



U.S. Department of the Interior
Bureau of Land Management
Lake Havasu Field Office



Havasu Travel Management Plan



Prepared by:

U.S. Department of Interior
Bureau of Land Management
Colorado River District

Lake Havasu Field Office
Lake Havasu City, Arizona

August 2013

TABLE OF CONTENTS

1.0	Introduction & Background	1
1.1	Background.....	1
1.2	Plan Area.....	2
1.3	TMP Purpose & Conformance	4
1.3.2	Land Use Plan Conformance	4
1.4	Statewide Standard Arizona BLM OHV Regulations & Travel Management Policies	4
1.5	Other Laws, Regulations, Policies & Program Guidance	5
1.6	BLM Administrative Determination on R.S. 2477 Right-of-Ways.....	5
2.0	Goals & Objectives	6
2.1	Desired Future Conditions	6
2.2	TMP Goals & Objectives.....	9
3.0	Management Actions (Implementation)	11
3.1	Designation of Travel Network	11
3.2	Publication of Designated Route & Trail Network	13
3.3	Signing the Travel Network.....	13
3.4	Managing and Maintaining the Travel Network.....	13
3.4.1	Function Classes.....	13
3.4.2	Maintenance Intensities.....	13
3.4.3	Establishment of New Roads and Trails	14
3.4.4	Private Land Ownership/Future Access Needed	14
3.5	Standard Wash Recreation Management Zone (RMZ)	14
3.6	Technical Vehicle Sites.....	15
3.7	Facilities Associated with Travel Network.....	16
3.8	Restoration and Rehabilitation of Closed Routes	17
3.9	Education and Outreach for Travel Network	17
3.10	SARA Park/Aubrey Hills Equestrian Use.....	22
4.0	Prioritization of Implementation	22
4.1	Project Priorities.....	22
4.2	Enforcement.....	23
5.0	Monitoring and Evaluation	23
5.1	Implementation Monitoring	24
5.2	Effectiveness Monitoring	24
5.3	Resource or Validation Monitoring	25
5.4	Adaptive Management	25
6.0	TMP Revision and Amendment.....	26

Appendices

- A. Sign Plan
- B. Standard Wash OHV Open Area
- C. Arizona Resource Advisory Council (RAC) OHV Guidelines
- D. Glossary
- E. Environmental Assessment

Tables & Figures

- Table 1: Acreage for Havasu TMA
 - Table 2: TMP Goals & Objectives
 - Table 3: Transportation Assets
 - Table 4: Route Designations within Travel Network
 - Table 5: Maintenance Intensities
 - Table 6: Technical Vehicle Sites
 - Table 7: Proposed Facilities
 - Table 8: Length Comparison of Closed Routes
-
- Figure 1: Area Overview
 - Figure 2: Roads, Primitive Roads, and Trails
 - Figure 3: Open/Limited/Closed Route Designations
 - Figure 4: Technical Vehicle Sites

1.0 INTRODUCTION & BACKGROUND

This Travel Management Plan (TMP) is the product of extensive public and agency input which has occurred over the past three years. Its intent is to establish a comprehensive travel network, and meet both current and future access needs to the area's public lands while resolving conflicts of users of the travel network identified in this document. This document identifies a proposed system of roads, primitive roads and trails, and the terms for their use and maintenance. Additionally, it outlines facilities to be developed in support of recreation through creation of new routes, and closure of other routes. The travel network identified in this TMP comprises both motorized and non-motorized trails.

The Environmental Assessment (EA) provides analysis of the proposed plan, and the four alternatives that were considered during the planning process. Publication of the proposed plan will be followed by a 60-day public review period, in which additional data or information from our constituents will be sought. Upon completion of the 60-day review period, public input may be incorporated wherein a Finding of No Significant Impact (FONSI) may be issued, along with a Decision Record.

1.1 BACKGROUND

Federal agencies are directed to manage motorized vehicle use on public lands through Executive Order 11644 and Executive Order 11989 (See Section 1.4), which have been incorporated into the Code of Federal Regulations (CFR), under 43 CFR 8342.1. Routes identified within the Lake Havasu Field Office Record of Decision and Approved Resource Management Plan (2007 LHFO RMP) are designated as "limited to existing roads and trails"¹ with the exception of two sub-regions wherein routes are allocated as "limited to existing roads and trail – seasonal use." The 2007 LHFO RMP (pg. 112) deferred choosing the designation of specific roads and trails as "open," "closed," or "limited," to later individual travel management plans. Following approval of the Havasu TMP, all routes will be "limited to designated roads and trails." In addition, the 2007 LHFO RMP limits the use of motorized vehicles in the Aubrey Hills Recreational Management Zone (RMZ) for existing authorized use. Additionally, in the 2007 LHFO RMP, the Standard Wash RMZ is designated as an Off-Highway Vehicle (OHV) open area². The open area designation required compliance with the National Historic Protection Act (NHPA) and the Endangered Species Act (ESA) prior to implementation. NHPA compliance was completed in 2011 and the ESA compliance will be completed in 2013.

As outlined in the 2007 LHFO RMP, bicycles are considered non-motorized vehicles and are limited to travel on roads or trails; individuals walking or riding horses are permitted to travel cross country on public lands (although some locations may be closed for public safety). This plan addresses all existing and established roads, routes, and trails, including those established for hiking, biking, and equestrian uses.

¹ Limited to Existing Roads and Trails Area designation was first applied to TMA public lands in the 1987, *Final Yuma District Resource Management Plan and EIS*.

² Lake Havasu Resource Management Plan and Record of Decision, 2007, BLM Lake Havasu Field Office, Page (s) #115
TM-24

1.1.1 INVENTORIES

Routes within the Havasu TMA were inventoried between 1994 and 2004. Additional routes were brought forward from the public as recent as 2012, which were evaluated and included in the Havasu TMP. Data collected during this time provided the travel network outlined in the 2007 LHFO RMP wherein no new routes were to be established based on the “limited to existing roads and trails” classification.

1.1.2 EVALUATION PROCESS

The evaluation process provided LHFO the ability to gather information on recreational use, resource concern, and existing route data in order to ascertain inclusion within the travel network. To assist in this effort, BLM Arizona and LHFO contracted with Advanced Resource Solutions (ARS) to apply a systematic, standardized method to organize data associated with each route within the TMA. The methodology provided by ARS served as a tool for documenting current uses and resources, while identifying potential impacts. Appendix E of the Environmental Assessment outlines the planning criteria³ used to organize potential impacts to current uses and resources.

The route evaluation process, facilitated by ARS, allowed BLM staff and project partners to consider area goals/objectives, potential impacts, and public input which lead to the development of four travel network alternatives emphasizing various levels of access and resource protection. Each route was designated as open, limited, or closed, in adherence to 43 CFR 8342.1, which was put in place to ensure resource protection and to minimize conflict with existing or proposed uses. Specific data and potential impacts associated with each route are catalogued via reports in Appendix F of the Environmental Assessment for this TMP.

1.2 PLAN AREA

The Havasu TMA, one of six, was established by the 2007 LHFO RMP. This TMA encompasses 557 square miles within Mohave County, Arizona and San Bernardino County, California. Table 1 displays acres managed by various land agencies throughout the TMA.

	Federal Lands	State Lands	Private Lands	Tribal Lands	Other	Total
Number of Acres	217,029	28,918	45,538	36,038	28,789	356,312

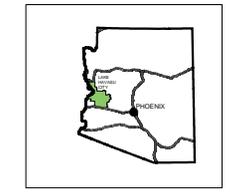
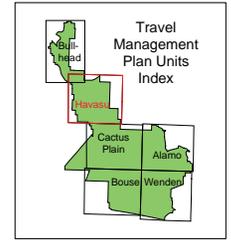
Outdoor recreation is a major draw for local residents and seasonal visitors to Lake Havasu City. Within the Havasu TMA the public may experience a wide variety of OHV riding, target shooting, hunting, hiking, biking, horseback riding, recreational mining, camping, wildlife observation, sightseeing, shoreline fishing and rock hounding. In order to manage a range of recreational opportunities in the Havasu TMA, the 2007 LHFO RMP established two Special Recreation Management Areas (SRMA), the Havasu Urban SRMA and the Lake Havasu SRMA, which encompass

³ The planning criteria is adapted from Appendix L -Travel Management, *Lake Havasu Approved Resource Management Plan, 2007*

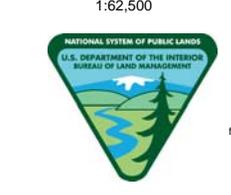
Figure 1 - Area Overview

Havasu Travel Management Area (TMA) Area Overview

- Legend**
- Land Status**
- Bureau of Land Management
 - Indian Lands
 - Private
 - State
 - City, County, & State Park
 - US Fish & Wildlife Service
 - Wilderness Area
 - Areas of Critical Environmental Concern (ACEC)
 - Lands with Wilderness Characteristics
 - Technical Vehicle Sites
- Highways**
- Interstate Highways
 - State Highway
- Roads**
- County Road - Paved
 - County Road - Unpaved
 - Paved Road
 - Unpaved Road
- Other Features**
- Lake Havasu Field Office Boundary
 - Incorporated City Boundary
 - Township Grid
 - Powerline
 - Railroad
 - Fence
 - Rivers
 - Lakes, Rivers, and Canal



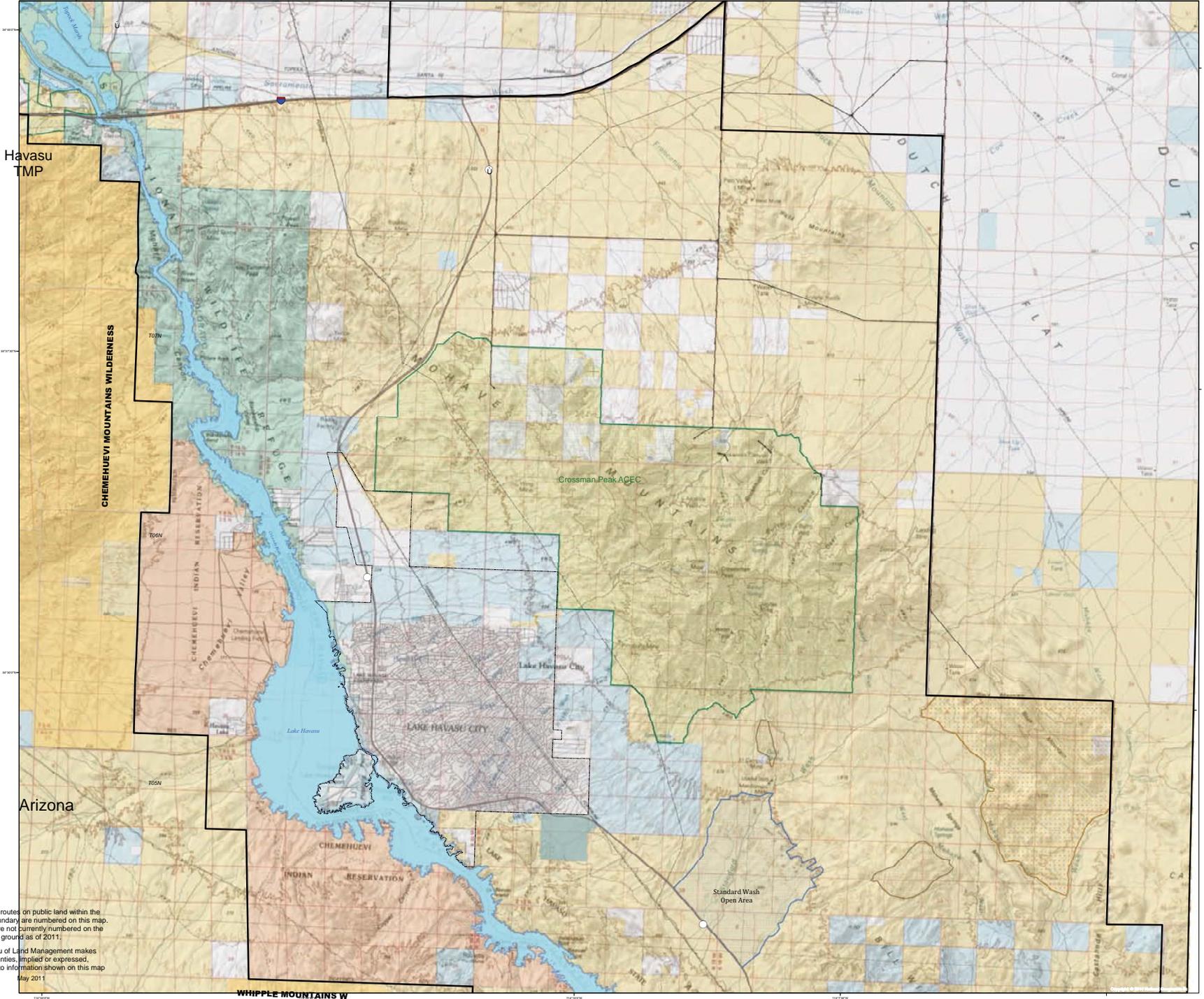
0 0.5 1 2 3 4 5 Miles



Inventoried routes on public land within the field office boundary are numbered on this map. The routes are not currently numbered on the ground as of 2011.

The Bureau of Land Management makes no warranties, implied or expressed, with respect to information shown on this map.

May 2011



WHIPPLE MOUNTAINS W

six Recreational Management Zones (RMZ). In addition to recreation, the Havasu TMA contains a major utility corridor, two permitted grazing allotments, active mining operations, One Area of Critical Environmental Concern (ACEC) and wildlife management areas for bighorn sheep and desert tortoise. Figure 1 displays a general overview of the Havasu TMA.

1.3 TMP PURPOSE & CONFORMANCE

Presently, the Havasu TMA is open to all motorized and non-motorized use on existing, inventoried routes. Route proliferation has been and continues to be a concern in the area, contributing to increased conflict amongst various recreationists, habitat fragmentation, and erosion. Additionally, the lack of trail markers and associated maps contributes to issues related to navigability and therefore, public safety. The purpose of the proposed action is to modify the existing travel network within the Havasu TMA through designation of inventoried routes as open, limited, or closed. The Proposed Action will enhance outdoor recreational opportunities through increased public safety and navigability, meet access needs, and protect both natural and cultural resources on public lands. Guidance for implementing the proposed action is driven by Executive Orders 11644 and 11989, 43 CFR 8342.1, Manual 1626, Handbook 8342, and 2007 LHFO RMP Desired Future Condition TM-1.

1.3.1 LAND USE PLAN CONFORMANCE

BLM's planning process is governed by the Federal Land Policy and Management Act (FLPMA) (43 USC 1711) and 43 CFR 1600, which governs the administrative review process for most of BLM's decisions. Land use plans ensure that BLM-administered public lands are managed in accordance with the intent of Congress as stated in FLPMA and under the principles of multiple use and sustained yield. BLM currently manages the Havasu TMA under the 2007 LHFO RMP.

The 2007 LHFO RMP indicates Desired Future Conditions (DFC), or long-term goals, for resources and uses of public lands under LHFO management. BLM also sets national goals and objectives through strategic plans and manuals such as: *Recreation 2000, A Strategic Plan*, and *National Management Strategy for Motorized off- Vehicle Use on Public Lands (2001)*⁴.

The TMP is considered an implementation or action plan. The plan specifies the measurable management objectives and actions that will be taken to produce or maintain the DFCs as described in the 2007 LHFO RMP.

1.4 STATEWIDE STANDARD ARIZONA BLM OHV REGULATIONS & TRAVEL MANAGEMENT POLICIES

1. Permittees (e.g. for hunting, wood gathering, livestock operators) must comply with TMP route designations. Exceptions may be made by the authorized officer.
2. There shall be no motorized access to harvested game cross country or off of a route designated open to the public, although use of a mechanized game carrier off of an open route is permitted outside of designated wilderness areas.
3. It is unlawful for a person to camp within one-fourth mile of a natural water hole containing water or a man-made watering facility containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water.
4. Use of motorized or mechanized vehicles off of the designated route for the purpose of working livestock is prohibited.
5. State vehicle laws apply to motor vehicle use.

⁴ These documents can be found on the web, and their internet address is the included bibliography.

6. There are no posted speed limits on BLM roads, primitive roads or trails. The speed on primitive roads should be 15 – 25 miles per hour.
7. BLM will not develop, endorse or publish road or trail ratings. BLM may describe physical characteristics of a route.
8. 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. When 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 ⁵

1.5 OTHER LAWS, REGULATIONS, POLICIES & PROGRAM GUIDANCE

When developing any management action, consideration must be given to all applicable laws, regulations and policies. Detailed discussions of these tenets are found in Appendix A of the 2007 LHFO RMP and were incorporated into the plan by reference. The following guidance is specific to the formation of the Havasu TMP and details can be found on the web at <http://www.blm.gov>:

- 43 CFR 8340 – Off-Road Vehicles,
- 43 CFR 9268 Law Enforcement – Recreation Programs,
- BLM, 2011 Manual 1626, Travel and Transportation,
- BLM, H-8342 Travel and Transportation Handbook.
- BLM Instruction Memorandum AZ2012-067, Clarification of Cultural Resource Considerations for Off-Highway Vehicle Designations and Travel Management,
- BLM Instruction Memorandum AZ2009-017, State Specific Guidance for Implementation of the Arizona Off-Highway Vehicle (OHV) Law,
- BLM Instruction Memorandum 2008-174, Road Maintenance Agreements,
- Arizona Revised Statute Title 49 sections 400-500 governing air quality
- Memos of communication between Arizona State Land Department and Arizona State Office BLM regarding access across state trust lands.
- Bureau of Reclamation Plans and Regulations to be Considered in Management Actions
 - DM 613 – Management of Bureau of Reclamation Lands
 - The Lower Colorado River Land Use Plan, January 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

1.6 BLM ADMINISTRATIVE DETERMINATION ON R.S. 2477 RIGHT-OF-WAYS

The BLM does not have the authority to make binding determinations on the validity of R.S. 2477 right-of-way claims. The BLM may, however, make informal, non-binding, administrative determinations for its own land use planning and management purposes. Such determinations must be based in the particular laws of each state in which a claimed right-of-way is situated.

As of February 2009, the BLM has been directed not to process or review any claims under R.S. 2477 pending further review and direction from the Secretary of the Interior.

⁵ Instructional Memorandum AZ-2005-007.

