use (e.g., limited by season, vehicle width, etc.). For Closed alternatives, information is provided about how routes would be closed/decommissioned. Also, if a route is redundant to another route, that is specified.

The Designation Alternatives also documents how the BLM IDT assessed the manner in which each potential route designation within the TMA is consistent with 43 CFR 8342.1.

Potential Alternative Route Designations

Alternative A (Current Management, No Action Alternative)

Area Designation:
Limited to Existing Routes

Route Designation:
Open

Specific designations by user type:

Administrative/Official Users: All Federal, State and Local agencies may use this route by all motorized modes, year-round.

Authorized/Permitted Users: Currently authorized users may use this route by all motorized modes, year-round.
Additional users may be authorized by the BLM through future authorizations.

Non-motorized Public: The public may use this route by all non-motorized modes, year-round.

OHV Public: **Designation per 43 CFR § 8342.1: Open** - The public may use this route by all motorized modes, year-round.

Alternative B

Comprehensive Designation:
CLOSED
This route will be decommissioned and not managed as a BLM transportation asset. Unless otherwise signed, cross-country foot and animal use is allowed in the area.

OHV Public: Designation per 43 CFR § 8342.1: Closed

Specific Designation Criteria Addressed and Relevant to Route Issues:
• 43 CFR § 8342.1 (a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.
• 43 CFR § 8342.1 (b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

How Designation Addresses Criteria Above: Closing the route would reduce the potential for travel-related impacts to special status species and their habitats by eliminating motorized use and removing the route footprint. Closing this route would minimize impacts to wildlife habitat by eliminating motorized uses (reducing the potential for harassment of wildlife) and removing the route footprint (reducing habitat fragmentation.) Closing this route, along with natural reclamation, would minimize visual contrast created by the route.

Designation Criteria Addressed but Not Relevant to Route Issues:
(no known conflicts among users or no known resource concerns to minimize for)

• 43 CFR § 8342.1 (c)
• 43 CFR § 8342.1 (d)

Closure Method: Obscure with local materials to visual horizon, Natural rehabilitation

Alternative C

Comprehensive Designation:
LIMITED W/ MANAGEMENT

Comprehensive Designation Type:
Limited to season.

Specific designations by user type:

Administrative/Official Users: All Federal, State and Local agencies may use this route by all motorized modes, except from January 1 to April 30, when the route is closed to motorized use. The limit is applied to this route because of Mexicana desert bighorn sheep reproductive area. Exception to the closure includes motorized use when necessary by administration, permittees, or owners.

Authorized/Permitted Users: Currently authorized users may use this route by all motorized modes, except from January 1 to April 30, when the route is closed to motorized use. The limit is applied to this route because of Mexicana desert bighorn sheep reproductive area. Exception to the closure includes motorized use when necessary by administration, permittees, or owners.
Additional users may be authorized by the BLM through future authorizations.

Non-motorized Public: The public may use this route by all non-motorized modes, year-round.

OHV Public: **Designation per 43 CFR § 8342.1: Limited** - The public may use this route by all motorized modes, except from January 1 to April 30, when the route is closed to motorized use. The limit is applied to this route because of Mexicana desert bighorn sheep reproductive area. Exception to the closure includes motorized use when necessary by administration, permittees, or owners.

Designation Criteria Addressed and Relevant to Route Issues:
• 43 CFR § 8342.1 (a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.
• 43 CFR § 8342.1 (b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

How Designation Addresses Criteria Above: Allowing continued use of this route would minimize the potential for impacts to documented resources by providing specific recreation activity and experience opportunities that reduce or eliminate the inclination for users to travel off-route. By limiting motorized access on this route, traffic volume in the area would be reduced, minimizing the potential for impacts to special status species. Due to the traffic volume and speeds expected on this route, allowing its continued use would contribute to minimizing the route's potential for habitat damage, wildlife harassment, and disruption to movement patterns. By providing a well-managed route that reduces the inclination for visitors to travel off-trail, the potential for damage to wildlife habitats would be minimized.

Designation Criteria Addressed but Not Relevant to Route Issues:
(no known conflicts among users or no known resource concerns to minimize for)
• 43 CFR § 8342.1 (c)
• 43 CFR § 8342.1 (d)

Potential Management Actions:
Mitigation: Signing - Regulatory

Potential management actions may be incorporated with an overall monitoring strategy that would assess the status and/or integrity of the potentially impacted sensitive resource or resource issues identified as they relate to various external factors, e.g., climate cycles, exotic species introduction, visitor use levels (type, intensity, and season of use), etc. Monitoring data that indicate a decline in resource integrity or reveal methods of mitigation that proved to be unsuccessful would then trigger adaptive and appropriate responses aimed at restoring integrity or successfully mitigating undesirable conditions.

Alternative D

Comprehensive Designation:
OPEN

Specific designations by user type:

Administrative/Official Users: All Federal, State and Local agencies may use this route by all motorized modes, year-round.

Authorized/Permitted Users: Currently authorized users may use this route by all motorized modes, year-round.
Additional users may be authorized by the BLM through future authorizations.

Non-motorized Public: The public may use this route by all non-motorized modes, year-round.

OHV Public: **Designation per 43 CFR § 8342.1: Open** - The public may use this route by all motorized modes, year-round.