A travel management plan is not intended to provide evidence bearing on or addressing the validity of any R.S. 2477 assertions. R.S. 2477 rights are determined through a process that is entirely independent of the BLM's planning process. Consequently, this plan does not consider any R.S. 2477 assertions or evidence. Travel management plans are founded on an independently determined purpose and need, and associated access to public lands and waters. When a decision is made on R.S. 2477 assertions, the BLM will adjust its travel route designations accordingly.

2.0 GOALS & OBJECTIVES

2.1 DESIRED FUTURE CONDITIONS

This TMP incorporates the DFCs for SRMAs and the Extensive Recreation Management Area (ERMA), as set forth in the 2007 LHFO RMP for long-range planning. These DFCs provide the objective for road/primitive road/trail management within the Havasu TMA. Basic reference information for each road/primitive road/trail can be found in the route reports, found in Appendix F of the Environmental Assessment. Progress in meeting these objectives will be determined through monitoring, see Section 5.0. The following outlines DFCs for travel management related to the Havasu TMP.

- TM-1 Designations will be made and management implemented for a balance of opportunities for the entire range of motorized and non-motorized access needs, while in balance with other resource values found on public lands.
- TM-2 Reasonable, safe, and environmentally sound access will be provided to visitors, local residents, licensed or permitted activities, and property owners. Lake Havasu Field Office will be linked with other state, regional, and land management agencies or interest groups to better facilitate travel management.
- TM-3 Travel between communities within the planning area will be made safer.
- TM-4 Public access easements will be acquired across private or state lands where public access to federal lands and waterways is not available.
- TM-5 Instill and strengthen a more effective and responsible user ethic through public outreach programs for motorized and non-motorized users.
- TM-6 The BLM will continue to provide motorized and non-motorized access across public lands, with emphasis on development of non-motorized trails and trailheads.
- TM-8 Opportunities for "touring" and "loop" travel beyond the boundaries of the planning area will be maintained or enhanced when creating the travel management network for the planning area.

In addition to travel management DFCs, the following DFCs apply to the development of the Havasu TMP:

Biological Resources Management

- WF-1 Wildlife movement corridors will be maintained for biotic diversity, to minimize fragmentation of habitat and to minimize barriers to movement.
- WF-4 Ensure that important habitats for migratory birds are managed, maintained, increased, and improved to attain the vegetation structure plant species diversity and density to provide diverse habitat of quality and quantity.
- WF-5 Recognize the importance of the tortoise as a keystone species, which via its burrowing systems provides habitats for many other species.
- TE-1 Conserve and protect Migratory Bird species and their habitats, Lake Havasu Field Office will follow the guidance provided with the Migratory Bird Executive Order 13186, *Arizona Partners in Flight Bird Conservation Plan*, *Partners in Flight Desert and Riparian Bird Conservation Plan*, *USFWS North American Waterfowl Management Plan*, and LCRMSCP.
- TE-2 No net loss of quantity or quality of priority species and/or priority habitats will occur on the Lake Havasu Field Office.
- TE-3 Conserve habitat and work toward the recovery of T&E species, as well as reduce the likelihood of additional species listings under the ESA and California ESA.

Cultural Resource Management

- CL-1 Preserve and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations.
- CL-2 The BLM will identify sacred sites in consultation with Indian tribes, accommodate tribal access to sacred sites, and prevent physical damage or intrusions that might impede their use by religious practitioners. The locations of sacred sites and other places of traditional or religious importance to Indian tribes will be kept confidential to the extent allowed by law.

Paleontological Resource Management

- GL-2 The BLM will preserve and protect significant vertebrate paleontological resources for present and future generations. Scientifically significant invertebrates (to be determined by a qualified paleontologist) will also be protected.

Recreation Management

- RR-4 Manage high-volume recreation on the lake and shoreline to sustain natural resource values and recreational opportunities.
- RR-5 Visitors will benefit from closer relationship with the natural world, by trekking and OHV touring through this rugged natural scenery and a remote backcountry area.

- RR-6 Visitors will have the opportunity for improved physical fitness and health by traveling non-motorized trails in a rural natural setting that is in close proximity to Lake Havasu City. (Lake Havasu RMZ 2- North Aubrey)
- RR-7 Visitors will have the opportunity for improved physical fitness and health by traveling non-motorized trails in a rural natural setting that is in close proximity to Lake Havasu City. (Lake Havasu RMZ 3 – Aubrey Hills)
- RR-8 Visitors to the Lake will have the benefit of natural settings. Majority of the access will be from the lake and non-motorized. (Lake Havasu RMZ 4 – AZ Shoreline)
- RR-10 Visitors to the Lake will have the benefit of natural settings. Majority of the access will be from the lake and non-motorized. (Lake Havasu RMZ 6 – CA Shoreline)
- RR-26 Visitors will benefit from an area open to unrestricted OHV use/play in a rural setting. OHV users will be able to use the area as staging ground for the more expansive designated travel network.
- RR-27 Travelers, both motorized and non-motorized, will be able to visit this scenic backdrop to Lake Havasu on a clearly marked trail network. They are able to engage in sustainable personal discovery and experiences while protecting critical resources located in this area.
- RR-28 Residents of Lake Havasu City will have quick access to natural landscapes and benefit from the open space that public lands provide. Use of this area will increase awareness and the need for protection of natural landscapes.
- RR-33 Visitors will recognize enhanced recreation experiences and enjoyment while protecting resources. Management will be more custodial in nature in order to realize environmentally sound public land dependent recreational opportunities.

Area of Critical Environmental Concerns (ACECs)

- AC-5 Crossman Peak Scenic ACEC will be managed to protect and prevent irreparable damage to the relevant characteristic or important values.

Visual Resource Management

- VR-1 VRM Class I – The objective of this class is to preserve the existing character of the landscape. This class provides for the natural ecological changes; however, it does not preclude very limited management activity. The level of change of the characteristic landscape should be very low and must not attract attention.
- VR-2 VRM Class II – The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- VR-3 VRM Class III – The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the

view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

- VR-4 VRM Class IV – The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Wilderness Characteristics Management

- WC-1 The following wilderness characteristics will be maintained or enhanced where lands are allocated for that purpose:

Naturalness – Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable. Naturalness attributes may include the presence or absence of roads and trails, fences, wildlife facilities and other improvements; the nature and extent of landscape modifications; the presence of native vegetation communities; and the connectivity of habitats. Wildlife populations and habitat are recognized as important aspects of the naturalness and will be actively managed.

Solitude – Visitors may have outstanding opportunities for solitude when the sights, sounds, and evidence of other people are rare or infrequent, where visitors can be isolated, alone or secluded from others.

Primitive and Unconfined Recreation – Visitors may have outstanding opportunities for primitive and unconfined types of recreation where the use of the area is through non-motorized, non-mechanical means off designated routes or as specifically excepted, and where no or minimal developed recreation facilities are encountered.

2.2 TMP GOALS & OBJECTIVES

The implementation strategy for this TMP was established through goals derived from the Desired Future Conditions, listed above, set in the 2007 LHFO RMP. Table 2 outlines five goals with coordinating objectives, as well as the section of this document pertaining to each objective.

TABLE 2 - TMP GOALS AND OBJECTIVES

	Goal	Objective	TMP Section for Implementation
1	Designate the route asset type, maintenance intensities, and functional classes for each route.	Roads, primitive roads, and trails are designated as: - Open to all public uses - Limited to administrative use/type of use/non-motorized use - Closed to all uses (For a complete list of designations, see Appendix F of the Environmental Assessment)	Section 3.1
2	Identify and communicate motorized/non-motorized recreation opportunities	Produce an official public travel management map to communicate route designations	Section 3.2
		Identify the designated routes on the ground in a clear and consistent manner	Section 3.3 and Appendix A
		Provide clean and consistent information related to route designations. Make maps and signs easy to read and understand.	See Appendix A
		Rehabilitate routes to achieve a natural appearance. Apply active rehabilitation techniques to closed routes only where necessary to speed recovery process.	Section 3.8
3	Create a monitoring program for the route network	Identify specific actions, methods, and anticipated resource needs for compliance and enforcement related route designations.	Section 4.2
		Document route system engineering and maintenance needed.	Section 3.4.2 and 5.0
		Identify specific actions, methods, and anticipated resource needs for environmental monitoring.	Section 5.3
4	Implement route designations selected under the Proposed Action alternative in the Environmental Assessment	Implementation the Management Actions specified in this plan in a consistent and timely manner.	Section 5.1
5	Identify triggers for adaptive management, future planning needs and opportunities related to travel management	Identify route system actions that may be taken at a later date which will require further analysis and documentation.	Section 5.4

3.0 MANAGEMENT ACTIONS (IMPLEMENTATION)

3.1 DESIGNATION OF TRAVEL NETWORK

The primary objective of this TMP is to designate the travel network encompassed within the TMA. BLM defines and categorizes its travel routes into the following three transportation asset categories: roads, primitive roads, and trails. Table 3 defines and outlines the miles of roads, primitive roads, and trails within the Havasu travel network.

<i>TABLE 3 - TRANSPORTATION ASSETS</i>		
Asset	Definitions ⁶	Routes (Miles)
Road	A route managed and maintained for regular and continuous use by low-clearance vehicles having four or more wheels.	37.14
Primitive Road	A route able to be traversed by four-wheel drive or high-clearance vehicles. Primitive roads do not normally meet any BLM road design standards.	537.30
Trail	A route managed for human-powered, stock, or OHV forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high clearance vehicles.	76.59
Total		651.03

**Note: TVS mileage is not included within these totals*

Table 4 displays the miles of roads, primitive roads, trails and the number of Technical Vehicle Site (TVS) per designation. A majority of the routes are designated as open for all users (motorized and non-motorized); however, there are some limitations placed on routes to encourage specific types of use (i.e. single track, private property access, hiking, mountain biking, or equestrian use). Closed designations eliminate all forms of motorized use. Details of the specific type of constraints placed on each “limited” route are contained in Appendix F of the Environmental Assessment.

⁶ Instruction Memorandum (IM) 2006-173, “Implementation of the Roads and Trails Terminology Report”, dated June 16, 2006,

<i>TABLE 4 - ROUTE DESIGNATIONS WITHIN TRAVEL NETWORK</i>				
Designations	Open	Non-Motorized Use Only	Limited to Authorized Users/Vehicles	Closed
Miles of Roads, Primitive Roads, & Trails	532.45	49.15	69.43	155.31
Technical Vehicle Sites (#)	16	-	-	9

Figure 2 - Roads, Primitive Roads, and Trails

Havasu Planning Unit - Travel Management Plan Roads, Primitive Roads, and Trails

Route Designations

- Roads
- Primitive Roads
- - - - Trails
- Open Area
- Technical Vehicle Site

Legend

- Land Status**
- Bureau of Land Management
 - Indian Lands
 - Private
 - State
 - City, County, & State Park
 - US Fish & Wildlife Service
 - Wilderness Area
 - Areas of Critical Environmental Concern (ACEC)
 - Lands with wilderness characteristics
- Highways**
- Interstate Highways
 - State Highway
- Roads**
- County Road - Paved
 - County Road - Unpaved
 - Paved Road
 - Unpaved Road
- Other Features**
- Lake Havasu Field Office Boundary
 - Incorporated City Boundary
 - Township Grid
 - Powerline
 - Railroad
 - Fence
 - Rivers
 - Lakes, Rivers, and Canal



Inventoried routes on public land within the field office boundary are numbered on this map. The routes are not currently numbered on the ground as of 2011.

The Bureau of Land Management makes no warranties, implied or expressed, with respect to information shown on this map.

April 2013
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LAKE HAVASU FIELD OFFICE

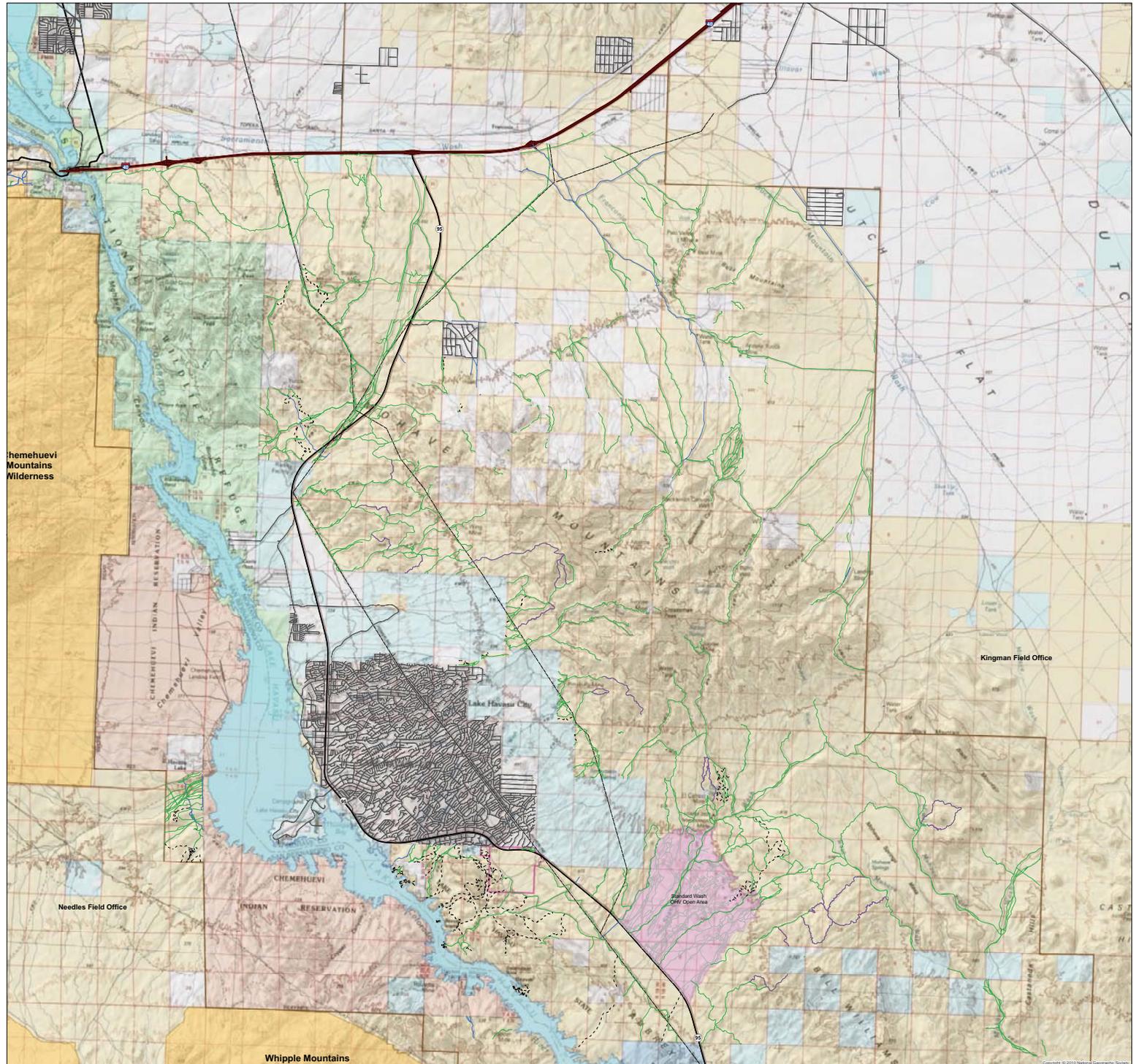


Figure 3 - Open, Closed, Limited Designations

Havasu Planning Unit - Travel Management Plan Alternative C - Proposed Action

- Route Designations**
- Open
 - Limited to Authorized Users
 - Non-Motorized Use Only
 - Single Track Only
 - Equestrian and Non-Motorized Use
 - - - Technical Vehicle Site
 - - - Closed to Motorized Use

- Legend**
- Land Status**
- Bureau of Land Management
 - Indian Lands
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 - City, County, & State Park
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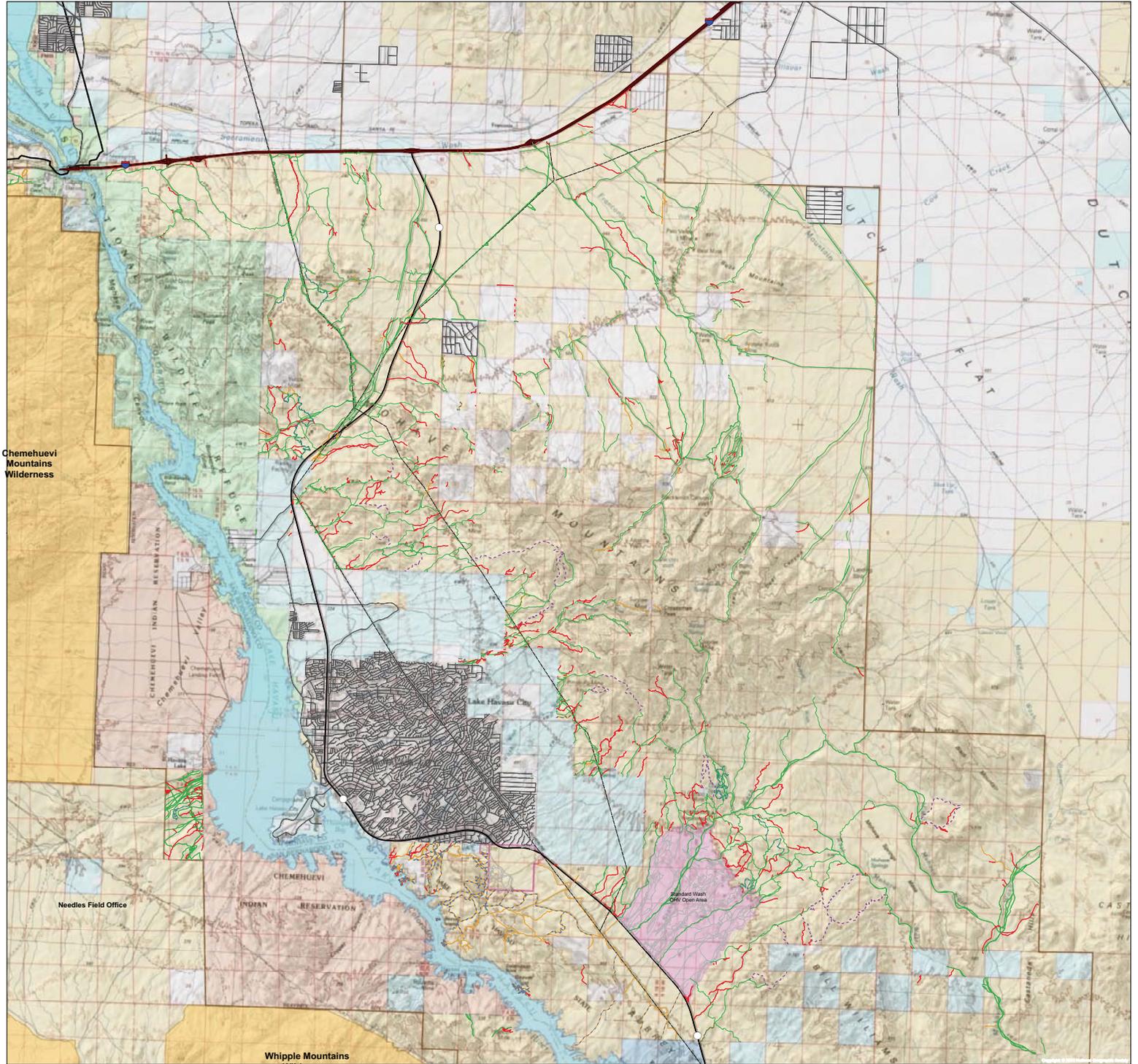
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LAKE HAVASU FIELD OFFICE



Whipple Mountains
Wild

3.2 PUBLICATION OF DESIGNATED ROUTE & TRAIL NETWORK

Maps will be developed and published for general public use. These maps will depict routes available for motorized and non-motorized use, technical vehicle sites, and an OHV open area. Closed routes will not be depicted. Routes limited to administrative and/or permitted motorized use will be depicted on these maps as non-motorized trails open to hiking, mountain biking, and equestrian use. Each route will be assigned a number to enable public navigability. Maps will be available at the LHFO and displayed in informational kiosks located throughout the TMA.

3.3 SIGNING THE TRAVEL NETWORK

All open and limited use routes will be signed for navigational purposes; signs will include assigned route numbers and will be installed at one-mile intervals, as well as at all intersections. Routes within the Standard Wash open area will not be signed; however, its boundary will be delineated. Routes proposed as closed will not be signed and continued use of these routes subsequent to implementation of the TMP will result in citation by law enforcement officers. Detailed information of the TMP sign plan may be referred to in Appendix A.

3.4 MANAGING AND MAINTAINING THE TRAVEL NETWORK

The proposed routes within this TMP comprise approximately 838 miles, which includes more miles than inventoried due to additional routes added based on public input. Management of these routes will depend on the maintenance intensity level of each route as described in 3.4.2 below. Maintenance of the proposed routes will involve utilizing labor provided by volunteers and/or through the Arizona OHV Ambassador Program.

3.4.1 FUNCTION CLASSES

Function classes indicate the relative importance of a route's transportation and access purposes. These classes are the basis for design standards and are defined as collector roads, local roads, and resource roads. The routes in the planning area are designated as resource roads/trails, unpaved, single lane, with very low traffic volume (Average Daily Traffic <150 vehicle/traveler passes) and slow traffic speeds.

3.4.2 MAINTENANCE INTENSITIES

Based upon the above functional classifications and resource management needs, each route was assigned a maintenance intensity level (see Table 5), which were derived from the *Roads and Trails Terminology Report (BLM, November 2006)*. The intensity of maintenance can vary from year to year, as well as from route to route, as management and funding needs change. Transportation maintenance may be conducted for routes on a case by case basis.

Only one road in the TMA (Partners Point Road) currently meets the Level 5 Maintenance Intensity outlined in Table 5; all levels indicated in Table 5 will provide a basis for route maintenance within the TMA.

TABLE 5: MAINTENANCE INTENSITIES

Maintenance Intensity	Descriptions	Miles
Level 0	Existing routes that will no longer be maintained or declared as routes. Routes identified for removal from the Transportation System entirely.	155.31
Level 1	Routes where minimal (low-intensity) maintenance is required to protect adjacent lands and resource values. These roads may be impassable for extended periods of time. Primitive roads and/or trails.	649.39
Level 3	Routes requiring moderate maintenance because of low-volume use (e.g., seasonally or year-round for commercial, recreational, or administrative access). Maintenance Intensities may not provide year-round access, but are intended to generally provide resources appropriate for keeping the route in use for the majority of the year. Roads.	0
Level 5	Routes for high (Maximum) maintenance because of year-round needs, high-volume traffic, or significant use. Also may include routes identified through management objectives as requiring high intensities of maintenance or to be maintained open year-round. Roads.	1.63

3.4.3 ESTABLISHMENT OF NEW ROADS AND TRAILS

Future changes to the travel network are anticipated to be infrequent, but may be required. Potential changes to the travel network (i.e. new routes, reroutes, upgrades to existing routes, and/or closures) may be made through activity level planning or with the appropriate site specific NEPA analysis. All new roads, primitive roads, and trails will meet the standards for design, construction, and maintenance found in *BLM Manuals 9113-Roads (2011)* and *9114-Trails (2011)*. Changes to the travel network will be recorded in the administrative record of the TMP, posted on the LHFO website for public notification, and updated in maps as necessary.

3.4.4 PRIVATE LAND OWNERSHIP/FUTURE ACCESS NEEDED

Private lands are located within the TMA. Although many of the routes identified in the TMP cross private parcels, designations on private property are not binding and simply follow current use patterns. Land ownership changes along routes will be indicated through the sign plan and users will be instructed to respect private inholdings.

Access across private, state or tribal lands is a concern for the public in the Lake Havasu City, Arizona and Havasu Lake, California communities. Although the LHFO does not currently have plans to acquire ROW across state or private lands, LHFO will consider partnering with agencies and/or community organizations through zoning or the acquisition of easements.

3.5 STANDARD WASH RECREATION MANAGEMENT ZONE (RMZ)

Standard Wash RMZ, due to its proximity to Lake Havasu City, has evolved into a de facto day-use area in which substantial OHV activities occur. Management for this use was addressed in the 2007 LHFO RMP through TM-24, which designated this area as “open.” As such, individual trails within the Standard Wash open area do not need designation in the TMP. BLM intends to develop the Standard Wash RMZ as a staging area for travel on surrounding designated routes. A preliminary plan of development for the Standard Wash RMZ is outlined in Appendix B.

3.6 TECHNICAL VEHICLE SITES

TABLE 6 - TECHNICAL VEHICLE SITES

ID Num	Description or Name	Miles	Estimate Acreage	ID Num	Description or Name	Miles	Estimate Acreage
TVS01	West Mohave Wash	6	72	TVS10	NA	0.88	11
TVS02	Sidewinder (Diamondback, Gold Springs and Anniversary)	3.76	45	TVS11	Chocolate Crunch	1.06	13
TVS03	Python	2.2	27	TVS12	NA	1.7	21
TVS04	Baller Canyon	0.76	9	TVS13	NA	0.64	8
TVS06	In2Deep	0.95	11	TVS14	Black Falls Loop (Gold Springs-Rattler/Yahoo B)	0.29	4
TVS07	Over the Top	2.1	25	TVS18	King Cobra (Cottonmouth)	1.78	22
TVS08	Cottonmouth	1.18	14	TVS21	Black Mamba (Easy's Sunday Drive)	2.04	25
TVS09	Black Viper (3 Amigos)	4.29	52	TVS29	Boulder Gulch	3.31	40

Technical Vehicle Sites, primarily utilized for 4WD rock crawling, are proposed for designation as “sites” rather than as “routes”, due to the nature of the activity, which requires a buffer of approximately 50 feet from the centerline of the existing trail to accommodate vehicles capable of 4WD rock crawling. Table 6 lists the 16 proposed designated technical vehicle sites; locations of these sites are illustrated in Figure 4. Management will seek partnerships with current users to ensure both the proper use and maintenance of technical vehicle sites.

Figure 4 - Technical Vehicle Sites

Havasu Planning Unit - Travel Management Plan Technical Vehicle Sites (TVS)

Technical Vehicle Sites

- Travel Network
- - - Technical Vehicle Site

- Legend**
- Land Status**
- Bureau of Land Management
 - Indian Lands
 - Private
 - State
 - City, County, & State Park
 - US Fish & Wildlife Service
 - Wilderness Area
 - Areas of Critical Environmental Concern (ACEC)
 - Lands with wilderness characteristics
- Highways**
- Interstate Highways
 - State Highway
- Roads**
- County Road - Paved
 - County Road - Unpaved
 - Paved Road
 - Unpaved Road
- Other Features**
- Lake Havasu Field Office Boundary
 - Incorporated City Boundary
 - Township Grid
 - Powerline
 - Railroad
 - Fence
 - Rivers
 - Lakes, Rivers, and Canal



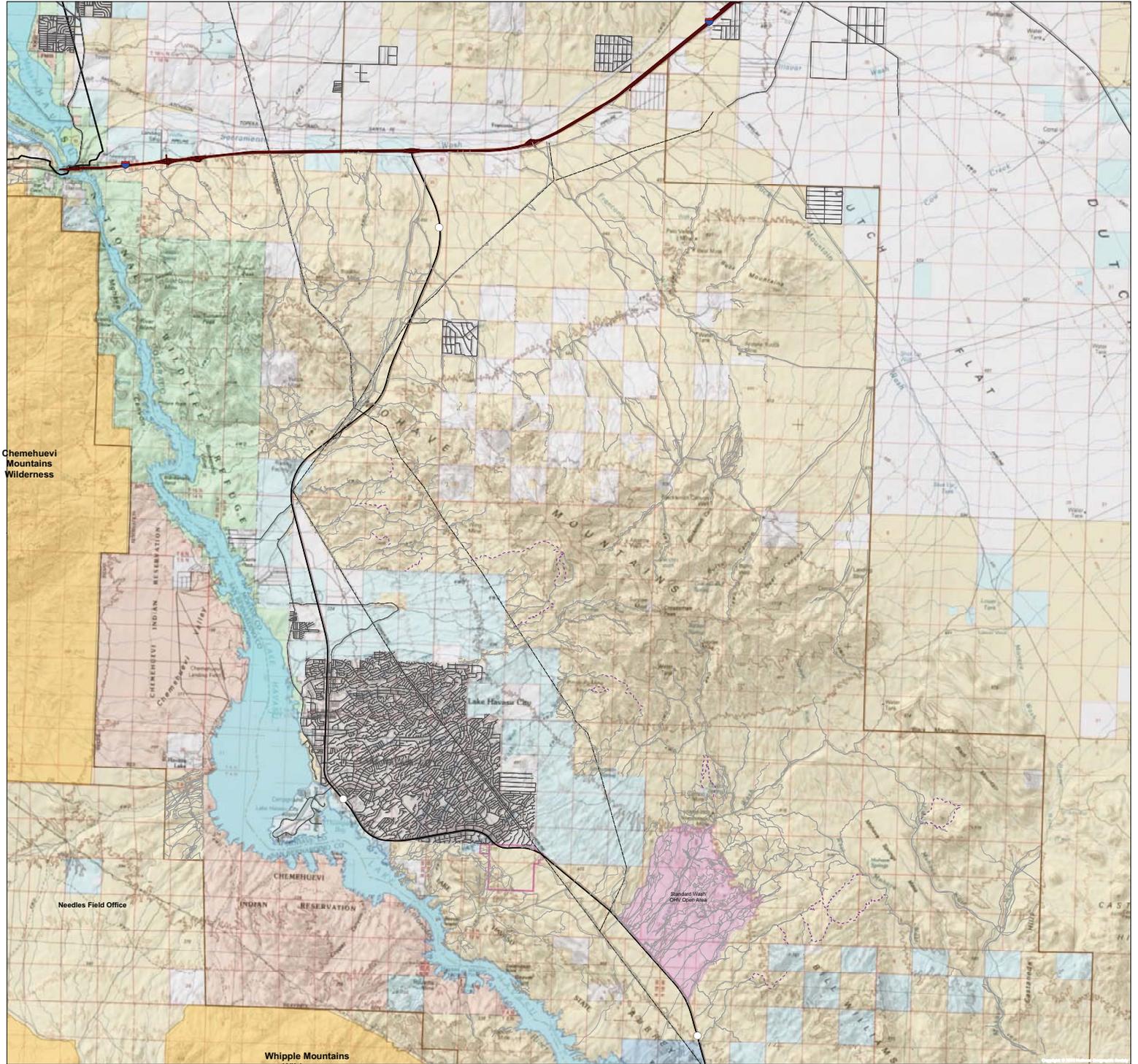
Inventoried routes on public land within the field office boundary are numbered on this map. The routes are not currently numbered on the ground as of 2011.

The Bureau of Land Management makes no warranties, implied or expressed, with respect to information shown on this map.

April 2013
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LAKE HAVASU FIELD OFFICE



3.7 FACILITIES ASSOCIATED WITH TRAVEL NETWORK

To support the travel network, this TMP proposes upgrading or creating new facilities, including campsites, staging areas, protective fencing, barriers, information kiosks, administrative gates, trailheads, and/or a scenic non-motorized trail. Site-specific project designs will be developed to avoid or mitigate impacts to natural and cultural resources. Project plans are subject to NEPA analysis. Specific descriptions of each facility are outlined in Table 7.

	Facility Descriptions	General Location
F1	Shoreline Trail: The majority of this proposed non-motorized trail will be constructed within one mile or less, depending on terrain, of the shoreline proper. The precise location of the trail will be determined not as part of this plan but in a separate project plan. The goal is to have a trail that connects the southern end of the Havasu National Wildlife Refuge with Cattail Cove State Park.	Parallel to the Lake Havasu's Arizona shoreline. The first phase will be within Aubrey Hills
F2	Designated Campsite(s) or camping locations with camping length of stay limits (14 days) will be developed as needed. Campsites will be created for the following purposes: protecting resources, ensuring visitor safety, avoiding social conflicts, improving recreation experiences. Campsite characteristics may be as simple as a defined level space(s), or could include fire pans and tables. Pit toilet facilities or water may be provided depending on the number of campsites and need. There will be provisions for small-group camping. Site-specific rules (such as quiet hours, pet limitations, etc.) will be addressed through the supplemental rule-making process.	Standard Wash RMZ
F3	An OHV Staging Area will be created for OHV day use. It may include a parking area with pull-through design to accommodate vehicles with trailers. It will include a loading ramp and single panel information kiosk for educational purposes. Pit toilets may be constructed if partnerships can be developed to defray costs and maintenance.	Standard Wash RMZ
F4	A Three Panel Information Kiosk will be installed at entrance points. Information will include a map of the area, local interpretive information, emergency contact information, area rules of use, and recreation etiquette.	Crossman Peak RMZ
F5	Protective fencing will be erected to prevent OHV use near cultural resources, open mining shafts or any other hazards.	Crossman Peak RMZ
F6	Administrative Gates will limit vehicle access but permit non-motorized access. Access will be granted for administrative purposes and to permitted parties to the route accessing Crossman Peak.	Crossman Peak RMZ,

3.8 RESTORATION AND REHABILITATION OF CLOSED ROUTES

TABLE 8: LENGTH COMPARISON OF CLOSED ROUTES

Length of Closed Routes	# of Closed Routes	% of All Closed Routes
Less than 0.10 mile	231	41%
0.10 – 0.50	243	43%
0.50 – 1.0 mile	64	11%
1.0 – 2.0 miles	21	4%
Over 2.0 miles	5	1%

The majority of the routes identified in Table 8 will be allowed to recover naturally. The following roads, primitive roads, trails, and TVS will be restored by obscuring the route to the visual horizon:

- HN014
- HN305
- HN308
- HN309
- HN310
- HN311
- HN312
- HN317
- HN605A
- HN609
- HN610
- HN610A
- HN622
- HN649
- HN653
- HN661
- HN672
- HN681
- HN707
- HN734
- HN741
- PN023A
- PN024A
- PN027
- TVS28

Only after monitoring will adaptive management require substantial restoration actions to take place.

The objective of obscuring the route to the visual horizon is to blend the disturbed area into the landscape, therefore discouraging continued use of a closed route. Some techniques to accomplish this type of restoration may include hand raking, breaking up straight lines, and/or placement of rocks, mulch, local vegetation, or dead plant material. If monitoring indicates the need for additional restoration efforts, NEPA analysis will be completed on proposed actions.

3.9 EDUCATION AND OUTREACH FOR TRAVEL NETWORK

An educational and outreach program will be developed in collaboration with federal, state, and county entities, with established and emerging organizations and programs, and with public participation to educate and encourage the public to use designated routes within the Havasu TMA. This program will help to educate the public on ethical OHV use, local natural and cultural resources, and multiple trail use guidelines.

The following are five target messages or themes for this educational effort:

- Nature Rules! Stay on Roads and Trails (<http://azstateparks.com/ohv/ethics.html>)
- Share the Trail (www.azstatepark.com/trails/share/)
- Tread Lightly (www.treadlightly.org)
- Leave No Trace (www.lnt.org)

- Respect the rights of private land owners and other users of public land

Maps and publications relating to OHV travel in the TMA will be available at the LHFO, as well as on display in informational kiosks. In order to foster appreciation of the natural and cultural resources of the area, educational material will be on display in kiosks throughout the TMA. At the SARA Park trailhead, information will be available to encourage non-motorized, multi-use trail safety.

The LHFO will work with local OHV users to establish an Arizona OHV Ambassador Program in the Colorado River District (CRD). This program will assist BLM in outreach efforts through direct contact with various OHV users, as well as complete monitoring and maintenance activities.

3.10 SARA PARK/AUBREY HILLS EQUESTRIAN USE

Recently, interest for commercial equestrian use within the SARA Park/Aubrey Hills area has been expressed by constituents. The 2007 LHFO RMP, supported by the Havasu TMP, designated the Aubrey Hills area as limited motorized (authorized) and non-motorized public use. While the TMP does not designate equestrian only routes within this area, potential future use of this kind may be considered. To best manage non-motorized multiple-use trails, proposals for the development equestrian-only trails will be considered and may be implemented following environmental analysis.