Designation Criteria Addressed and Relevant to Route Issues:
• 43 CFR § 8342.1 (a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.
• 43 CFR § 8342.1 (b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

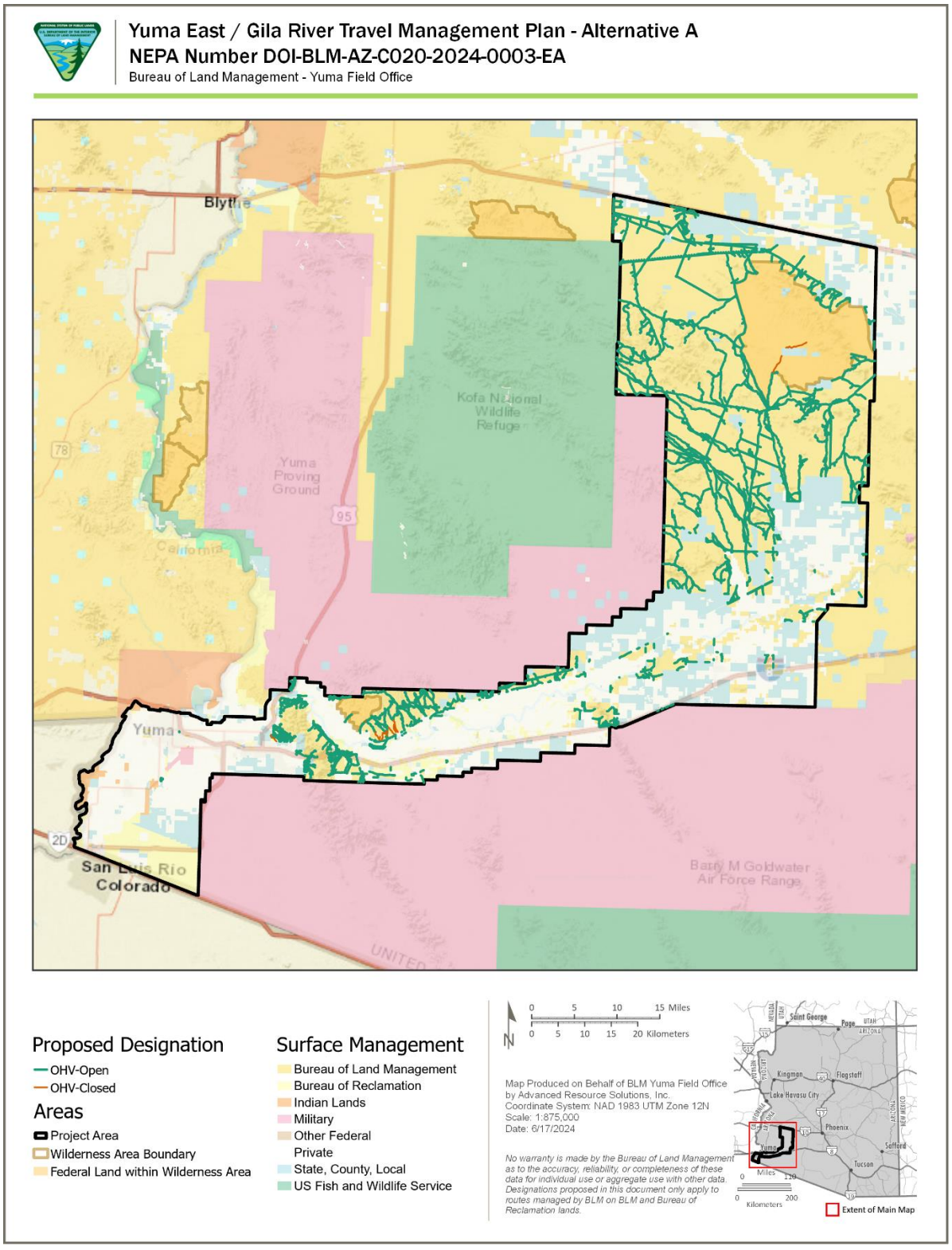
How Designation Addresses Criteria Above: By providing a managed route that reduces the inclination for visitors to travel off-trail, the potential for damage to special status species habitats would be minimized. Due to the traffic volume and speeds expected on this route, allowing its continued use would contribute to minimizing the route's potential for habitat damage, wildlife harassment, and disruption to movement patterns. By providing a well-managed route that reduces the inclination for visitors to travel off-trail, the potential for damage to wildlife habitats would be minimized.

Designation Criteria Addressed but Not Relevant to Route Issues:
(no known conflicts among users or no known resource concerns to minimize for)
• 43 CFR § 8342.1 (c)
• 43 CFR § 8342.1 (d)