4.0 PRIORITIZATION OF IMPLEMENTATION

4.1 PROJECT PRIORITIES

The successful implementation of this new travel management plan should proceed in the following order:

1. Publish maps on the Web. This is the first step in the effort to increase public knowledge of the travel network and plans for its future
2. Initiate education and outreach program.
3. Pursue funding for signs and staff needed to implement the route and facility signing effort.
4. Recruit and train volunteers to establish volunteer patrols and help in placing route markers. Set up partnerships with existing local groups and clubs.
5. Sign the open route network and inventory restoration needs. The principal goal is to make the “open” routes more attractive than the “closed” routes.
6. Monitor and maintain the open route network markers.
7. Develop and publish up-to-date, readily available, and easy-to-understand maps. Coordinate printed and web based versions of these maps.
8. Design Standard Wash RMZ Project Plan. Project plan should include its own priority list of actions.
9. Install informational sign. Use the sign plan in Appendix A to install informational bulletin boards and signing where they would be most effective.
10. Pursue funding for route and site rehabilitation. Establish restoration priorities using data from inventory and monitoring.
11. Restore closed routes.

12. Monitor compliance with plan and travel network.
13. Design facilities and create project plans

Adaptive management may require changes to implementation priorities. When looking at specific sites, priorities will be assigned to tasks by using the five factors/questions listed below. The highest priority will be given to routes/areas for which all five factors apply.

1. Would implementing the task maintain and enhance public safety?
2. Would the task be implemented in an area of high resource value (natural, cultural, historic, vegetative, scientific, scenic, or recreational)?
3. Does the task location have above-average density of important listed or sensitive species?
4. Does the task location have above-average surface disturbance?
5. Does the task have significant urban interface issues?

4.2 ENFORCEMENT

Law enforcement coverage in the TMA is currently provided by BLM Colorado River District law enforcement officers. Periodic patrols are conducted by BLM law enforcement, as well as Arizona Game & Fish Department (AZGFD) Wildlife Managers. Some of the typical law enforcement concerns related to public use in the area include accidents, DUI, firearm violations, cross country motorized vehicle use and creation of new routes and trails by visitors. State and Federal laws will also be enforced throughout the TMA.

Goals for successful enforcement of the TMP:

- Increase the presence of BLM and partner agency law enforcement through the TMA
- Improve and expand interagency cooperation in the area
- Concentrate efforts on high use periods such as weekends and holidays
- Focus targeted enforcement along the boundary of the Standard Wash OHV open area
- Support of volunteer efforts to educate the public on rules and etiquette (AZ OHV Ambassador Program)

Partnerships with local interest groups and dealerships will be encouraged to promote safe and appropriate OHV use. Volunteer groups, such as the AZ OHV Ambassador Program, may assist with monitoring, public education, and special events.

5.0 MONITORING AND EVALUATION

The success of the Havasu TMP is best determined through monitoring and evaluation. The LHFO will implement a monitoring and evaluation program in order to identify and address emerging issues which may adversely impact a resource and/or visitor experience. The data from this effort will be used to evaluate implementation progress, the effectiveness of the TMP in achieving DFCs, and to identify adaptive measures, where necessary.

The following information will be gathered through monitoring and evaluation:

- Determine if recreation objectives are being met
- Determine visitor satisfaction

- Determine use patterns and volumes
- Determine the condition of routes, public use areas, and compliance with designations

Some features of the monitoring and evaluation program will include:

- Photo-monitoring points, in key locations, to monitor implementation actions and their effectiveness. These points may be used to determine success of rehabilitation, continued use of closed routes, and/or extent of erosion. Photo-monitoring points will be documented using GPS and a monitoring schedule.
- Closed routes will be monitored for indications of continued use. Rehabilitated routes will be monitored to determine effectiveness.
- Sign condition and presence will be documented to determine the need for replacement.
- Field verification of compliance with proposed route designations.

5.1 IMPLEMENTATION MONITORING

Implementation monitoring determines how well the Proposed Action is being completed. Although there are no specific thresholds or indicators required for this type of monitoring, the LHFO will report annually the progress made towards the priorities identified in Section 4.1. This annual report should include some of the following:

- Percent of open/limited routes signed
- Maps of routes/TVS signed
- Track volunteer hours and contributions towards implementation
- Outline progress of implementation priorities

Annual reports will be added to the Administrative Record until the project implementation is completed.

5.2 EFFECTIVENESS MONITORING

Effectiveness monitoring is used to determine if the management actions implemented in the Havasu TMP were effective; and if so, how effective, in meeting DFC established in the 2007 LHFO RMP. Effectiveness monitoring will be completed through field visits and reports of activity off of designated routes. An annual report will outline effectiveness monitoring by including some of the following information:

- Reports of off-route travel. This may be obtained from:
 - Law Enforcement
 - BLM Staff
 - Partner Organizations
 - Local OHV Clubs
- Photo documentation of completed restoration sites
- Documentation of signs, gates, berms, or features in need of repair/replacement
- Locations of dump sites

- Obvious changes in route conditions

This annual report, including information on implementation monitoring, will be filed with the Administrative Record.

5.3 RESOURCE OR VALIDATION MONITORING

Resource monitoring will document how implementation of the Plan has influenced natural and cultural resources over time. Monitoring, as well as management, will be adaptive. Monitoring will be accomplished through protocols such as:

- Resource monitoring will initially consist of an ecological site inventory following the guidelines of the Arizona Standards for Rangeland Health. Most ecological sites established throughout the state have already been inventoried; therefore the work required here will usually be limited to identification of the sites within the TMA. Some new monitoring sites may be required specifically for the travel management program. These transect sites should be set up by resource specialists in the first year of this plan.
- On a five year recurring basis, transects, utilizing the line-intercept method, will be taken from sites identified above. Both reference and affected sites will be monitored. Core indicators to be monitored should include: percent bare ground, vegetative composition, percent vegetative cover, soil aggregate stability, and record the presence / absence of OHV tracks. Additional monitoring information that may be collected as part of the core data collection could include vegetation height and non-native invasive species composition.
- Monitor for proliferation of non-native species in specific locations, to be determined by resource staff.
- Annually monitor the known Sonoran Desert Tortoise burrows and the associated animals occupying those burrows to determine health and welfare of the individual desert tortoises. Continue the telemetry study in the TMA, if needed, to determine the movements of the Sonoran Desert Tortoise.
- Annually survey at a minimum, ten cultural resource sites. Sites to be specified by Lake Havasu Field Office's Cultural Specialist. Sites may include both publicly known sites near designated routes and reference sites that are not located near any travel network assets. BLM may work with authorized universities and cultural contractors to accomplish needed monitoring.

5.4 ADAPTIVE MANAGEMENT

Adaptive management refers to a system of management practices based on clearly identified outcomes, including monitoring to determine 1) if management actions are meeting outcomes, and 2) if not, to facilitate management changes that will best ensure outcomes are either met or re-evaluated. Data collected through the monitoring and evaluation program will determine the need for adaptive management of implementation, effectiveness, and resource concerns.

Indicators, or triggers, which require adaptive management, may include the following:

- Unauthorized routes, whether created by motorized or non-motorized users, cannot be rehabilitated at the same rate as their creation.

- Priority/special status species habitat condition are in a downward trend over a five year period and is determined to be a result of recreation or travel impacts.

The appearance of new or unauthorized routes may be addressed through law enforcement, increased public education, temporary signs, barriers, and, if needed, reclamation of route through vertical mulching and/or native planting.

6.0 TMP REVISION AND AMENDMENT

The Havasu TMP will be in effect until rescinded or amended by a future management action or a revision of the 2007 LHFO RMP. Adaptive management measures may be undertaken with plan maintenance actions and implementation progress. Future changes to the travel network are anticipated to be infrequent, but may be required. Potential changes to the travel network (i.e. new routes, reroutes, upgrades to existing routes, and/or closures) may be made through activity level planning or with the appropriate site specific NEPA analysis.

Any person, organization or governmental body may propose changes to the current route designations. Changes to the travel network must meet specific needs, and cannot solely be for the enhancement of recreation opportunity. Request to change route designations should be submitted in writing to the BLM LHFO Manager. Since the designation of routes is a discretionary action the manager may determine whether or not the proposal has merit and whether or not the proposal constitutes a significant or minor modification. If the application is rejected, a letter will be sent to the applicant indicating the reasons for the refusal. If accepted, the request will be forwarded to the appropriate BLM staff. When accepting a proposal the authorized officer should consider cost recovery. Only after evaluation of the effect on the total travel network and NEPA analysis has occurred will there be a formal decision to accept or reject a specific route change. Any proposed amendment to this plan will be documented and appended to this plan.

APPENDICES

A. SIGN PLAN

The objective of travel management sign plan is to discourage off-network travel and other misuse of the area. Priority will be given to placing and maintaining signs for all designated “Open” routes. The goal of an effective sign plan is to make the network of open primitive roads, trails, and routes more obvious and attractive than the “closed” routes.

Another goal of an effective sign plan is to ensure that there is ample information for the public to be able to understand where they are allowed or prohibited and what activities are allowed. If this goal is met, the public can easily comply with BLM’s regulations and route designations. Also, this goal is concerned with enforcement. In the event a law enforcement officer should need to issue a citation, the officer will be able to prove to a magistrate that there was ample information readily available for the visitors to have understood what was required.

The following four general categories of signs will be used to establish the route network on the ground. These categories are adapted from the *2004 BLM Sign Guidebook*.

Identification signs: these are usually, large wooden signs on two posts or a stone base at major access points to specific areas like the Standard Wash OHV Recreation Management Area. These can also be as simple as small metal signs on posts that indicate entering or leaving public lands or areas (see Figure 1).

Information signs: such as bulletin boards or kiosks that are placed at parking or pullout areas to provide maps and detailed area use information. Also included in this category are small information signs that provide stewardship or interpretive messages.

Regulatory/Warning /Safety Signs. These signs are used for the protection of visitors and environment. They are purposely concise and straight forward, and include use of international symbols where possible (see Figure 1)

Guide or Navigation Signs (commonly referred to as “route markers”). The majority of signs for this plan fall in this category. Most of these signs are fiberglass markers showing the route number and applicable limitation symbols (see Figure 1). Initially, all routes will be marked at intersections and other points that may be confusing to visitors with route markers. At the intersection of two major connector routes, larger guide signs with designations and mileages may also be used.



Figure 1 Navigation Sign

The sign plan for this travel management area has three major sections: *Route & Route Numbering, Signs and Proposed Locations,* and *Maintenance and Monitoring.*

ROUTE MARKERS & ROUTE NUMBERING

NUMBERING

Starting in the Northwest corner of the travel management area a consistent four digit numeric system will be applied to the route network. All route identifiers within the travel area will have numbers between 4000-4099 and 4300-4999 to denote Lake Havasu Field Office. Long distance routes, touring loops or routes to specific places may have a route name or symbol, example: *4300 Mojave Wash* or *4303 Crossman Peak Trail*. Local input will be sought when naming loops and trails. The numbering system will be flexible, and numbers may not always follow in numeric order. Routes that travel between field offices or planning areas will retain the number of origin.

MARKERS



The majority of primitive roads and trails will be marked with brown 5'6" by 3.75" fiberglass markers generally referred as fiberglass posts. Figure 2 provides three examples of layouts for route markers. All numbers and/or decals should be placed within the top three feet of the post. At the top of each post there will be American flag decal then an agency decal. Underneath this an international symbol that will delineate the chief recommended use. Next, the numeric route identifier will be placed and below everything will be international symbols will indicate restrictions, with the "No" red slash across the symbols.

At each intersection "open" routes will be marked with their number. In order to limit the number of markers at an intersection, two routes may be identified on one post through the use of arrow symbols and by using both sides of the double-sided fiberglass posts. When adding a route name or where more than one or two international symbols are needed to convey a restriction or use, BLM may develop specific decals which clearly identify the needed message or trail name. If a volunteer group adopts a route they may also be allowed to develop a decal to place on the markers. Trail names or "Trail Adopters" may also be identified and labeled on the post above the route number. Not all route markers need both route name and alphanumeric route

identifier, such that the type of information conveyed could be alternated from route marker to route marker.

A primitive road or trail should be marked at a minimum of one mile intervals along the route, or as necessary to indicate routes that are “open” for vehicle travel.

At the intersections of a motorized route or trailhead with “Non-Motorized Use Only” trails fiberglass posts will indicate first that it is open to hiking, biking or horseback riders, and then will be marked with standard symbol decals, indicating that the route is closed to motor vehicles. Beyond the trailhead or intersection, these types of non-motorized trails should be marked only where needed to clarify the trail’s direction or path.

Where there is potential for a motorized route to be extended past its current-end point by vehicular travel, “Motorized Route Ends” signs or decals may be used.

“Administrative Use Only” routes will be marked with standard “Closed” route signs most prominently (i.e. at the beginning of the route), followed by route markers that display the standard “Administrative use only.”

Where motorized routes intersect with closed routes, the active or designated “Open” route will be posted with a directional marker (decal with arrow). The post will be placed centered on the closed route’s path to encourage continued travel on the designated open route. “Closed” route markers will be placed only where absolutely necessary for resource protection or public safety. When these closed routes are completely rehabilitated either through natural re-vegetation or reclamation efforts, and the “Closed” route markers are no longer necessary, the markers will be removed.

Double-sided white Fiberglass posts with decals stating “*Leaving (or Entering) Public Lands,*” will be placed next to routes when they leave (or enter) public lands (see Figure 3). GPS technology will be used to place these signs as close as possible to the legal boundary. A disclaimer will be placed on information bulletin boards, maps and other informational outlets that these markers are located near boundary lines and do not constitute a legal property line.

Information signs with positive messages will be used and are preferred over limitation signs. Typically no more than two markers should be placed in any one place or within 200 yards of each other. Fewer markers and signs are generally better from a visual resource management perspective, so care should be taken to prioritize the need for markers and their locations.

Table 1 estimates material costs for implementing the marker portion of the sign plan. This estimate is based upon estimating the number of intersections, number of routes over a mile long, number of “end of trail” or trailhead locations, and number of places routes cross private property lines or leaves lands within BLM’s jurisdiction within the Havasu Travel Management Planning Area. Using these estimates, an initial cost for materials to mark the primitive roads and trails within the planning area was derived. Labor costs are not included. The use of labor



ands

supplemental to that which can be provided directly by the BLM LHFO (e.g. volunteer groups, contractors) will be needed to accomplish the initial posting and subsequent monitoring of these markers.

Table 1 – Material Cost Estimate for Route Markers

Material Cost Estimate for Route Markers*					
	Number of Locations	Est. Markers per Location	Total Est. Markers needed.	Est. cost per-post (with basic Decals)	Est. Total Cost
Intersections	1808	2	3616	\$26	\$94,016
Routes over mile Long	49	1	49	\$26	\$1,274
Trailheads	36	1	36	\$59	\$2,124
Route ends	213	1	213	\$59	\$12,567
Private Property / BLM Jurisdiction Lines	333	1	333	\$54	\$17,982
Boundary of OHV Area	61	1	61	\$54	\$3,294

*Estimations based on 2013 dollars

IDENTIFICATION SIGNS

The posting of route markers (i.e. guide or navigation signs) should be of the highest priority, along with posting of the regulatory signs stating: *“Entering Limited Use Area, Vehicle travel stay on designated and marked routes.”* These markers will be placed during the first phase of the plan implementation. Other signs will be placed in an ‘as needed’ priority for the protection of resources and visitor compliance within the travel network during the life of this plan. All other signs within the planning area will be developed according to the 2004 *BLM Sign Guidebook*.

The objective is to provide the visitor with signs that clearly indicate the area is managed by BLM, but are adapted to present the needed information for the specific location or use. Standard Wash will have its own project plan with a site-specific sign plan incorporated as part of that larger plan.

MAINTENANCE AND MONITORING OF TRAVEL MANAGEMENT SIGNS

Generally maintenance will be done according BLM’s Sign Guidebook’s Chapter 5.

An inventory of signs and all route markers will be maintained in a database with at least the following information:

- GPS Location
- Date installed (on all larger signs this information should be placed on the actual the back of the sign)
- Type of Sign: R= Route Marker B=Boundary Marker or S=Sign (include sign plan worksheet number)
- Date last monitored
- Current condition: Good, Fair; Needs Repair or Replacement
- Number of times sign has been “replaced”(via ongoing count)

- All photos of signs should be linked to the GPS Location and maintained with the database in subfolders by year.

This inventory will be incorporated into this Sign Plan and maintained annually. Current markers and signs should be inventoried as soon as possible after of the acceptance of the Travel Management Plan.

All visitors should be encouraged to report missing or damaged signs. Volunteer efforts should be developed to help install, monitor and replace route markers and signs. Cost of replacement signs should be a line item in annual budget projections. These costs should be identified though the database.

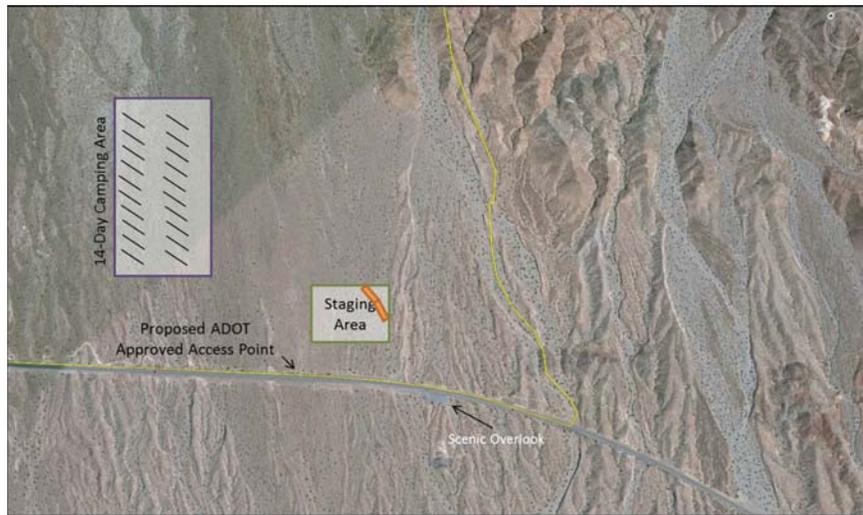
B. STANDARD WASH OHV OPEN AREA

The Standard Wash area is a popular destination and launching point for OHV users. In an effort to provide an optimum recreational experience, the LHFO is proposing to develop facilities at this location for the public's use.

Currently, the Standard Wash area has one ADOT approved access point with left turning and deceleration lane at the northern end of the Open Area leading to a mineral collection site. An informational kiosk is located just north of this access point. At the southern end of the Open Area, the public tends to use a scenic overlook, located across State Highway 95, as a parking area and launch point. For public safety purposes, BLM will be looking to develop a second, ADOT approved access point at this southern end in order to reduce OHV traffic crossing the highway.

Proposed Developments:

- Improved access (road re-construction) to the northern kiosk from the gravel pit
 - Users will use northern, ADOT approved access point. Once off the highway, users will travel north via new constructed road towards pre-existing kiosk for parking and staging.
- New construction of ADOT approved access, with turning and deceleration lanes, located at the southern end of the OHV Open Area
- 2 OHV Staging Areas (located at northern and southern ends of Open Area; near access points). Each staging area will include:
 - Restrooms
 - Information Kiosks
 - OHV Ethics (Leave No Trace, etc)
 - Wildlife
 - Cultural
 - OHV Ambassador Stewardship
 - Loading/Unloading Ramp
- 14-Day Camping Area
- Open Area Boundary Delineation
 - Signs
 - Rehabilitation and/or obstruction of closed routes (boulders, fence, etc)



C. ARIZONA RESOURCE ADVISORY COUNCIL (RAC) OHV GUIDELINES

The Arizona BLM oversees a Resource Advisory Council (RAC) comprised of citizens from around the state representing various interests and geographic areas. The RAC formed a subcommittee to study policy and create suggested guidelines to address recreation management. The extent possible and considering current policy, Arizona BLM attempts to use these guidelines in the preparation of plans such as Travel Management Plans. The following guidelines represent the recommendations from the RAC that have been incorporated into BLM's planning.

Arizona BLM Guidelines for Off-Highway Vehicle (OHV) Recreation Management February 24, 2007

Introduction

Off-Highway Vehicle (OHV) recreation, as well as commercial use, has become increasingly more popular and prevalent on public lands. Arizona's population growth has placed ever greater demands on outdoor recreation opportunities, and BLM managed public lands are frequently the premier outdoor destination for both urban and rural recreational users. The range of OHV users includes not only the dirt bike, all-terrain vehicle (ATV), and four wheel drive jeep riders, but also recreationists such as hikers, hunters, and birders who use OHVs such as sport utility vehicles (SUVs) and pickup trucks to access their favorite hiking, hunting, or birdwatching destination. Thus, OHV recreation spans virtually all recreational uses of the public lands. Recognizing the growing significance of OHV use, the Bureau of Land Management, Washington, DC office, published the National Strategy for Motorized Off-Highway Vehicle Use on Public Lands, dated January, 2001. The National Strategy emphasizes that the BLM should be proactive in seeking motorized OHV management solutions that conserve natural resources while providing for appropriate motorized recreation opportunities. Soon after publication of the 2001 Strategy, BLM realized that it must manage all modes of travel. Public land users travel by a variety of modes: motorized, mechanized, animal, pedestrian and over water and snow. However, the most critical travel management priority currently facing the Arizona BLM is OHV recreation. Thus, this set of guidelines will deal primarily with OHV recreational use and actions necessary to assure rangeland health, as well as broader, more strategic OHV recreation management implementation strategies.

These guidelines were developed in a collaborative process with the Arizona Resource Advisory Council (RAC) similar to the process that resulted in the Standards for Rangeland Health and Guidelines for Grazing Administration (USDI 1997) (copy included in Appendix to these OHV Guidelines).

The OHV guidelines are presented in two sections. The first section addresses OHV guidelines that directly relate to the Arizona BLM rangeland health standards. Each standard is listed along with its associated OHV guidelines. As a comparison, see Appendix which defines the Grazing Guidelines, developed in 1997. These OHV guidelines deal primarily with on-the-ground actions necessary to assure that OHV use and travel activities are managed in a manner to assure achievement of the

rangeland health standards, or that significant progress is being made toward attainment. Inherent in the application of these guidelines is the need to conduct monitoring and evaluation of their effectiveness. Through adaptive management, new or modified guidelines may be required to enable attainment of the rangeland health standards. Specific application of the rangeland health standards and OHV guidelines will be governed by the Resource Management Plan.

The second section addresses a broader and more strategic set of OHV recreation management implementation strategies that are largely derived from the BLM National OHV Strategy (USDI 2001) and consider OHV “best practices” adopted by other western states. These strategies identify successful practices for managing OHV recreation, including user education and outreach, land use planning considerations, OHV partnerships, route maintenance, law enforcement and monitoring, and visitor services information.

These guidelines and implementation strategies are intended to provide an initial toolbox for management of OHV recreation on Arizona BLM public lands. Recognizing the dynamic nature of OHV recreation, this document may be modified or augmented in the future as dictated by lessons learned from field offices’ implementation.

I. Arizona Standards for Rangeland Health and Guidelines for Management of OHV Use

A. Standard 1: Upland Sites

Upland soils exhibit infiltration, permeability, and erosion rates that are appropriate to soil type, climate and landform (ecological site).

Criteria for meeting Standard 1:

Soil conditions support proper functioning of hydrologic, energy, and nutrient cycles. Many factors interact to maintain stable soils and healthy soil conditions, including appropriate amounts of vegetative cover, litter, and soil porosity and organic matter. Under proper functioning conditions, rates of soil loss and infiltration are consistent with the potential of the site. Ground cover in the form of plants, litter or rock is present in pattern, kind, and amount sufficient to prevent accelerated erosion for the ecological site; or ground cover is increasing as determined by monitoring over an established period of time.

Signs of accelerated erosion are minimal or diminishing for the ecological site as determined by monitoring over an established period of time. As indicated by such factors as:

- Ground Cover
- Litter
- Live vegetation, amount and type (e.g., grass, shrubs, trees, etc.)
- Rock
- Signs of erosion
- Flow pattern
- Gullies
- Rills
- Plant pedestaling

Exceptions and exemptions (where applicable): none

OHV Guidelines:

1-1. Route Design and Location. Locate and manage OHV travel use to conserve soil functionality, vegetative cover, and watershed health. Consider the following factors when designing and locating roads, primitive roads, and trails (hereafter referred to as routes) or when approving/designating existing routes for inclusion in a transportation plan:

- **Grade:** Routes should be designed to cross any slopes rather than go straight up or down the fall line. Grade should not exceed 50% of the cross slope of the area being crossed to avoid channeling water. To the extent practicable, route grade should change frequently enough to diminish or dissipate the erosive energy of overland water flow.
- **Water Control:** Water control structures should be incorporated into the route grade. Construct or reconstruct routes with rolling dips, undulating route design or route grade breaks.
- **Location:** Main route networks should disperse users away from environmentally sensitive or heavily used areas. Locate routes on stable soils and avoid areas with highly erosive soils. Avoid route proliferation by designing routes with adequate mileage distance, suitable access to desired destinations, and diversity of experiences. Use signs and barriers to delineate approved routes.
- **Curves and Switchbacks:** Turns and curves can be used as a design feature to reduce sight distances, increase difficulty and therefore control speed. When multiple turns are necessary to gain elevation in steep country, use climbing turns rather than switchbacks if possible. Climbing turns have a longer radius, are preferentially used to maintain route integrity and soil stability, and provide for a more useable and enjoyable turn.
- **Vegetation and Clearing:** The type of clearing on a route can also be used to maintain route integrity, control speed or increase the level of difficulty on a route. To protect against erosion and to maintain natural conditions, leave trees and woody vegetation in place where possible. Narrow routes provide a better rider experience and minimize loss of soil cover and vegetation.

1-2. Route Maintenance. Regular maintenance, condition assessment, and monitoring are key to controlling erosion and protecting desired soil conditions. Erosion problems such as headcuts should be addressed early on and may require route re-construction or rehabilitation.

1-3. Route Stabilization and Hardening. Use stabilization materials to repair and improve tread integrity.

1-4. Re-vegetation (or Reclamation). Where land use plan/implementation decisions dictate closure of non-system routes, re-vegetate closed routes using natural materials. Some routes would be required. Employ vertical mulching to the visual horizon, where appropriate.

B. Standard 2: Riparian-Wetland Sites

Riparian-wetland areas are in properly functioning condition. Criteria for meeting Standard 2: Stream channel morphology and functions are appropriate for proper functioning condition for existing climate, landform, and channel reach characteristics. Riparian-wetland areas are functioning properly when adequate vegetation, land form, or large woody debris is present to dissipate stream energy associated with high water flows. Riparian-wetland functioning condition assessments are based on examination of hydrologic, vegetative, soil and erosion deposition factors. BLM has developed a standard checklist to address these factors and make functional assessments.

Riparian-wetland areas are functioning properly as indicated by the results of the application of the appropriate checklist.

The checklist for riparian areas is in Technical Reference 1737-9 "Process for Assessing Proper Functioning Condition." The checklist for wetlands is in Technical Reference 1737-11 "Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas." As indicated by such factors as:

- Gradient
- Width/depth ratio
- Channel roughness and sinuosity of stream channel
- Bank stabilization
- Reduced erosion
- Captured sediment
- Ground-water recharge
- Dissipation of energy by vegetation

Exceptions and exemptions (where applicable): Dirt tanks, wells, and other water facilities constructed or placed at a location for the purpose of providing water for livestock and/or wildlife and which have not been determined through local planning efforts to provide for riparian or wetland habitat are exempt. Water impoundments permitted for construction, mining, or other similar activities are exempt.

OHV Guidelines:

2-1. Route Design and Location. Routes should be located, or relocated, to avoid/minimally impact sensitive areas such as riparian and wetland areas. Avoid placement of routes longitudinally along riparian-wetland areas. Perpendicular crossings are acceptable as long as the size or frequency of crossings does not significantly affect proper functioning condition or where effect can be mitigated, e.g. with hardening or bridging the crossing to reduce sediment delivery.

2-2. Route Maintenance. Regular maintenance, condition assessment, and monitoring are key to controlling erosion and protecting stream bank stabilization. Erosion problems such as headcuts should be addressed early on and may require route re-construction or rehabilitation.

2-3. Route Stabilization and Hardening Use stabilization materials to repair and improve tread integrity.

2-4. Re-vegetation (or Reclamation). Where land use plan decisions dictate closure of non-system (i.e. non-designated) routes, re-vegetate closed routes using natural materials in order to retard erosion and stabilize soils. Employ vertical mulching to the visual horizon, where appropriate.

2-5. OHV Facilities (e.g., staging areas and campgrounds) New facilities should be located away from riparian-wetland areas if they conflict with achieving or maintaining riparian wetland function. Existing facilities must be used in a way that does not adversely impact riparian-wetland functions or are relocated/modified when incompatible with proper riparian wetland functions. Ensure that facilities are not located in a flood zone.

C. Standard 3: Desired Resource Conditions

Productive and diverse upland and riparian-wetland plant communities of native species exist and are maintained.

Criteria for meeting Standard 3:

Upland and riparian-wetland plant communities meet desired plant community objectives. Plant community objectives are determined with consideration for all multiple uses. Objectives also address native species, and the requirements of the Taylor Grazing Act, Federal Land Policy and Management Act, Endangered Species Act, Clean Water Act, and appropriate laws, regulations, and policies.

Desired plant community objectives will be developed to assure that soil conditions and ecosystem function described in Standards 1 and 2 are met. They detail a site-specific plant community, which when obtained, will assure rangeland health, State water quality standards, and habitat for endangered, threatened, and sensitive species. Thus, desired plant community objectives will be used as an indicator of ecosystem function and rangeland health. As indicated by such factors as:

- Composition
- Structure
- Distribution

Exceptions and exemptions (where applicable): Ecological sites or stream reaches on which a change in existing vegetation is physically, biologically, or economically impractical.

OHV Guidelines:

3-1. As appropriate, manage OHV travel use by type, season, intensity, distribution, and/or duration to minimize the impact on plant and animal habitats, especially those containing threatened, endangered or candidate species. If seasonal closures become appropriate to minimize adverse OHV travel impacts on public lands resources, designate alternative routes to preserve public access where possible. Provide clear and timely information to the public when closures, seasonal use, and other regulations or limits are placed on OHV travel on public lands.

3-2. Protect wildlife and/or habitat by:

- Preserving connectivity and minimizing fragmentation during design or approval of transportation systems.
- Using kiosks, signs, maps, and barriers to delineate approved routes and to educate users about sensitive areas.
- Managing OHV travel activities to minimize interference with critical wildlife stages such as nesting, reproduction, or seasonal concentration areas/ wildlife waters.
- Avoiding creation of artificial attractions such as the intentional and un-intentional feeding of wild animals or improper disposal of garbage.

3-3. Avoid or minimize the establishment and/or spread of noxious or other weeds from intensive recreation, including the use of riding and pack animals, hiking, motorized, or other mechanized vehicles.

Conduct an educational campaign to inform recreational users about the damage caused by noxious weeds and how their spread can be minimized.

Where appropriate, apply restrictions, e.g. don't permit surface disturbing activities.

3-4. Assign higher priority to route monitoring and law enforcement, especially during high-use times such as hunting seasons and holiday periods. Work to coordinate and improve enforcement to deter violations.

3-5. Manage OHV travel activities to conserve watershed and water quality. Manage recreational uses in coordination with other uses on public lands to meet or exceed applicable water quality standards. Control water quality impacts resulting from recreational use, such as erosion, bank degradation, human waste, trash, and other elements. Monitor non-point source pollution particularly in high use areas.

3-6. Manage OHV travel activities to preserve significant cultural, historical, archaeological, traditional, and paleontological resources. Use information and interpretative services as major tools to protect cultural resources. As appropriate, improve public knowledge by locating kiosks, interpretive signs, and visitor information facilities at visitor contact points. Design OHV routes for placement at an adequate distance away from sensitive sites to reduce/eliminate potential damage.

II. OHV Recreation Management Implementation Strategies

A. Coordination, Communications, and Collaboration.

Successful management of OHV recreation relies on pro-active outreach and collaboration with OHV users. Field offices should form local coordinating groups comprised of OHV users and other interested parties to address OHV issues and develop collaborative solutions.

B. Education and Training.

Expand and improve educational efforts to foster responsible-use ethics among OHV users. Use resources from national organizations, such as the National Off-Highway Vehicle Conservation Council, Tread Lightly, Inc., and Leave No Trace. The Bureau has signed National Memoranda of Understanding with Leave No Trace (2001) and Tread Lightly! (1998). BLM is committed to abiding by and instructing public land users to likewise abide by these land use ethics principles.

Disseminate information about regulations, penalties, Effects for irresponsible behavior, and impacts to resources from inappropriate use. Utilize high use areas and special events such as OHV dealer expositions to maximize the dissemination of responsible use education materials and concepts to the public and OHV dealers. Set up a booth and greet visitors at entry routes to popular OHV destinations to disseminate educational information and maps/brochures. Incorporate information about public land values and user ethics into the terms and conditions of permits and land use authorizations.

Provide OHV management and land use ethics education and training for managers, staff, partners, and volunteers.

C. Land Use Planning. (See USDI 2005: Appendix C, p. 17-8).

Place a high priority on analysis of OHV travel issues, including user needs, trends, and resource impacts during the land use planning process. Collaborate with the public, including OHV users and other interest groups, when conducting and evaluating route inventories and developing the

transportation system and OHV designations, i.e., open, closed, or limited per 43 Code of Federal Regulations 8342. In this regard, the Arizona BLM endorses the use of a systematic route evaluation process that is fully informed by systematic and comprehensive input from the public when preparing transportation plans.

Identify easements and acquisitions where appropriate and necessary to resolve lack of legal access to BLM lands.

Consider designating new OHV use areas, route systems, and camping areas (with adequate support facilities) where appropriate to focus OHV use away from sensitive areas, to disperse heavy OHV use concentrated in too small an area, to provide a diversity of experiences for different types of OHV users, and to meet current and future demands, especially in the urban interface areas. As stated in the National Strategy (USDI 2001: p. 18), where demand exists and land resources can accommodate OHV use, field offices should provide OHV recreation sites to be used for destination-type facilities.

Include in land use plans, social/economic effects of OHV recreational use, including special recreation events (USDI 2001: p.12-13).

Plan and locate OHV travel activities to minimize user conflicts and to segregate motorized from non-motorized recreational uses. For example, OHV travel activities should be located to avoid or minimize contact with non-motorized trail users such as birders, hikers, or equestrians who desire a quiet, natural environment to enjoy their recreational pursuits. Also, establish appropriate speed limits on the designated transportation network to enable safe travel by all users.

D. Partnerships and Volunteers.

Leverage the use of volunteers through challenge cost-share projects. Seek OHV grant funding available through Arizona State Parks such as the Recreation Trails Program.

Develop partnerships with user groups to assist with route maintenance and monitoring through the Adopt-A-Trail program. Enhance opportunities for citizen involvement in OHV management issues by working directly with the public, local communities, user groups, and partnership organizations such as the National Off-Highway Vehicle Conservation Council. Consider use of prison crews to complete planned projects.

E. Route Maintenance.

As stated in the National OHV Strategy USDI 2001, route design, maintenance, and restoration techniques need to be improved to enhance resource conditions and visitor experiences on public lands. Document deferred maintenance needs and seeks partnerships with other agencies and user groups to address critical issues.

Document deferred maintenance budget requirements and identify resource impacts if not addressed. The Adopt-a-Trail program is one way to get maintenance done by volunteers and it also develops some rider "ownership" in the route. Volunteer workdays are an effective way to get larger projects done.

Partnerships with user groups and environmental organizations can provide volunteers to help reclaim and restore closed routes.

F. Law Enforcement.

Strengthen on-the-ground presence of law enforcement personnel to monitor compliance with OHV regulations and speed limits, particularly during high use periods. Where illegal equipment is suspected, check vehicles for compliance with federal and Arizona state regulations, such as presence of spark arresters and mufflers that comply with sound limits.

G. Monitoring and Adaptive Management

Use volunteers to patrol the designated transportation network to greet visitors and disseminate information in a positive, less threatening environment. Increase on-the-ground presence and encourage the use of volunteer trail patrols. Develop patrol standards and facilitate education of OHV user groups.

Encourage organized OHV groups and responsible users to provide peer pressure to educate non-compliant users and help mitigate adverse resource impacts.