APPENDIX D. ALTERNATIVE ROUTE NETWORK MAPS

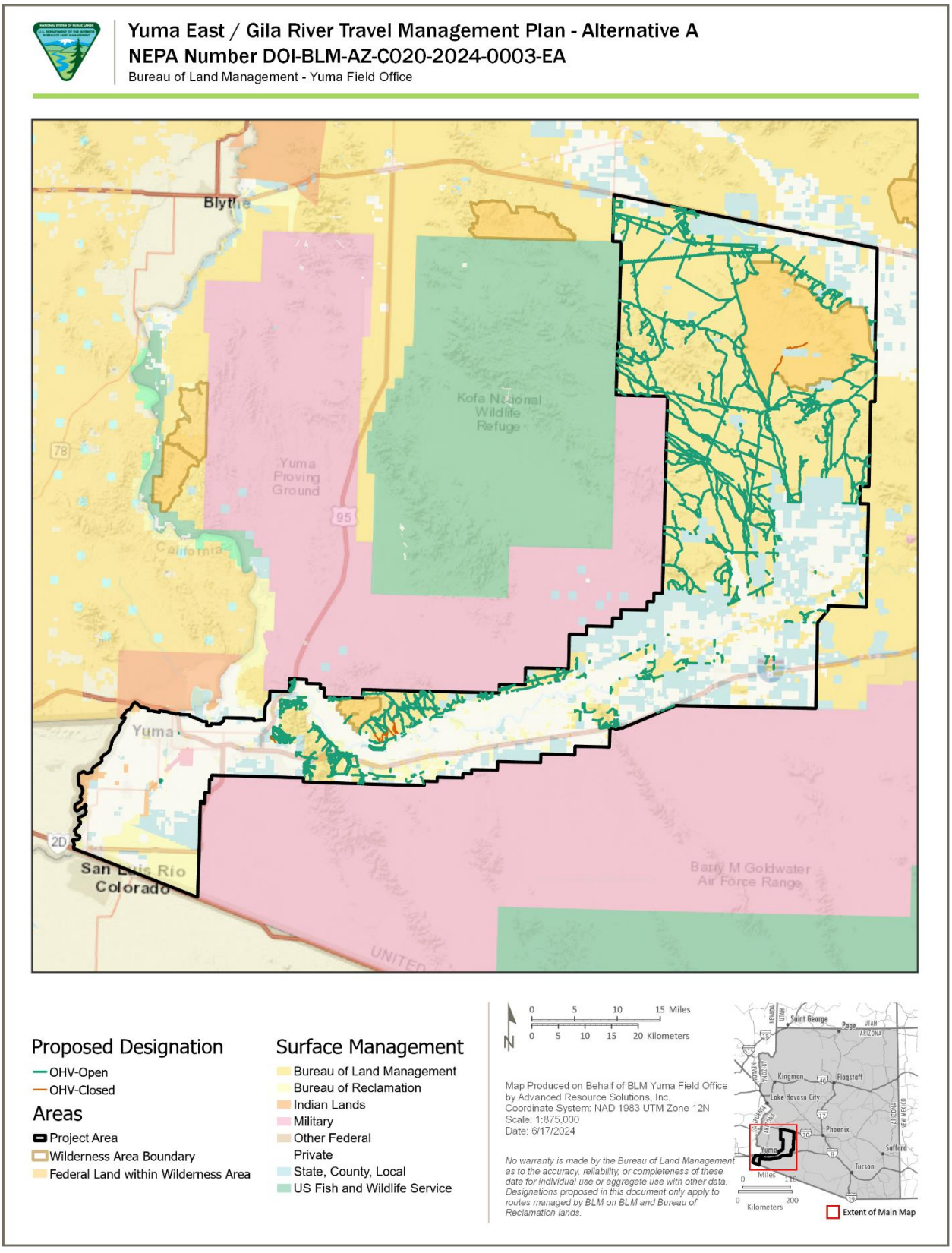
Alternative A

Map 2: Alternative A Route Network



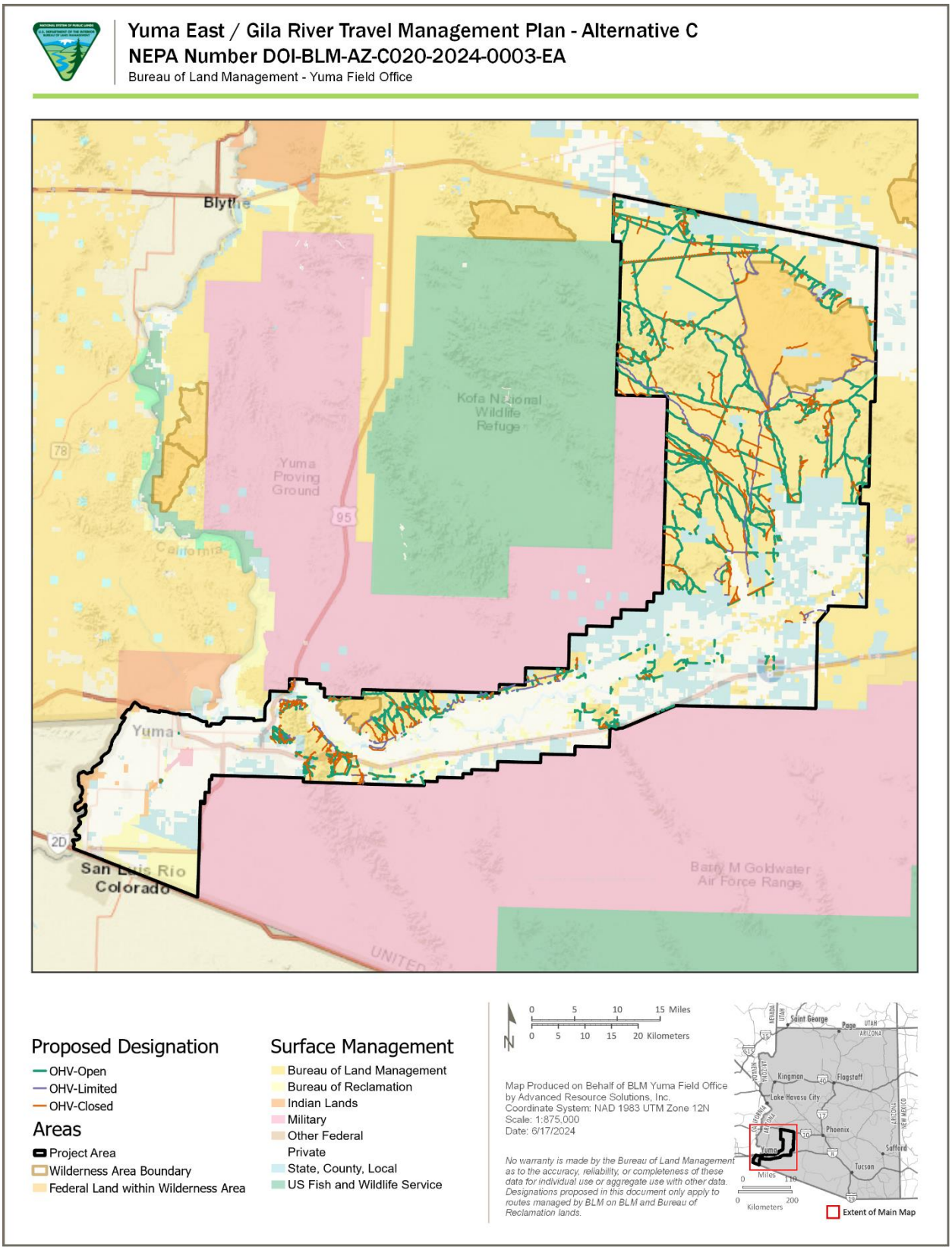
Alternative B

Map 3: Alternative B Route Network



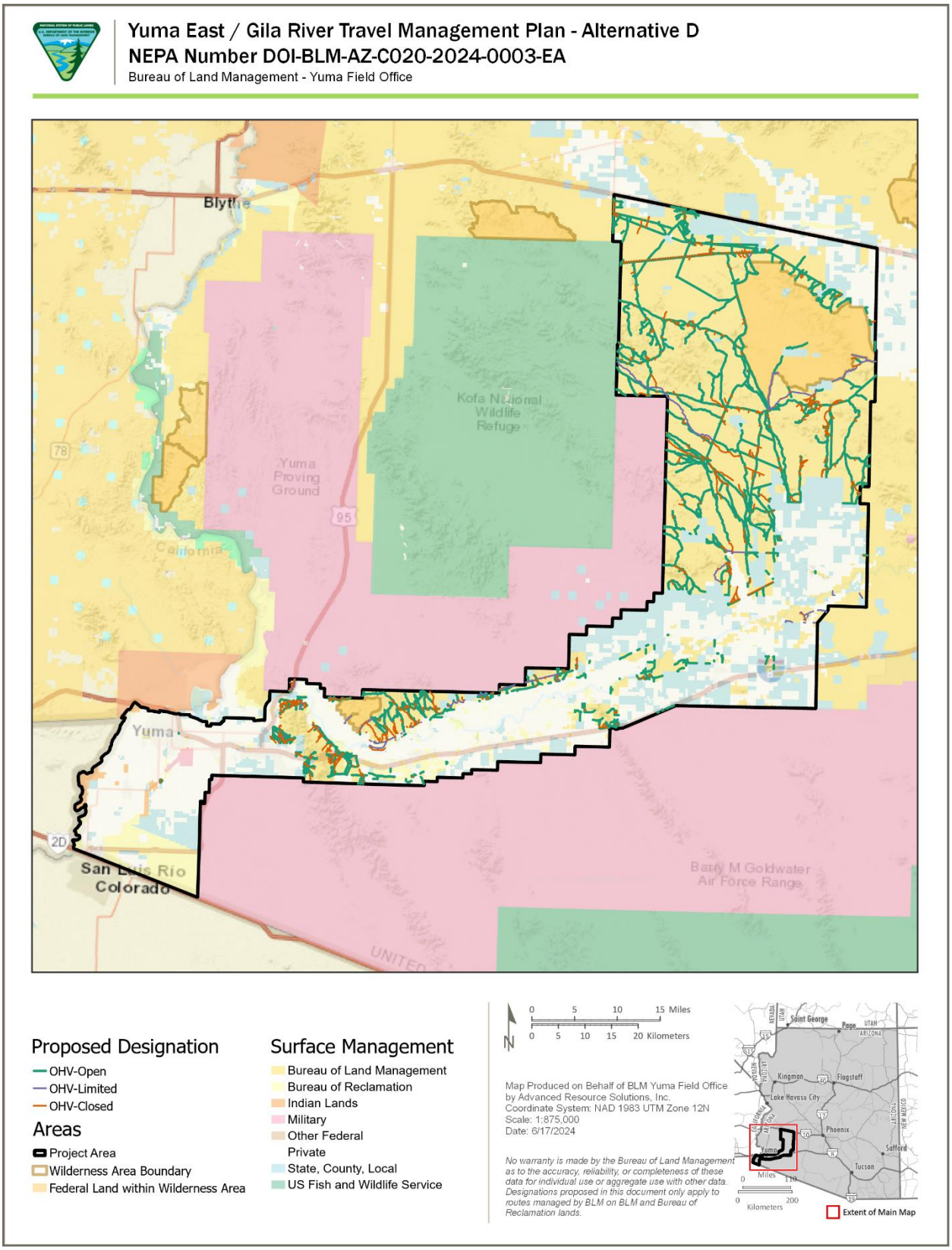
Alternative C

Map 4: Alternative C Route Network



Alternative D

Map 5: Alternative D Route Network



APPENDIX E. GLOSSARY

Access: The opportunity to approach, enter, and/or cross public lands. (BLM 2016)

Adaptive management: A system of management practices based on clearly identified outcomes and monitoring to determine whether management actions are meeting desired outcomes; and, if not, facilitating management changes that will best ensure that outcomes are met or re-evaluated. Adaptive management recognizes that knowledge about natural resource systems is sometimes uncertain. (43 CFR 46.30 Definitions)

Administrative use: Travel-related access for official use by BLM employees and agency representatives during the course of their duties using whatever means is necessary. Access is for resource management and administrative purposes and may include fire suppression, cadastral surveys, permit compliance, law enforcement, and resource monitoring or other access needed to administer BLM-managed lands or uses. (BLM 2016)

All-terrain vehicle (ATV): A motorized, wheeled vehicle other than a snowmobile, which is defined as having a wheelbase and chassis of 50 inches in width or less, handlebars for steering, generally a dry weight of 800 pounds or less, three or more low-pressure tires, and a seat designed to be straddled by the operator. (BLM 2012a)

Alternatives: Other options to the proposed action by which the BLM can meet its purpose and need. The BLM is directed by the NEPA to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.…" (BLM 2008a)

Asset: A non-building facility and transportation construction, which include roads, primitive roads, and trails that are included in FAMS. The BLM maintains assets through the annual and deferred maintenance programs. (BLM 2016)

Authorized use: Travel-related access for users authorized by the BLM or otherwise officially approved. Access may include motorized access for permittees, lessees or other authorized users, along with approved access across BLM-administered public lands for other state and federal agencies. (BLM 2016)

Categorical Exclusion (CX): A category of actions that the agency has determined, in its agency NEPA procedures, normally do not have a significant effect on the human environment (40 CFR 1508.1). A categorical exclusion is a form of NEPA compliance, without the analysis that occurs in an EA or an EIS. It is not an exemption from the NEPA (BLM 2008a).