Monitoring forms the basis of “adaptive management”. Areas that experience heavy or illegal use will be closely monitored and given priority for law enforcement patrols. If irresponsible use is creating resource damage, then management is adapted to compensate. It is important to intervene and mitigate early before a growing pattern of illegal use is established. OHV travel routes may be restricted, relocated, or even closed to deal with adverse impacts. Use signs to explain closures for mitigation of resource damage. Install additional signs and/or barriers to steer use away from inappropriate areas. Generally, management actions should be taken sequentially in a gradual fashion ranging from minor/temporary to major/permanent restrictions until the problem is resolved or mitigated. There may be instances when proper function has degraded and immediate action is necessary to correct the problem.

Monitoring objectives should include, but not be limited to:

- meeting land health standards (e.g. watershed conditions)
- condition assessment (e.g. erosion, washouts, vegetation)
- use (e.g. intensity, type, consistency with planned use)

H. Signs, Maps, and Brochures.

Users are frequently confused about the appropriate use of their vehicles on public lands because of inadequate signs, maps, brochures, and other interpretive products. Field offices should disseminate visitor services information (i.e appropriate vehicle use) through kiosks, signs, maps, brochures, and other publications.

Provide travel information on websites with downloadable mapping capabilities for at-home trip planning.

Cooperate and coordinate with adjacent land managers so that there is seamless travel management transition among land jurisdictions.

I. Congressionally Designated Wilderness Areas.

OHV routes that are located near or adjacent to designated wilderness areas may pose special challenges. Some wilderness areas are accessed by OHV routes that are legally cherry-stemmed and surrounded by wilderness. In some cases, OHV routes lay alongside the boundaries of wilderness areas. These routes may be part of an approved transportation plan; however, adequate

signing of wilderness boundaries is critical to ensure users are aware of the legal limits of motorized travel.

If OHV use is in trespass of a wilderness boundary, early intervention with increased law enforcement, monitoring, and mitigation of resource damage will help prevent a potentially growing pattern of illegal trespass. Where there are dead-end OHV routes that lead only to a wilderness trailhead or campsite (example is the spur route to Brittlebush Trailhead at the boundary of the North Maricopa Mountains Wilderness), it may be appropriate to manage OHV use by type, e.g., exclude use by non-street legal dirt bikes, ATVs, and sand rails.

Collaboration with OHV users and the general public should be done before restrictions are imposed. Notification and education should also be conducted in an effort to reduce and avoid closures

J. Noxious Weed Abatement.

Avoid or minimize route location in areas vulnerable to invasive species, particularly in riparian areas and washes that show such conditions.

Require vehicle wash protocols for permitted events, where appropriate and practicable.

Require vehicle wash protocols in areas vulnerable to invasive species where appropriate and practicable.

References

USDI, Bureau of Land Management

1997 Arizona Standards for Rangeland Health and Guidelines for Grazing Administration.

2001 National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands.

2005 Handbook 1601-1, Land Use Planning Handbook

D. GLOSSARY

ACCESS POINTS: Designated areas and passageways that allow the public to reach a road, primitive road, or trail from adjacent streets or community facilities.

ADAPTIVE MANAGEMENT: A process for continually improving management policies and practices by learning from the outcomes of operational programs and new scientific information. Under adaptive management, plans and activities are treated as working hypotheses rather than final solutions to complex problems.

ADVERSE VISUAL IMPACT: Any modification in land forms, water bodies, or vegetation, or any introduction of structures, which negatively interrupts the visual character of the landscape and disrupts the harmony of the basic elements (i.e., form, line, color, and texture).

ALL-TERRAIN VEHICLE (ATV): A wheeled or tracked vehicle, designed primarily for recreational use or for the transportation of property or equipment exclusively on trails, undeveloped road rights-of-way, marshland, open country, or other unprepared surfaces.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): Acreage within public lands where special management attention is required to protect and prevent irreparable damage to important historical, cultural, or visual values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

BACKCOUNTRY: A recreation setting classification characterized by a naturally appearing landscape with human modifications not readily noticeable.

CASUAL USE: Is defined in various places in 43 CFR and is uniformly based on the principal that the activity will “not ordinarily lead to appreciable disturbance or damage to lands, resources or improvements.”

CLOSED OFF-HIGHWAY VEHICLE DESIGNATIONS: Areas or trails are designated closed if closure to all vehicular use is necessary to protect resources, promote visitor safety, or reduce use conflicts (see 43 CFR 8340.05).

Common impact terms:

Negligible Impacts are those impacts that occur or may occur and have little or no visible trace on the resource or for which mitigation actions exist and acceptable.

Minor Impacts are those impacts that occur or may occur and have some visible trace on the resource or for which mitigation actions exist and are not acceptable or for which no mitigation impacts exist.

Moderate Impacts are those impacts that occur or may occur and have some visible trace on the resource or for which mitigation actions exist and are not acceptable or for which no mitigation impacts exist.

Major Impacts are those impacts that occur or may occur and have a large visible trace on the resource or may even eradicate the resource or cause its value as a resource to deteriorate to such a level that the resource may no longer qualify for protection or use.

Short-Term Impacts are those effects that are not permanent or can be changed/remediated back to a prior condition in a short amount of time.

Long-Term Impacts are those permanent or unchangeable effects such as the loss of a resource and other than permanent or unchangeable that cannot be changed/remediated back to a prior condition in a short amount of time.

COOPERATING AGENCY: Assists the lead Federal agency in developing an Environmental Assessment or Environmental Impact Statement. Any Federal, State, or local government with jurisdiction may become a cooperating agency by agreement with the lead agency.

COLLECTOR ROADS: usually double-lane, graded, drained and surfaced with a 20 to 24 foot travel way. They serve large land areas and are the major access route into development areas.

DISPERSED RECREATION: Various kinds of recreation occurring in individual, scattered, and unstructured settings throughout a large area (i.e. not confined to a specific place or developed facilities).

DUAL-SPORT MOTORCYCLE: A dual-sport motorcycle compromises the light weight and off-road capabilities of the typical dirt bike in order to offer a safer, more comfortable ride on the road and comply with regulations that affect street motor vehicles.

EFFECTS (OR IMPACTS): The biological, physical, social, or economic consequences resulting from a proposed action or its alternatives. Effects may be adverse (detrimental) or beneficial, and cumulative, direct, or indirect.

EFFECTS, CUMULATIVE: The impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions. Cumulative impacts can also result from individually minor but collectively significant actions taking place over a period of time.

EFFECTS, DIRECT: Effects on the environment which occur at the same time and place as the initial cause or action.

EFFECTS, INDIRECT: Effects also caused by the action, but occurring later or further removed in distance.

ENVIRONMENTAL IMPACT: The positive or negative effect of any action upon a given area or source.

EXTENSIVE RECREATION MANAGEMENT AREAS (ERMA): These are areas where dispersed recreation is encouraged and where visitors have a freedom of recreational choice with minimal regulatory constraint. Detailed planning is not usually required for these areas.

FEDERAL REGISTER: Daily publication which provides a uniform system for making regulations and legal notices issued by the Executive Branch and various departments of the Federal government available to the public.

FOUR-WHEEL DRIVE VEHICLE (4X4, 4WD): A passenger vehicle or light truck having power available to all wheels.

FREEDOM OF INFORMATION ACT (FOIA): Allows all US citizens and residents to request any records in possession of the executive branch of the federal government.

GOAL(S): Statement(s) of what a plan or action in a plan hopes to accomplish in the long term. Goals state the preferred situation, and usually are not quantifiable and may not have established time frames for achievement.

INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA): Reauthorized in 2005 as SAFETEA-LU. Federal legislation authorizing highway, highway safety, transit, and other surface transportation programs from 1991 through 1997. It provided new funding opportunities for sidewalks, shared use paths, and recreational trails. ISTEA was superseded by the Transportation Equity Act for the 21st Century (TEA-21) in 1998.

IMPLEMENTATION PLAN: A site-specific plan written to implement decisions made in a land use plan. An implementation plan usually selects and applies best management practices to meet land use plan objectives. Implementation plans are synonymous with “activity” plans.

LAND MANAGEMENT AGENCY: Any agency or organization that manages lands, many managed as recreation and/or wilderness areas. Examples include federal agencies such as the USDI Bureau of Land Management, USDA Forest Service, and the USDI National Park Service as well as state, county, and local park system agencies: as well as organizations such as The Nature Conservancy.

LAND MANAGER: Any person who makes decisions regarding land use.

LAND USE PLAN (LUP): A set of decisions that establishes management direction for land within an administrative area, as prescribed under the planning provisions of the Federal Land Policy Management Act of 1976; 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.

LAND USE PLAN DECISIONS: Establishes desired outcomes and actions needed to achieve them. Decisions are reached by using the planning process in 43 CFR 1600. When these decisions are presented to the public as proposed decisions, they can be protested to the BLM Director. They are not appealable to the IBLA.

LANDS WITH WILDERNESS CHARACTER: Wilderness characteristics are resource values that include naturalness, outstanding opportunities for solitude, or outstanding opportunities for primitive and unconfined recreation. Areas evaluated for wilderness characteristics generally occur in undeveloped locations of sufficient size (typically greater than 5,000 contiguous acres) to be practical to manage for these characteristics.

LIMITED AREA: As defined in Title 43 Part 8340, means an area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: Numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions.

LIMITED OHV DESIGNATIONS: The limited designation is used where OHV use must be restricted to meet specific resource management objectives. Examples of limitations include: number or type of vehicles; time or season of use; permitted or licensed use only; use limited to designated roads and trails; or other limitations if restrictions are necessary to meet resource management objectives, including certain competitive or intensive use areas that have special limitations (see 43 CFR 8340.05).

MAINTENANCE INTENSITY: provide guidance for appropriate “standards of care” to recognized routes within the BLM.

MANAGEMENT AREA: An area selected for management of an emphasized natural resource, and common management objectives.

MECHANIZED TRAVEL: Moving by means of mechanical devices such as a bicycle; not powered by a motor.

MOTORIZED TRAVEL: Moving by means of vehicles that are propelled by motors such as cars, trucks, OHVs, motorcycles, and boats.

MOTORIZED VEHICLE: Synonymous with off-highway vehicle. Examples of this type of vehicle include all-terrain vehicles (ATV), Sport Utility Vehicle (SUV), motorcycle, and snowmobiles.

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;... that takes into account the long-term needs of future generations for renewable and non-renewable resources, including recreation, range, timber, minerals, watershed, wildlife, and fish; natural scenic, scientific, and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land ... (FLMPA, 42 U.S.C. 1702, Sec. 103 [c]).

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): Federal law (established by Congress in 1969), which requires that every Federal agency with public involvement assess the environmental impacts of all federal actions, evaluate if there will be any significant environmental impacts of the proposed project, and disclose the findings to the public.

NECESSARY TASKS: are defined as work requiring the use of a motorized vehicle and only if such travel does not result in resource damage.

NON-MOTORIZED TRAVEL: Moving by foot, stock or pack animal, boat, or mechanized vehicle such as a bicycle.

OFF-HIGHWAY VEHICLE (OHV): OHV is synonymous with Off-Road Vehicles (ORV). ORV is defined in 43 CFR 8340.0-5 (a): Off-road vehicle means 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. OHVs generally include dirt motorcycles, dune buggies, jeeps, 4-wheel drive vehicles, snowmobiles, and ATVs.

OFFICIAL USE: use by an employee, agent, or designated representative of the Federal government or one of its contractors, in the course of his employment, agency, or representation.

OHV AREA DESIGNATIONS: Used by federal agencies in the management of OHVs on public lands. Refers to the land use plan decisions that permit, establish conditions, or prohibit OHV activities on specific areas of public lands. All public lands are required to have OHV designations (43 CFR

8342.1). The CFR requires all BLM-managed public lands to be designated as open, limited, or closed to off-road vehicles and provides guidelines for designation. The definitions of open, limited, and closed are provided in 43 CFR 8340.0-5 (f), (g), and (h), respectively.

OHV RECREATION: All uses of motorized vehicles on public lands are not considered OHV recreation. Commercial use of motorized vehicles, such as haul trucks and utility company vehicles are not motorized recreation. OHV recreation is more closely associated with the use of specialized two, three and four wheel vehicles, intended for recreation or racing uses, i.e. dirt bikes, quads, go carts, utility terrain vehicles (UTV's or side-by-sides) and specially prepared 4x4 units. This form of motorized use is more correctly categorized as OHV recreation, particularly when the specialized vehicle is used to test ones abilities or equipment or is specifically brought to the area to ride for the pleasure of the ride itself.

OFF-ROAD VEHICLE (ORV): The legal term used in the CFR 8340 regulations. See the Off-Highway Vehicle definition.

OPEN OHV DESIGNATIONS: Open designations are used for intensive OHV use areas 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 (see 43 CFR 8340.05).

PLAN AMENDMENT: The process of considering or making changes in the terms, conditions, and decision of approved plans. Usually only one or two issues are considered that involve only a portion of the planning area.

PLANNING CRITERIA: Factors that managers and interdisciplinary teams develop to form judgments about decision making, analysis, and data collection during planning. Planning criteria streamline and simplify the resource management planning actions to ensure that the actions are tailored to the issue(s) previously identified and to ensure that unnecessary data collection and analysis are avoided.

PM10: Particulate matter pollution consists of very small liquid and solid particles floating in the air. These particles are less than 10 microns in diameter (about 1/7th the thickness of a human hair) and are known as PM₁₀.

PRIMITIVE ROADS: A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not formally meet any BLM road design standards.

PUBLIC: Individuals, including consumer organizations, public land resource users, corporations and other business entities, environmental organizations and other special interest groups, and officials of State, local, and Indian tribal governments affected or interested in public land management decisions.

PUBLIC LAND: Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

RECREATION, DEVELOPED: Outdoor recreation requiring significant capital investment in facilities to handle a concentration of visitors on a relatively small area. Examples are ski areas, resorts, trailheads, and campgrounds.

RECREATION, DISPERSED: Outdoor recreation activities that occur outside of developed recreation facilities in which visitors are diffused over relatively large areas away from maintained roads. This type of recreation is also referred to as unstructured recreation. Where facilities or developments are provided, they are more for access and protection of the environment than for the comfort or convenience of the people.

RECREATION MANAGEMENT AREA: Recreation management areas are sub-units of resource areas that are the basic land units of recreation management. Each area is identified and managed as a unit based on similar or interdependent recreation values, homogenous or interrelated recreation use, land tenure and use patterns, or administrative efficiency. There are two types of recreation management areas, Extensive and Special

SPECIAL RECREATION MANAGEMENT AREAS (SRMA): Recreation Management Areas where congressionally recognized recreation values exist or where significant public recreation issues or management concerns occur. Special or more intensive types of management are typically needed. Detailed recreation planning is required in these areas and greater managerial investment (e.g. facilities, supervision, etc.) is likely. There may be none to several of these areas within a resource area. The size of these management units is typically over 1,000 acres, but exceptions can occur for smaller sites (e.g., very large campground units, trail segments, historic sites, etc.).

RECREATION OPPORTUNITY SPECTRUM (ROS) AND WATER RECREATION OPPORTUNITY SPECTRUM (WROS): A means of classifying and managing recreational opportunities based on physical, social, and managerial settings. ROS classes are: primitive, backcountry, middle country, front country, Rural, and Urban. Each ROS class is defined in terms of its combination of activity, setting, and experience.

RECREATION SITE, DEVELOPED: A site developed primarily to accommodate specific intensive use activities or groupings of activities such as camping, picnicking, boating, swimming, winter sports, etc. These sites include permanent facilities which require continuing management commitment and regular maintenance, such as roads, trails, toilets, and other facilities needed to accommodate recreation use over the long term.

RECREATIONAL TRAILS PROGRAM (RTP): Federal program first established in 1991, RTP returns a portion of federal gasoline taxes, generated by non-highway recreation, to the states, which in turn provide grants for trail-related purposes to private organizations, state and federal agencies, and municipalities (www.fhwa.dot.gov/environment/rectrails).

RESOURCE DAMAGE: Significant undue damage or disturbance including erosion or water pollution, creating undue degradation of wildlife or vegetative resources (including the spread of noxious weeds). This definition of resource damage applies to areas designated as open, limited or closed to ORV use. The on-the-ground determination of whether resource damage has occurred is left to the discretion of the authorized officer.

RESOURCE MANAGEMENT PLAN (RMP): The BLM considers Resource Management Plans synonymous with land use plans (as defined previously), so the terms may be used interchangeably. Land use plan decisions made in RMPs establish goals and objectives for resource management (such as desired future conditions), the measures needed to achieve these goals and objectives, and parameters for using public lands. Land use planning decisions are usually made on a broad scale and customarily guide subsequent site-specific implementation decisions.

RESOURCE ROAD: local roads are low-volume, single-lane roads. They normally have a 12 to 14 foot travelway with “invisible turnouts,” as appropriate, where approaching drivers have a clear view of the section of road between the two turnouts and can pull off to the side to let the approaching driver pass. They are usually used for dry weather, but may be surfaced, drained, and maintained for all-weather use. These roads connect terminal facilities, such as a well site, to collector, local, arterial, or other higher class. They serve low average daily traffic (ADT) and are located on the basis of the specific resource activity need rather than travel efficiency. These roads collect traffic from resource or local roads or terminal facilities and are connected to arterial roads or public highways.

RMP AREA: Most RMPs cover a large planning and management area. As a result, the planning area may be divided into smaller areas, each with differing values, issues, needs, and opportunities that may warrant differing management prescriptions.

RIGHT-OF-WAY: A linear corridor of land held in fee simple title or as an easement over another's land, for use as a public utility (highway, road, railroad, trail, utilities, etc.) for a public purpose. Usually includes a designated amount of land on either side that serves as a buffer for adjacent land uses.

RIGHT OF WAY: The right of one trail user or vehicle to proceed in a lawful manner in preference to another trail user or vehicle.

RISK MANAGEMENT: Evaluating the effects of potential hazards of an action or non-action. A level risk is measured through considering acceptance, control, or elimination of such hazards with respect to expenditure of resources.

ROADS: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

ROAD AND TRAIL SELECTION: For each limited area, the BLM should choose a network of roads and trails that are available for motorized use, and other access needs including non-motorized and non-mechanized use, consistent with the goals, objectives, and other considerations described in the LUP.

ROAD AND TRAIL IDENTIFICATION: For the purposes of this guidance, road and trail identification refers to the on-the-ground process (including signs, maps, and other means of informing the public about requirements) of implementing the road and trail network selected in the land use plan or implementation plan. Guidance on the identification requirements is in 43 CFR 8342.2 (c).

ROUTES: Multiple roads, trails, and primitive roads; a group or set of roads, trails, and primitive roads that represents less than 100% of the BLM transportation system. Generically, components of the transportation system are described as “routes.”

SEDIMENT: Solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water. Sediment includes chemical and biochemical precipitates and decomposed organic material such as humus.

SETTINGS:

- **PHYSICAL SETTING:** The component of setting opportunity determined by the on-the-ground condition, or degree of environmental modification, resulting from human activity.
- **SOCIAL SETTING:** The component of setting opportunity determined by the level and types of contacts between individuals or groups which can be expected in a particular area.
- **MANAGERIAL SETTING:** The component of setting opportunity which reflects the kind and extent of management services and facilities provided to support recreation use, and the restrictions placed on peoples' actions by the administering agency. **SPECIAL MANAGEMENT AREA (SMA):** SMAs include Wilderness Study Areas, Wild and Scenic Rivers, Research Natural Areas, and Areas of Critical Environmental Concern Areas.

SPECIAL RECREATION MANAGEMENT AREA: A public lands unit identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific, structured recreation opportunities (i.e., activity, experience, and benefit opportunities). Both land use plan decisions and subsequent implementing actions for recreation in each Special Recreation Management Area (SRMA) are geared to strategically identified primary market—destination, community, or undeveloped.

SPECIAL RECREATION PERMIT (SRP): A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of federal lands for some special purpose such as a motorcycle race, outfitter guide, etc.

SPECIFICATIONS: Written provisions and requirements (standards) for the performance of work and type of materials to which trails (tread, clearing, grade) and trail structures (bridge, culvert, puncheon) are built and maintained according to type of use.

SPORT UTILITY VEHICLE (SUV): A street legal, high clearance vehicle used primarily on-highway but designed to be capable of off-highway travel.

STANDARD(S): A statement and/or illustration describing a design recommendation or principle that recommends a preferred development technique for use as a rule or basis of comparison in measuring maximum or ideal requirements, quantity, quality, value, etc.

STEWARDSHIP: Taking responsibility for the well-being of land and water resources and doing something to restore or protect that well-being. It usually involves cooperation among people with different interests and sharing of decision-making. It is generally voluntary. It is oriented towards assessment, protection, and rehabilitation of trails and roads as well as sustainable use of resources.

SUSTAINABLE (SUSTAINABILITY): Use of natural resources in a way that allows for long term use while minimizing impacts to resources and need for continuing maintenance.

SUSTAINABLE DEVELOPMENT: Development that maintains or enhances economic opportunity and community well-being while protecting and restoring the natural environment upon which people and economies depend. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.

TECHNICAL: A section along a trail that is difficult to navigate; used by mountain bikers and other trail users to describe challenging sections of trail.

TECHNICAL ASSISTANCE: Help (advice and knowledge; usually not financial) offered by federal and state agencies to local groups.

TECHNICAL VEHICLE SITE (TVS): Defined recreation area venue which is designated for specialized motor vehicles and is not part of the designated transportation system. Specialized vehicles used in these venues are designed for 1) sport, challenge, skill and for 2) crossing difficult terrain that a “standard stocked” vehicle is not designed to traverse. Venue may contain limiter devices and may require limited/permitted use. The sport that is practiced at this type of venue is commonly known as “rock crawling”.

TRAIL: Linear routes managed for human-powered, stock, or OHV forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

TRAIL DESIGN: Designing and layout of trails requires special training, knowledge, experience, and skill. When designing trails, many different factors are taken into account including hydrology, topography, soils, flora, fauna, management objectives, user expectations and characteristics, and trail design standards. The designer will utilize data collected from area site analysis, environmental assessments, public meetings, and area trail and management plans.

TRAILHEAD: An access point to a trail or trail system often accompanied by various public facilities, such as hitching posts for horses, a horse or OHV unloading dock or chute, parking areas, toilets, water, directional and informational signs, and a trail use register. Designed and managed for those embarking on an overnight or long-distance trip, whereas a staging area caters to trail day use.

TRANSPORTATION ENHANCEMENT: Projects that include: providing bicycle and pedestrian facilities; converting abandoned railroad rights-of-way into trails; preserving historic transportation sites; acquiring scenic easements; mitigating the negative impacts of a project on a community by providing additional benefits; and other non-motorized projects.

TRANSPORTATION LINEAR FEATURES: Linear features represent the broadest category of physical disturbance (planned and unplanned) on the BLM land. Transportation-related linear features include engineered roads and trails, as well as user-defined, non-engineered roads and trails created as a result of the public use of the BLM land. Linear features may include roads and trails identified for closure or removal as well as those that make up the BLM’s defined transportation system.

TRAVEL MANAGEMENT AREA (TMA): TMAs are polygons or delineated areas where travel management (either motorized or non-motorized) needs particular focus. These areas may be designated as open, closed, or limited to motorized use and will typically have an identified or designated network of roads, trails, ways, and other routes that provide for public access and travel across the planning area. All designated travel routes within TMAs should have a clearly identified need and purpose as well as clearly defined activity types, modes of travel, and seasons or times for allowable access or other limitations.

TRAVEL NETWORK (TN): The network of roads, primitive roads, and trails (motorized and nonmotorized) that are selected (recognized, designated, or authorized) for use through the comprehensive travel and transportation planning process.

TRAVEL MANAGEMENT PLAN: The document that describes the process and decisions related to the selection and management of the Transportation Network. This implementation plan specifically and officially designates roads, primitive roads and trails.

UTILITY TYPE (OR 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 of twenty (20) psi or less, maximum width less than seventy-four (74) inches, 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 golf carts, vehicles specially designed to carry a disabled person, implements of husband.

WILDERNESS AREA: Uninhabited and undeveloped federal land to which Congress has granted special status and protection under authority of the Wilderness Act of 1964. This allocation allows foot and horse traffic only; no mountain bikes, OHV use, hang gliders, or other "machines."

WILDERNESS STUDY AREA (WSA): An area possessing wilderness characteristics as defined in the Wilderness Act. These areas are maintained in their original condition and evaluated for possible inclusion in the National Wilderness Preservation System.

E. ENVIRONMENTAL ASSESSMENT

Havasu Travel Management Plan (TMP)
Environmental Assessment
DOI-BLM-AZ-LHFO-2013-0020-EA



Prepared by:

U.S. Department of Interior
Bureau of Land Management
Colorado River District

Lake Havasu Field Office
Lake Havasu City, Arizona

August 2013

TABLE OF CONTENTS

1.0	Introduction	1
1.1	Background.....	1
1.2	Plan Area.....	2
1.3	Land Use Plan Conformance	3
1.4	Purpose and Need	3
1.4.1	Decisions To Be Made	3
1.5	Scoping and Issues.....	3
1.5.1	Internal Scoping.....	3
1.5.2	External Scoping	5
1.5.3	Issues	5
2.0	Proposed Action & Alternatives Considered	6
2.1	No Action (Alternative A)	7
2.2	Resource Protection (Alternative B).....	7
2.3	Proposed Action (Alternative C).....	8
2.4	Access (Alternative D).....	8
2.5	Alternatives Eliminated from Detailed Analysis	9
3.0	Affected Environment & Environmental Effects	9
3.1	Area of Environmental Concern, Crossman Peak (ACEC)	9
	Affected Environment.....	9
	Environmental Effects	9
3.2	Cultural/Paleontological Resources.....	10
	Affected Environment.....	10
	Environmental Effects	11
3.3	Fish & Wildlife Excluding Federally Listed Species	11
	Affected Environment.....	11
	Environmental Effects	11
3.4	Hazardous or Solid Wastes.....	13
	Affected Environment.....	13
	Environmental Effects	13
3.5	Migratory Birds.....	14
	Affected Environment.....	14
	Environmental Effects	14
3.6	Native American Religious Concerns.....	15

Affected Environment.....	15
Environmental Effects	16
3.7 Public Health & Safety	16
Affected Environment.....	16
Environmental Effects	16
3.8 Recreation	17
Affected Environment.....	17
Environmental Effects	17
3.9 Socioeconomics.....	19
Affected Environment.....	19
Environmental Effects	19
3.10 Soils.....	20
Affected Environment.....	20
Environmental Effects	21
3.11 Threatened and Endangered Species/Special Status Species	21
Affected Environment.....	21
Environmental Effects	28
3.12 Travel Management.....	29
Affected Environment.....	29
Environmental Effects	29
3.13 Vegetation/ Invasive & Non-Native Species	30
Affected Environment.....	30
Environmental Effects	30
3.14 Visual Resources.....	31
Affected Environment.....	31
Environmental Effects	31
4.0 Mitigating Measures for the Proposed Action	32
5.0 Cumulative Impacts Analysis	33
5.1 Analysis Area.....	33
5.2 Past, Present, & Reasonably Foreseeable Actions	34
5.3 Cumulative Impact Analysis	35
6.0 Consultation and Coordination.....	36
6.1 Tribes, Individuals, Organizations, or Agencies Consulted.....	36
6.2 List of Preparers	37

APPENDICES

A. Works Cited	1
B. Public Comments and Notes.....	3
C. Vegetative Communities	16
D. Socioeconomic Study.....	18
E. Planning Criteria	26
F. Route Designation Reports.....	27
G. Alternative Maps	29

1.0 INTRODUCTION

The Havasu Travel Management Plan (TMP) is the product of extensive public and agency input. Its intent is to establish a comprehensive travel network, and meet both current and future access needs to the area's public lands while resolving conflict among users of the travel network as identified in this document. This plan identifies a system of roads, primitive roads and trails, as well as the terms for their use and maintenance. Additionally, it outlines facilities to be developed in support of recreation through creation of new routes, and closure of other routes. The travel network identified in this TMP comprises both motorized and non-motorized trails.

This Environmental Assessment (EA) provides analysis of the proposed plan, and four alternatives considered during the planning process.

1.1 BACKGROUND

Federal agencies are directed to manage motorized vehicle use on public lands through Executive Order 11644 and Executive Order 11989, which have been incorporated into the Code of Federal Regulations (CFR), under 43 CFR 8342.1. Routes identified within the Lake Havasu Field Office Record of Decision and Approved Resource Management Plan (2007 LHFO RMP) are designated as "limited to existing roads and trails"¹ with the exception of two sub-regions wherein routes are allocated as "limited to existing roads and trail – seasonal use." The 2007 LHFO RMP deferred choosing the designation of specific roads and trails as "open," "closed," or "limited," to individual activity-level travel management plans. The Havasu Travel Management Area (TMA), one of six within the Lake Havasu Field Office's jurisdiction, comprises approximately 217,029 acres of BLM administered lands covered under this analysis. Following approval of the Havasu TMP, all routes will be "limited to designated roads and trails." In addition, the 2007 LHFO RMP limits the use of motorized vehicles in the Aubrey Hills Recreational Management Zone (RMZ) for existing authorized use; the Standard Wash RMZ is designated as an Off-Highway Vehicle (OHV) open area².

The proper management of the Havasu TMA entails evaluation and designation of all individual routes/trails for uses within the TMA unless designated as an open area or Wilderness Area. The overall goal of the Havasu TMP is to encourage and accommodate outdoor recreation opportunities while protecting natural, cultural, and historic resources by limiting OHV use to designated routes.

A travel network in the TMA is necessary to respond to increased OHV use on public lands due to population increases in the area. Nationwide participation in OHV activity increased 32% between fall 1999 and 2005³. As this use increases in this area, conflict can occur with users seeking different recreational experiences. Additionally, as urban development encroaches on public lands, recreational use pressures can negatively impact natural and cultural resources, as well as other authorized uses.

¹ Limited to Existing Roads and Trails Area designation was first applied to TMA public lands in the 1987, *Final Yuma District Resource Management Plan and EIS*.

² Lake Havasu Resource Management Plan and Record of Decision, 2007, BLM Lake Havasu Field Office, Page (s) #115 TM-24

³ *Off-Highway Vehicle Recreation in the United States, Regions and States: A National Report from the National Survey on Recreation and the Environment (NSRE)*, 2005, H. Ken Cordell, Carter J. Betz, Gary Green, Matt Owens

1.2 PLAN AREA

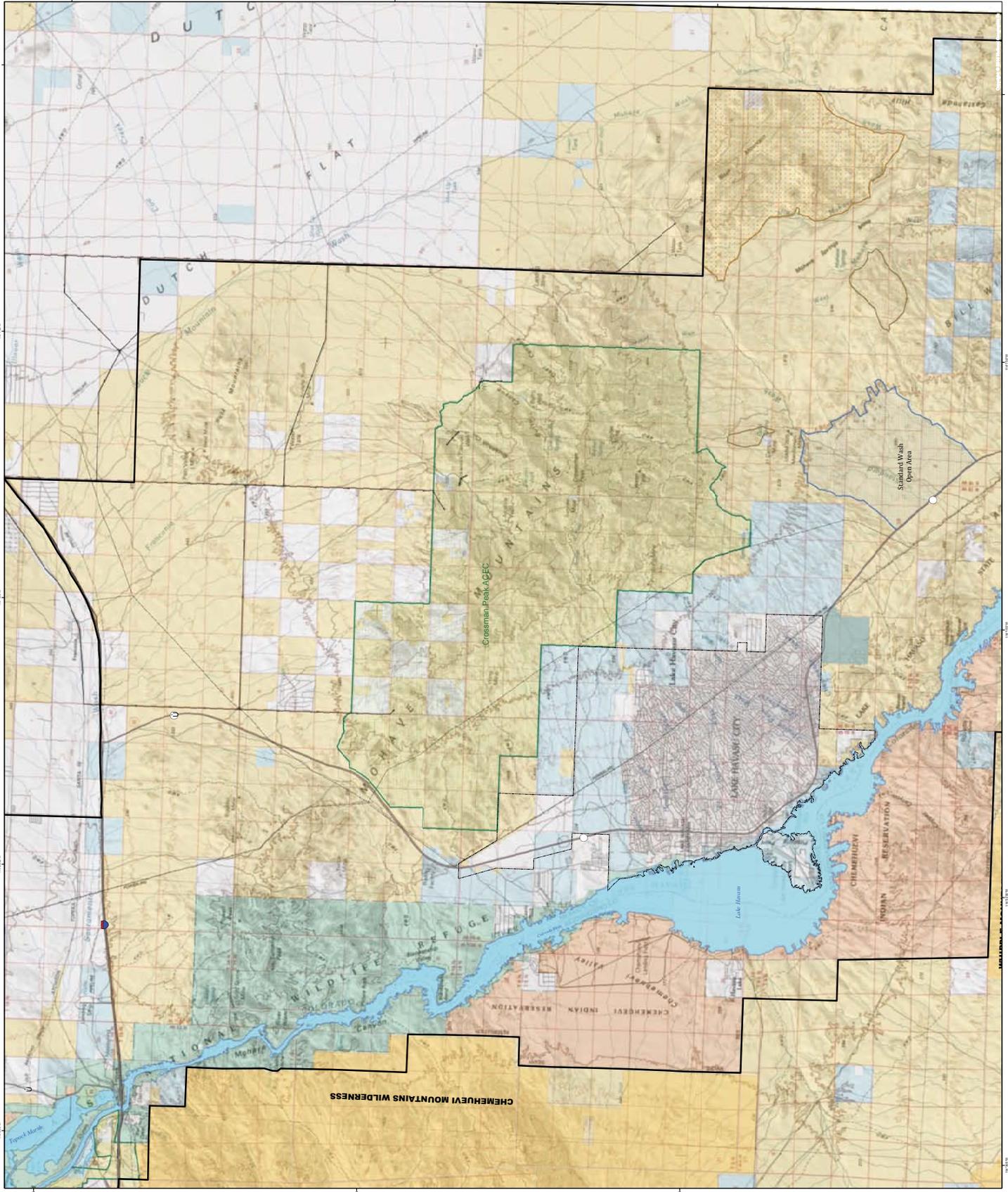
The Havasu TMA encompasses 557 square miles within Mohave County, Arizona and San Bernardino County, California. Table 1 outlines respective acreages managed by various land agencies throughout the TMA.

	Federal Lands	State Lands	Private Lands	Tribal Lands	Other	Total
Number of Acres	217,029	28,918	45,538	36,038	28,789	356,312

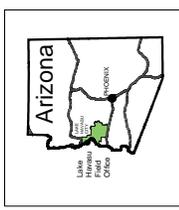
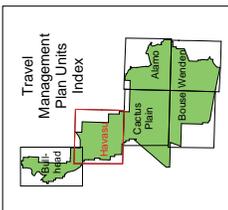
Outdoor recreation is a major draw for local residents and seasonal visitors to Lake Havasu City. Within the Havasu TMA the public may experience a wide variety of recreational activities including OHV riding, target shooting, hunting, hiking, biking, horseback riding, recreational mining, camping, wildlife observation, sightseeing, shoreline fishing and rock hounding. To adequately manage a range of recreational opportunities in the Havasu TMA, the 2007 LHFO RMP established two Special Recreation Management Areas (SRMA), the Havasu Urban SRMA and the Lake Havasu SRMA, which encompass six Recreational Management Zones (RMZ). In addition to recreation, the Havasu TMA contains a major utility corridor, two permitted grazing allotments, several active mining operations, one Area of Critical Environmental Concern (ACEC) and wildlife management areas for bighorn sheep and desert tortoise. Figure 1 displays a general overview of the Havasu TMA.

Havasas Travel Management Area (TMA) Area Overview

Figure 1 - Area Overview
Havasas
TMP



- Legend**
- Land Status**
- Bureau of Land Management
 - Indian Lands
 - Private
 - State
 - City, County, & State Park
 - US Fish & Wildlife Service
 - Wilderness Area
 - Areas of Critical Environmental Concern (ACEC)
 - Lands with Wilderness Characteristics
 - Technical Vehicle Sites
- Highways**
- Interstate Highways
 - State Highway
- Roads**
- County Road - Paved
 - County Road - Unpaved
 - Rural Road
 - Unimproved Road
- Other Features**
- Lake Havasu Field Office Boundary
 - Incorporated City Boundary
 - Township Grid
 - Roadway
 - Railroad
 - Fence
 - Rivers
 - Lakes, Rivers, and Canal



Travel Management Plan Units on public lands within the field office boundary are identified on this map. The routes are not currently numbered on the ground as of 2011.

The Bureau of Land Management makes no warranties, implied or expressed, with respect to information shown on this map.