Code of Federal Regulations (CFR): The codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government. It is divided into 50 titles that represent broad areas subject to Federal regulation. (https://www.govinfo.gov/help/cfr)

Cooperating agency: Assists the lead Federal agency in developing an environmental assessment or environmental impact statement. These can be any agencies with jurisdiction by law or special expertise for proposals covered by NEPA (40 CFR 1501.6). Any tribal, Federal, State, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency. (BLM 2008a)

Critical habitat: An area occupied by a threatened or endangered species on which are found physical and biological features that are (1) essential to the conservation of the species, and (2) may require special management considerations or protection. (16 USC 1532(5))

Cultural resource: A definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological,

historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit. They may be but are not necessarily eligible for the National Register of Historic Places (NRHP). (BLM 2004a)

Cultural resource inventory classes:

- Class I - existing information inventory: a study of published and unpublished documents, records, files, registers, and other sources, resulting in analysis and synthesis of all reasonably available data. Class I inventories encompass prehistoric, historic, and ethnological/sociological elements, and are in large part chronicles of past land uses. They may have major relevance to current land use decisions.
- Class II - probabilistic field survey: a statistically based sample survey designed to help characterize the probable density, diversity, and distribution of archaeological properties in a large area by interpreting the results of surveying limited and discontinuous portions of the target area.
- Class III - intensive field survey: a continuous, intensive survey of an entire target area, aimed at locating and recording all archaeological properties that have surface indications, by walking close-interval parallel transects until the area has been thoroughly examined. Class III methods vary geographically, conforming to the prevailing standards for the region involved. (BLM 2004a)

Cumulative effects: According to the Code of Federal Regulations, a cumulative effect "is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). In other words, these effects are the sum of the direct and indirect effects of an action and the direct and indirect effects of other actions on the same affected resources/uses.

Decision record (DR): The BLM document associated with an EA that describes the action to be taken when the analysis supports a finding of no significant impact. (BLM 2008a)

Decommission: The process of removing travel routes (i.e., transportation linear features) that are unauthorized or no longer needed. Transportation linear features that are not part of the defined travel route network or transportation system are transportation linear disturbances. The process for decommissioning routes may include site-specific reclamation actions, natural revegetation, or a toolset to complete reclamation should opportunities arise. Reclamation actions must be consistent with the goals and objectives for the area in which they occur. Reclamation can be passive or active. Linear features identified as transportation linear disturbances will remain in the national geospatial dataset until reclamation and subsequent monitoring is complete or all on-the-ground indications of the route have vanished. After that, the BLM will remove these features from the national ground transportation linear feature dataset(s), but store them in a secondary local dataset of decommissioned and reclaimed routes. (BLM 2016)

Designated routes: Specific roads and trails identified by the BLM where some type of use is appropriate and allowed. Route designations are implementation decisions that govern OHV activities on routes. (BLM 2016)

Direct effect: Caused by the action and occur at the same time and place (40 CFR 1508.8(a)).

Easement: An authorization for a non-possessory, non-exclusive interest in lands which specifies the rights of the holder and the obligation of the BLM to use and manage the lands in a manner consistent with the terms of the easement. (43 CFR 2920.05 Definitions)

E-bike: Two- or three-wheeled cycle with fully operable pedals and an electric motor of not more than 750 watts (1 h.p.) that meets the requirements of one of the following three classes:

- Class 1 electric bicycle shall mean an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour.
- Class 2 electric bicycle shall mean an electric bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of 20 miles per hour.
- Class 3 electric bicycle shall mean an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour. (85 FR 69223, Nov. 2, 2020)

Effect: Impact to the human environment brought about by an agent of change, or action. Effects analysis predicts the degree to which the environment will be affected by an action. The CEQ uses both the terms "effect" and "impact" in the NEPA regulations; these terms are synonymous in the NEPA context. As a noun, other synonyms include consequence, result, and outcome. Effects can be both beneficial and detrimental, and may be direct, indirect, or cumulative. (BLM 2008a)

Eligible cultural resource: Cultural resources that are listed or recommended eligible for inclusion on the National Register of Historic Places (National Register); this includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria (36 CFR 800.2(e)). A district, site, building, structure, object, traditional cultural property, historic landscape, or discrete group of thematically related properties, that represents America's history, architecture, archaeology, engineering, or culture may be eligible for the National Register (BLM 2004b). To be judged eligible, a property must possess integrity of location, design, setting, materials, workmanship, feeling, and association, and must meet at least one of the following criteria:

1. Property is associated with an event or events that have made a significant contribution to the broad patterns of America's history.
2. Property is associated with the lives of persons significant in our past.
3. Property embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction.
4. Property has yielded or may be likely to yield information important in prehistory or history.

Endangered species: Any species which is in danger of extinction throughout all or a significant portion of its range. (16 USC 1532 Definition)

Endangered Species Act (ESA): The Endangered Species Act establishes protections for fish, wildlife, and plants that are listed as threatened or endangered; provides for adding species to and removing them from the list of threatened and endangered species, and for preparing and implementing plans for their recovery; provides for interagency cooperation to avoid take of listed species and for issuing permits for otherwise prohibited activities; provides for cooperation with States, including authorization of financial assistance; and implements the provisions of the Convention on International Trade in Endangered Species of Wild Flora and Fauna. (https://www.fws.gov/law/endangered-species-act)

Environmental assessment (EA): A concise public document that provides sufficient evidence and analysis for determining the significance of effects from a proposed action and that serves as a basis for reasoned choice. Based upon the EA analysis, either an EIS or a FONSI will be prepared. (BLM 2008a)

Environmental Impact Statement (EIS): Federal agencies prepare an EIS if a proposed federal action will have a significant environmental impact (BLM 2008a). The regulatory requirements for an EIS are more detailed and rigorous than the requirements for an EA.

Erosion: Detachment and movement of soil or rock fragments by water, wind, ice, gravity; the land surface worn away by running water, wind, ice, or other geological agents, including such processes as gravitational creep. (BLM 2020)

Facility: All or any portion of a building, structure, site improvement, element, pedestrian route, or vehicular way located on a site. An element is an architectural or mechanical component, generally including toilets, picnic tables, grills, registration kiosks, etc. at a site (including a staging site). (BLM 2016)

Facility Asset Management System (FAMS): The BLM's official database for the management of transportation system assets and facilities. (BLM 2016)

Finding of No Significant Impact (FONSI): A finding that explains that an action will not have a significant effect on the environment and, therefore, an EIS will not be required. (BLM 2008a)

Geographic Information System (GIS): "System designed to capture, store, manipulate, analyze, manage, and present all types of geographical data. The key word to this technology is Geography – this means that some portion of the data is spatial. In other words, data that is in some way referenced to locations on the earth. Coupled with this data is usually tabular data known as attribute data. Attribute data can be generally defined as additional information about each of the spatial features. An example of this would be schools. The actual location of the schools is the spatial data. Additional data such as the school name, level of education taught, student capacity would make up the attribute data. It is the partnership of these two data types that enables GIS to be such an effective problem-solving tool through spatial analysis. GIS is more than just software. People and methods are combined with geospatial software and tools, to enable spatial analysis, manage large datasets, and display information in a map/graphical form." (University of Wisconsin-Madison Libraries)

Ground Transportation Linear Feature (GTLF): A geospatial database of all transportation linear features (from motorized to foot use) as they exist on the ground, not just those in the BLM transportation system (refer to the Ground Transportation Linear Features Data Standard Report, October 22, 2014, version 2.0 or later, for detailed information on the GTLF data standard). (BLM 2016)

Historic property: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria. (BLM 2004a)

Impact: See "effect."

Impassable: Roads intended for full-size vehicle passage that are otherwise impassable as a result of road deterioration or vegetation overgrowth; project-level road maintenance is required to make these roads passable. Road deterioration or vegetation overgrowth may be a result of neglect, irregular maintenance, or management decisions. (BLM 2014a)

Implementation decisions: Decisions that take action to implement land use planning; generally appealable to Interior Board of Land Appeals under 43 CFR 4.410 (BLM 2000). These decisions are generally more site-specific than land-use plan decisions.

Implementation plan: An area or site-specific plan written to implement decisions made in a land use plan. Implementation plans include both activity plans and project plans. (BLM 2000).

Indirect effect: Caused by the action and later in time or farther removed in distance, but still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the patter of land use, population density, or growth rate, and related effects on water and air and other natural systems, including ecosystems. (40 CFR 1508.8(b))

Invasive plants: Plant species that are typically not found on the ecological site or should only be in the trace or minor categories under the natural disturbance regime and have the potential to become a dominant or codominant species on the site if their establishment and growth are not actively controlled by natural disturbances or management interventions. (BLM 2020)

Land use plan: A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land-use-plan level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed (BLM 2000). The term includes both resource management plans (RMPs) and management framework plans (MFPs).

Linear disturbance: A human-made linear travel or transportation related disturbance that is not part of the BLM's transportation system or travel network. Transportation linear disturbances may include engineered (planned) but no longer needed features, as well as unplanned routes that have been identified for decommissioning and reclamation either passively or actively. Linear disturbances may also include permitted realty features (e.g., pipelines or power lines) that may or may not have travel routes maintained in association with them. (BLM 2012a, BLM 2016)

Linear feature: Linear features represent the broadest category of physical disturbance (planned and unplanned) on BLM land. A linear feature is a linear ground disturbance that results from travel across or immediately over the surface of BLM-administered public lands. These features include engineered roads and trails, as well as user-defined, non-engineered routes, created as a result of public or unauthorized use. Linear features may also include permitted realty features (e.g., pipelines or power lines) that may or may not have travel routes maintained in association with them. (BLM 2012a, BLM 2016)

Mechanized travel: Moving by means of mechanical devices not powered by a motor, such as a bicycle. (BLM 2016)

Minimize: Limit the degree or magnitude of. (BLM 2008a)

Missed route: Route that is, through human or technological error, inadvertently missed during route inventory efforts preceding a travel management planning process.

Mitigation: Measures that could reduce or avoid adverse impacts. Mitigation measures have not been incorporated into the proposed action or an alternative (BLM 2008a). Mitigation can include: (a) avoiding the impact, (b) minimizing the impact, (c) rectifying (i.e., repairing, rehabilitating, or restoring) the impact (d) reducing or eliminating the impact through operations during the life of the project, or (e) compensating by replacing or substituting resources (40 CFR 1508.20).

Monitoring: The process of tracking whether decisions were implemented as designed, their effectiveness in achieving desired outcomes, and the effectiveness of mitigation measures. Monitoring can also determine whether the impact analysis was accurate. (BLM 2008a)

Motorized vehicles: Vehicles propelled by motors or engines, such as cars, trucks, off-highway vehicles, motorcycles, snowmobiles, and boats. (BLM 2016)

Multiple use: 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. (43 USC 1702(c))

National Environmental Policy Act (NEPA): Legislation passed by Congress in 1969 and signed into law on January 1, 1970, that established a landmark national environmental policy which, among other things, encourages environmental protection and informed decision-making (BLM 2008a). It provides the means to carry out these goals by:

- mandating that every Federal agency prepare a detailed statement of the effects of "major Federal actions significantly affecting the quality of the human environment."
- establishing the need for agencies to consider alternatives to those actions.
- requiring the use of an interdisciplinary process in developing alternatives and analyzing environmental effects.
- requiring that each agency consult with and obtain comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved.
- requiring that detailed statements and the comments and views of the appropriate Federal, State, tribal, and local agencies be made available to the public.

National Historic Preservation Act (NHPA): 1966 legislation that expands protection of historic and archaeological properties to include those of national, State, and local significance and directs Federal agencies to consider the effects of proposed actions on properties eligible for or included in the National Register. It also directs the pro-active management of historic resources. (BLM 2000)

National Register of Historic Places (National Register): The official Federal list of cultural properties found to qualify for inclusion because of their local, State, or national significance. Eligibility criteria and nomination procedures are found in 36 CFR Part 60. (BLM 2004a)

Native plant community: A plant community having the proper mix of native species, structures, and landscape mosaic consistent with the natural disturbance regime. (BLM 2008b)

Native species: Species that historically occurred or currently occur in a particular ecosystem and were not introduced. (BLM 2008b)

Naturalness: The degree to which an area generally appears to have been affected primarily by the forces of nature with the imprint of people's work substantially unnoticeable. (BLM 2021b)

Non-mechanized travel: Moving by foot or by stock or pack animal. (BLM 2016)

Not eligible cultural resource: Cultural resource that does not meet the National Register criteria or maintain the relevant aspects of integrity. (See "eligible cultural resource.")

Noxious weed: Any plant designated by a federal, state, or county government to be injurious to public health, agriculture, recreation, wildlife, or any public or private property. (BLM 2020)

Objective: A description of a desired condition for a resource. Objectives can be quantified and measured and, where possible, have established time frames for achievement. (BLM 2000)

Off-highway vehicle (OHV): Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: 1) any non-amphibious registered motorboat; 2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; 3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used in times of national defense emergencies (as defined in 43 CFR 8340.0-5(a)). OHV is synonymous with off-road vehicle. (BLM 2016)

Off-highway vehicle (OHV) area designation: A land use planning decision that permits, establishes conditions for, or prohibits OHV activities on specific areas of public lands. The BLM is required to designate all public lands as open, limited, or closed to OHVs. Below are definitions of these designations as taken from the 2016 BLM Travel and Transportation Management Manual (BLM 2016):

- **OHV Closed Area:** An area where OHV use is prohibited. Access by means other than OHVs, such as by motorized vehicles that fall outside the definition of an OHV or by mechanized or non-mechanized means, is permitted. The BLM designates areas as closed, if necessary, to protect resources, promote visitor safety, or reduce user conflicts (see 43 CFR 8340.0-5(h)).
- **OHV Limited Area:** An area where OHV use is restricted at certain times, in certain areas, and/or to certain vehicular use. Examples of restrictions include numbers or types of vehicles; time or season of use; permitted or licensed use only; use limited to existing, designated roads and trails; or other restrictions necessary to meet resource management objectives, including certain competitive or intensive use areas that have special limitations (43 CFR 8340.0-5 (g)).
- **OHV Open Area:** A designated area where all types of OHV travel is permitted at all times, anywhere in the area subject only to the operating restrictions set forth in subparts 8341 without restriction (43 CFR 8340.0-5(f)). Open area designations are made to achieve a specific recreational goal, objective and setting and are only used in areas managed for intensive OHV activity where there are no special restrictions or where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel.

Off-highway vehicle (OHV) route designations: Implementation decisions that govern only OHV (43 CFR 8340.0-5(a)) activities on routes. The route designation is one of several decisions required to govern travel and transportation comprehensively. The BLM designates routes as open, limited, or closed, and the designation must be included in all route-specific decisions and recorded in the national ground transportation linear feature dataset(s). Definitions and the designation criteria used in this decision making process stem from those provided for OHV areas in 43 CFR 8340.0-5(f), (g), and (h). (BLM 2016)

- **OHV Open Route:** OHV travel is permitted where there are no special restrictions or no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting the timing or season of use, the type of OHV, or the type of OHV user.
- **OHV Limited Route:** OHV travel on routes, roads, trails, or other vehicle ways is subject to restrictions to meet specific resource management objectives. Examples of restrictions include numbers or types of vehicles; time or season of use; permitted or licensed use only; or other restrictions necessary to meet resource management objectives, including certain competitive or intensive uses that have special limitations.

- **OHV Closed Route:** OHV travel is prohibited on the route. Access by means other than OHVs, such as by motorized vehicles that fall outside of the definition of an OHV or by mechanized or non-mechanized means, is permitted. The BLM designates routes as closed to OHVs if necessary to protect resources, promote visitor safety, reduce use conflicts, or meet a specific resource goal or objective.

Primitive road: A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not customarily meet any BLM road design standards. Unless specifically prohibited, primitive roads can also include other uses such as hiking, biking, and horseback riding. (BLM 2016)

Record of Decision (ROD): Decision document associated with an EIS (BLM 2008a).

Recreation Management Information System (RMIS): The official BLM database for recording and tracking visitor use and acres with OHV area designations on BLM-managed lands; the BLM also uses it to track TMP completion and implementation. (BLM 2016)

Recreation Management Zone (RMZ): Subunits within a SRMA managed for distinctly different recreation products. Recreation products are comprised of recreation opportunities, the natural resource and community settings within which they occur, and the administrative and service environment created by all affecting recreation-tourism providers, within which recreation participation occurs. (BLM 2005)

Residual effect: Remain after mitigation has been applied to the proposed action or an alternative. (BLM 2008a)

Resource Management Plan (RMP): (Also known as Land Use Plan or Management Framework Plan). A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of the Federal Land Policy and Management Act of 1976, as amended, P.L. 94-579, 90 Stat. 2743; an assimilation of land use plan-level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed. (BLM 2008a)

Restoration: The process of assisting the recovery of a resource (including its values, services, and/or functions) that has been degraded, damaged, or destroyed to the condition that would have existed if the resource had not been degraded, damaged, or destroyed. (BLM 2021a)

Right-of-way (ROW): Authorization of rights and privileges for a specific use of the land for a specified period of time appropriate for the life of the project. The BLM has discretion to grant a ROW if doing so is in the public interest. (https://www.blm.gov/programs/lands-and-realty/rights-of-way)

Rilling: Shallow channeling from water that creates small, intermittent watercourses with steep sides, usually only several centimeters deep. Rills generally are linear erosion features running parallel to a slope. (BLM 2020)

Riparian area: A specialized form of wetland restricted to areas with characteristic vegetation along, adjacent to, or contiguous with perennially and intermittently flowing stream, lake, spring, and reservoir shore areas. Characteristic vegetation may range from hydrophilic plants such as pondweed through more terrestrial forms such as sycamores, cottonwoods, conifers, and willows. This habitat is transitional between true bottomland wetlands and upland terrestrial habitats, and while associated with water courses, may extend inland for considerable distances. (BLM 1991)

Road: A linear route declared a road by the owner, managed for use by low-clearance vehicles which have four or more wheels, and maintained for regular and continuous use. (BLM 2016)

Route: Generic description for a component of the transportation system or travel network. (BLM 2016)

Route proliferation: The addition or expansion of undesignated motorized or non-motorized routes stemming from a designated route.

Scoping (Internal and External): Process by which the BLM solicits internal and external input on the issues and effects that will be addressed, as well as the degree to which those issues and effects will be analyzed, in the NEPA document. Scoping is one form of public involvement in the NEPA process. Scoping occurs early in the NEPA process and generally extends through the development of alternatives (the public comment periods for EIS review are not scoping). Internal scoping is simply federal or cooperator review to decide what needs to be analyzed in a NEPA document. External scoping, also known as formal scoping, involves notification and opportunities for feedback from other agencies, organizations, and the public. (BLM 2008a)

Sensitive Species: Species that require special management consideration to avoid potential future listing under the ESA and that have been identified in accordance with procedures set forth in BLM Manual 6840 – Special Status Species Management. (BLM 2008c)

Solitude: The state of being alone or remote from habitations; isolation. A lonely or secluded place. Factors contributing to opportunities for solitude may include size, configuration, topographic or vegetative screening, and ability of the visitor to find seclusion. (BLM 2021b)

Special recreation management area (SRMA): An administrative unit where the existing or proposed recreation opportunities and recreation setting characteristics are recognized for their unique value, importance, or distinctiveness, especially compared to other areas used for recreation. (BLM 2014c)

Social trail: Undesignated trail that leads from an existing route or route-related location (e.g., end of a designated route, dispersed camp spot, etc.) resulting from repeated motorized or non-motorized use. (Example: a single-track route stemming from the end of a designated road leading to a nearby stream or overlook.)

Special recreation permits (SRPs): SRPs are issued to authorize specified and often time-restricted recreational uses of the public lands and related waters. The BLM issues SRPs to manage visitor use; to protect natural and cultural resources; to achieve the goals and objectives of Field Office recreation program as outlined in a land use plan; and to authorize specific types of recreational activities. There are five types of activities for which SRPs are required: commercial use, competitive use, vending, special area use, and organized group activity and event use. (BLM 2007)

Special status species: Collectively, federally listed or proposed and Bureau sensitive species, which include both Federal candidate species and delisted species within 5 years of delisting. (BLM 2008c)

State Historic Preservation Officer (SHPO): The State historic preservation officer (SHPO) reflects the interests of the State and its citizens in the preservation of their cultural heritage. In accordance with section 101(b)(3) of the National Historic Preservation Act, the SHPO advises and assists Federal agencies in carrying out their section 106 responsibilities and cooperates with such agencies, local governments and organizations and individuals to ensure that historic properties are taking into consideration at all levels of planning and development. (36 CFR 800.2)

Threatened species: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. (16 USC 1532 Definitions)

Traditional uses: Longstanding, socially conveyed, customary patterns of thought, cultural expression, and behavior, such as religious beliefs and practices, social customs, and land or resource uses. Traditions are shared generally within a social and/or cultural group and span generations. (BLM 2004a)

Trail: A linear route managed for human-powered, stock, or off-road vehicle forms of transportation or for historical or heritage values. The BLM does not generally manage trails for use by four-wheel-drive or high-clearance vehicles. (BLM 2016)

Travel Management Area (TMA): An administrative planning unit used to provide a strategic approach to inventory, planning, management, monitoring, and administration of the travel network, transportation system, and OHV use on public lands. TMAs can be used to separate areas with a different travel management focus from the larger planning area for a specific reason, such as the area's complexity or level of controversy, the need for a higher level of public involvement, consideration of special resource characteristics, or manageability of the area. A TMA's boundary may be altered as needed to reflect changes in priority, additional available resources, or any other change in circumstance. (BLM 2016)

Travel Management Plan (TMP): A document that describes decisions related to the selection and management of a travel network and transportation system. (BLM 2016)

Travel network: Routes occurring on public lands or within easements granted to the BLM that are recognized, designated, decided upon, or otherwise authorized for use through the planning process or other travel management decisions. These may or may not be part of the transportation system and may or may not be administered by the BLM. (BLM 2016)

Unevaluated (to the Natural Register): A cultural site to which the National Register eligibility criteria have not been applied. (BLM 2004a)

Utility Terrain Vehicle (UTV): Any recreational motor vehicle other than an ATV, motorbike or snowmobile designed for and capable of travel over designated unpaved roads, traveling on four (4) or more low-pressure tires, maximum width less than seventy-four (74) inches, usually a maximum weight less than two thousand (2,000) pounds, or having a wheelbase of ninety-four (94) inches or less. Utility type vehicle does not include vehicles specially designed to carry a person with disabilities. (BLM 2012a)

Visual Resource Inventory (VRI): The visual resource inventory process provides BLM managers with a means for determining visual values. The inventory consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of distance zones. Based on these three factors, BLM-administered lands are placed into one of four visual resource inventory classes. These inventory classes represent the relative value of the visual resources. Classes I and II being the most valued, Class III representing a moderate value, and Class IV being of least value. The inventory classes provide the basis for considering visual values in the RMP process. (BLM 1986)

Visual Resource Management (VRM): The inventory and planning actions taken to identify visual values and to establish objectives for managing those values; and the management actions taken to achieve the visual management objectives. (BLM 1984)

Visual resources: The visible physical features on a landscape, (topography, water, vegetation, animals, structures, and other features) that comprise the scenery of the area. (BLM 1984)

Way: See *Primitive route*.

Wetlands: Areas that have a predominance of hydric soils and that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions. Marshes, shallows, swamps, muskegs, bogs, and wet meadows are examples of wetlands. (BLM 1991)

Wilderness characteristics: These attributes include the area's size, its apparent naturalness, and outstanding opportunities for solitude or a primitive and unconfined type of recreation. They may also include supplemental values. Lands with wilderness characteristics are those lands that have been inventoried and determined by the BLM to contain wilderness characteristics as defined in section 2(c) of the Wilderness Act. (BLM 2021b)

APPENDIX F. REFERENCES

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