May 2011



1.3 LAND USE PLAN CONFORMANCE

The proposed action is in conformance with federal regulations pursuant to 43 CFR Subpart 8342 and BLM policies. The Havasu TMP is considered an implementation or an action plan and is in conformance to the 2007 LHFO RMP; The TMP conforms with national goals and objectives set through the following strategic plans and manuals: *Recreation 2000, A Strategic Plan*, and *National Management Strategy for Motorized off- Vehicle Use on Public Lands (2001)*.

1.4 PURPOSE AND NEED

Presently, the Havasu TMA is open to all motorized and non-motorized uses on existing, inventoried routes. Route proliferation has been and continues to be a concern in the area, contributing to increased conflict amongst various recreationists, habitat fragmentation, and erosion. Additionally, the lack of trail markers and associated maps contributes to issues related to navigability and therefore, public safety. The purpose of the Proposed Action entails modifying the existing travel network within the Havasu TMA through designation of inventoried routes as open, limited, or closed. The Proposed Action will enhance outdoor recreational opportunities through increased public safety and navigability, meeting access needs, and protecting both natural and cultural resources on public lands. Guidance for implementing the Proposed Action is driven by Executive Orders 11644 and 11989, 43 CFR 8342.1, Manual 1626, Handbook 8342, and Desired Future Condition TM-1 in the 2007 LHFO RMP.

1.4.1 DECISIONS TO BE MADE

The plan's *Decision Record* will specifically:

- Convert areas that are currently allocated as “limited to existing roads, primitive roads and trails,” to areas that are “limited to designated roads, primitive roads, and trails.”
- Establish a travel network, with each route explicitly designated per the requirements of 43 CFR 8342.1, BLM manual 16266, and Handbook 8342.

1.5 SCOPING AND ISSUES

1.5.1 INTERNAL SCOPING

The BLM interdisciplinary (ID) team analyzed the potential consequences of the Proposed Action and alternatives during route evaluations and meetings held throughout the development of the Havasu TMP. Table 2 displays the resource issues analyzed and addressed in Section 3.0 Affected Environment and Environmental Effects.

TABLE 2: INTERNAL SCOPING

Resource Issue	Not Present	Present Not Impacted	Present Impacted	Rationale
Air Quality*		x		Mohave County is in Attainment Area.
Areas of Critical Environmental Concern			x	See Section 3.1
Cultural/Paleontological Resources			x	See Section 3.2
Environmental Justice		x		No minority or low income group would be disproportionately impacted by health or environmental effects.
Farmlands*	x			No farmlands are present within the Havasu TMA
Fish Habitat*		x		No motorized access near Lake Havasu.
Fish & Wildlife Excluding Federally Listed Species			x	See Section 3.3
Floodplains*		x		No floodplains will be impacted by route designations
Forests and Rangelands*	x			No designated forests/rangelands within the Planning Area
Fuels/Fire Management		x		Fuels/Fire Management will not be impacted by route designations
Grazing		x		Grazing will not be impacted by route designations
Greenhouse Gas Emissions (Climate Change)		x		The Havasu TMP will determine which routes will be open to motorized use, but has no authority over the amount of motorized use within the TMA.
Hazardous or Solid Wastes*			x	See Section 3.4
Migratory Birds*			x	See Section 3.5
Minerals		x		Access for any mining activity is described and approved in the associated mining plan or notice. Includes a reclamation plan for any disturbance created to access mining areas.
Native American Religious Concerns*			x	See Section 3.6
Public Health & Safety			x	See Section 3.7
Recreation			x	See Section 3.8
Socioeconomics			x	See Section 3.9

Soils			x	See Section 3.10
Threatened and Endangered Species*			x	See Section 3.11
Travel Management			x	See Section 3.12
Vegetation/ Invasive & Non-Native Species			x	See Section 3.13
Visual Resources			x	See Section 3.14
Water Quality (Drinking or Groundwater)*		x		No motorized access near Lake Havasu.
Wetlands/Riparian Zones*		x		No motorized access near Lake Havasu
Wild & Scenic Rivers*	x			No Wild & Scenic Rivers in Planning Area
Wilderness*		x		Several routes access the Chemehuevi Mountain Wilderness, but do not enter or impact the designated Wilderness Area

1.5.2 EXTERNAL SCOPING

BLM held three public scoping meetings in Lake Havasu City to encourage and elicit public input on route designation alternatives. BLM initially invited public comment of the proposed route designations for 30 days. As a result of comments received, the public comment period was extended for a period of six months to accommodate seasonal resident input. Communication was encouraged by establishing a website (http://www.blm.gov/az/st/en/prog/travel_mgmt/lhfo/hav-tmp.html) which explained the planning process and provided the public with maps of four alternatives, as well as comment forms.

A final public scoping meeting was held on February 6, 2013 to encourage public review of a preliminary TMP for the Havasu TMA and its associated draft Environmental Assessment. Additional information on previous public comments received is outlined in Appendix B.

1.5.3 ISSUES

Resulting from public scoping, the list below summarizes the identified issues and concerns; Table 3 outlines specific resource issues and where they are addressed in this document.

- Route closures present a potential negative impact on the local economy due to the popularity of OHV use in the area.
- Route closures may reduce opportunity for OHV casual use, as well as access for other recreational uses.
- Public concern is that any route closure intensifies the impacts on the remaining open routes. Public motorized access is being squeezed onto smaller and smaller areas. OHV use is on the rise, but OHV trails are diminishing in number.

TABLE 3: ISSUES

Resource	Resource Issue	Section Addressing Issue
Socioeconomic Resources	How would routes closures impact the local economy, specifically the sales of off-road vehicles, parts, fuel, and the tourism industry?	See Section 3.9
Recreation	How would the route designations impact family recreational opportunities?	See Section 3.8
Wildlife	How would the route designations impact bighorn sheep movement corridors and lambing grounds?	See Section 3.3
Wildlife	How would the proposed action impact desert tortoise habitat quality?	See Section 3.3 and 3.11
Cultural	How would the route designations impact existing cultural resources?	See Section 3.2
Minerals	How would the route designations impact access to mining claims?	See Section 1.5.1
Recreation	How would the route designations contribute to loop routes and connectivity?	See Section 3.8
Recreation	How will the route designations impact access to prospecting, hunting opportunities, geocaching, and scenic view points?	See Section 3.8
Socioeconomic Resources	How would the route designations impact seasonal visitor frequency and use of travel network?	See Section 3.9
Recreation	How would the route designations impact public safety?	See Section 3.8

2.0 PROPOSED ACTION & ALTERNATIVES CONSIDERED

The Proposed Action is one of four alternatives considered in this analysis. Each alternative (except the No Action Alternative), follows the purpose and need as described in section 1.4 of this analysis. While each alternative (except the No Action Alternative) differs in their respective approaches to route network and Technical Vehicle Sites (TVS) designations, they all follow prescriptions outlined in the TMP. Table 4 below, outlines the differences between miles of route designations and the number of TVS for each alternative. Maps of each alternative are contained in Appendix G.

<i>TABLE 4: ROAD/PRIMITIVE ROAD/TRAIL DESIGNATIONS PER ALTERNATIVE</i>				
Designation	No Action Alt A (Miles)	Resource Protection Alt B (Miles)	Proposed Action Alt C (Miles)	Access Alt D (Miles)
Open/Mitigate Open	684.41	334.36	571.44	660.95
Non-Motorized Use Only	69.40	14.19	49.15	53.74
Limited to Authorized Users/Vehicles	28.15	55.51	69.43	55.94
Closed	0	441.27	155.31	74.70
TOTAL (MILES)	781.96	845.33	845.33	845.33
Technical Vehicle Sites (#)	2	2	16	21

2.1 NO ACTION (ALTERNATIVE A)

In the No Action Alternative (Alternative A), current management objectives for the Havasu TMA would be maintained. In this alternative, 684.41 miles (87.5%) of routes existing at the time of the initial route inventory would remain open to all recreational uses as outlined in the 2007 LHFO RMP. Additionally, 69.40 miles (8.9%) would remain open for non-motorized activities, as part of the Aubrey Hills RMZ. Routes limited to authorized users (i.e. private land owners or permittees), single track vehicles, and administrative purposes comprise 28.15 miles (3.6%).

Two TVS exist for rock crawling activities, located in the southeastern portion of the TMA outside of the Standard Wash Open Area. There are two areas which are closed to vehicular travel January through June due to Bighorn Sheep lambing season; these areas are located north of Lake Havasu City on both the west and east sides of Arizona Highway 95.

The No Action Alternative would not provide enhancement of recreational opportunities within the Havasu TMA through signing of routes and improving navigability. Furthermore, it would not address issues pertaining to habitat fragmentation, route proliferation, erosion, public safety, or user conflict.

2.2 RESOURCE PROTECTION (ALTERNATIVE B)

The Resource Protection Alternative (Alternative B) was developed to enhance natural and cultural resources through reducing motorized vehicular activity within the Havasu TMA. Alternative B is the most restrictive for OHV use. Based on extensive route evaluations, Alternative B would have 334.36 miles (39.6%) open to all recreational uses; 14.19 miles (1.7%) would be open for non-motorized activities. The majority of these non-motorized routes are located within the North Aubrey and Aubrey Hills RMZs, both of which were designated as non-motorized areas in the 2007

LHFO RMP. Routes limited to authorized users (i.e. private land owners or permittees), single track vehicles, and administrative purposes comprise 55.51 miles (6.5%). Routes designated as closed comprise 441.27 miles (52.2%) of the inventoried routes.

Two TVS exist for rock crawling activities, located in the southeastern portion of the TMA outside of the Standard Wash Open Area; no additional TVS would be designated.

Seasonal area limitations for motorized vehicular activity across Bighorn Sheep lambing grounds would cease; protection of these areas would be accomplished through the route designations associated with this alternative.

2.3 PROPOSED ACTION (ALTERNATIVE C)

The Proposed Action (Alternative C) was developed to provide an array of outdoor recreational opportunities for motorized and non-motorized users, while protecting natural and cultural resources through route closures. Based on extensive route evaluations, Alternative C would have 571.44 miles (67.6%) open to all recreational uses. Additionally, 49.15 miles (5.8%) would be open for non-motorized activities. The majority of these non-motorized routes are located within the North Aubrey and Aubrey Hills RMZs, both of which were designated as non-motorized areas in the 2007 LHFO RMP. Routes limited to authorized users (i.e. private land owners or permittees), single track vehicles, and administrative purposes comprise 69.43 miles (8.2%). Routes designated as closed comprise 155.31 miles (18.4%) of the inventoried routes.

Of the closed routes, 84% are less than a half a mile in length and 41% are less than one tenth of a mile in length. The majority of the routes proposed for closure under Alternative C do not contribute to overall route connectivity.

In order to encourage a wide range of outdoor recreation opportunities while reducing public safety concerns, the Alternative C would include 16 TVS. In addition to the two TVS allocated in the 2007 LHFO RMP, the Alternative C establishes 14 new sites. With the help of local user groups, these sites were identified as rock crawling areas based on difficulty of maneuvering and potential for vehicle damage. By establishing these sites as TVS, the risk of damaging vehicles and becoming stranded would be reduced for the general public.

Seasonal area limitations for motorized vehicular activity across Bighorn Sheep lambing grounds would cease; all OHV activity would be limited to designated routes in those areas.

2.4 ACCESS (ALTERNATIVE D)

The Access Alternative (Alternative D) was developed to accommodate extensive OHV use throughout the TMA, while limiting access to significant resource sites. Alternative D is the most accommodating for OHV use after the No Action Alternative.

Based on extensive route evaluations, Alternative D would have 660.95 miles (78.2%) open to all recreational uses. Additionally, 53.74 miles (6.3%) would be open for non-motorized activities. The majority of these non-motorized routes are located within the North Aubrey and Aubrey Hills RMZs, both of which were designated as non-motorized areas in the 2007 LHFO RMP. Routes limited to authorized users (i.e. private land owners or permittees), single track vehicles, and

administrative purposes comprise 55.95 miles (6.6%). Routes designated as closed comprise 74.70 miles (8.8%) of the inventoried routes.

In order to encourage a wide range of outdoor recreation opportunities while reducing public safety concerns, Alternative D would include 21 TVS. In addition to the two TVS allocated in the 2007 LHFO RMP, Alternative D establishes 19 new sites. With the help of local user groups, these sites were identified as rock crawling areas based on difficulty of maneuvering and potential for vehicle damage. By establishing these sites as TVS, the risk of damaging vehicles and becoming stranded would be reduced for the general public.

Seasonal area limitations for motorized vehicular activity across Bighorn Sheep lambing grounds would cease; all OHV activity would be limited to designated routes in those areas.

2.5 ALTERNATIVES ELIMINATED FROM DETAILED ANALYSIS

During internal scoping for the proposed action, a recommendation was made to close all routes to OHV use with the exception of right-of-ways and administratively accessed sites. This alternative does not meet the purpose and need of the Proposed Action as it does not accommodate OHV use within the Havasu TMA. Furthermore, this alternative does not conform to the 2007 LHFO RMP as it does not provide for the range of recreation opportunities specifically managed for within the Havasu SRMA.

3.0 AFFECTED ENVIRONMENT & ENVIRONMENTAL EFFECTS

3.1 AREA OF ENVIRONMENTAL CONCERN, CROSSMAN PEAK (ACEC)

AFFECTED ENVIRONMENT

Akoke-humi, the Mojave name for Crossman Peak, has been identified as a significant place of traditional cultural importance and is included in oral traditions concerning the creation of the Colorado River. The Crossman Peak ACEC was established to protect and prevent irreparable damage to significant places of traditional cultural importance, the natural scenic backdrop for Lake Havasu City, and major lambing grounds for Bighorn Sheep.

The ACEC is located just northeast of Lake Havasu City and covers 48,855 acres within the planning area. Due to its proximity to Lake Havasu City, it is a popular area for OHV touring, hiking, horseback riding, rock-crawling, hunting, and rock-hounding. Most recreational activities occur on the west side of Crossman Peak and its associated ridges. The inventory of this ACEC encompasses 167.5 miles of existing primitive roads and trails. Based on public input, an additional 25.29 miles of pre-existing routes and TVS, not a part of the inventory, were added for evaluation.

ENVIRONMENTAL EFFECTS

Under Alternative A (No Action), current management for the Crossman Peak ACEC would continue as established in the 2007 LHFO RMP. No routes would be closed for wildlife and cultural resource protection. Within the ACEC, 167.5 miles of routes would remain open to OHV use. Seasonal route closures for Bighorn Sheep lambing grounds would be upheld and enforced. Alternative A would

not establish any TVS within the ACEC. With the absence of route closures, cultural resources continue to be at risk through illegal collection and/or vandalism. Additionally, route proliferation within the ACEC attributed to the absence of signs and maps would persist and thereby continue to impact the resource values for which the ACEC was established.

Under Alternative B, 96.82 miles of routes within the ACEC would be closed to motorized use for natural and cultural resource protection. Additionally, 62.7 miles of routes would remain open for a wide range of motorized recreational opportunities and 14.2 miles of routes would be limited to administrative access and non-motorized public use. In this alternative, miles of routes open for OHV use would be reduced by 54%, compared to the No Action Alternative. Alternative B would not establish any TVS within the ACEC. Reduced OHV use within the ACEC would serve as an added layer of protection for the relevant characteristics and important values of which the ACEC was established.

Under Alternative C, 35.3 miles of routes within the ACEC would be closed for natural and cultural resource protection. Additionally, 131.7 miles of routes would remain open for a wide range of motorized recreational opportunities and 3.9 miles of routes would be limited to administrative access and non-motorized public use. In this alternative, miles of routes open for OHV use would be reduced by 19%, compared to the No Action Alternative. There are 9 TVS proposed under Alternative C, which encompass 14.3 miles that would be made available for rock-crawling activities. Reduced OHV use within the ACEC would serve as an added layer of protection for the relevant characteristics and important values of which the ACEC was established.

Under Alternative D, 17.6 miles of routes within the ACEC would be closed for natural and cultural resource protection. Additionally, 151.3 miles of routes would remain open for a wide range of motorized recreational opportunities and 2.4 miles of routes would be limited to administrative access and non-motorized public use. In this alternative, miles of routes open for OHV use would be reduced by 8%, compared to the No Action Alternative. There are 12 TVS proposed under Alternative D, which encompass 18.1 miles that would be made available for rock-crawling activities. The effects of Alternative D are similar to the No Action Alternative in that a majority of the inventoried routes would remain open to OHV use.

3.2 CULTURAL/PALEONTOLOGICAL RESOURCES

AFFECTED ENVIRONMENT

Within the planning area, there are approximately 76 known sites, 48 sites of which are eligible for inclusion on the National Register of Historical Places (NRHP). Cultural sites vary from individual sites to complexes of prehistoric trails or campsites. There are identified historic sites in the area associated with early mining and ranching activities. Due to the size of the planning area, the potential for unknown cultural resources are high. Specific paleontological sites are unknown within the area; however, paleontological resources have been found within the basic geological formations that make up the area. Currently, there are 127 routes with identified cultural resource concerns.

ENVIRONMENTAL EFFECTS

Alternative A (No Action) would continue to keep all primitive roads and trails “open” without regard to possible conflicts with cultural resources. As identified during route evaluations, 163 routes open to OHV use occur in, through, or lead to known cultural sites. Management of the routes would be left to future site specific project plans. Due to continued OHV use on open routes, this alternative could lead to impacts to these resource values.

Alternative B, through closures or restrictions on most routes would have the least potential for negative impacts to both known and unknown cultural resources. In this alternative, 39 routes open to OHV use would be in, through, or lead to known cultural sites, which represents a 76% reduction from the No Action alternative. Additionally, 19 routes (2.53 miles) would provide non-motorized access to known cultural sites.

Alternative C closes routes or places a restriction on OHV use on those trails which may have the highest potential to impact known and unknown cultural resources. In this alternative, 61 routes open to OHV use would be in, through, or lead to known cultural sites, which represents a 63% reduction from the No Action alternative. Additionally, 31 routes (4.46 miles) would provide non-motorized access to known cultural sites.

Alternative D, due to the number of routes identified open to OHV traffic would still contribute to the intrusion or alteration of cultural resources, and would have a high potential for negative impacts to cultural sites. In this alternative, 83 routes open to OHV use would be in, through, or lead to known cultural sites, which represents a 49% reduction from the No Action alternative. Additionally, 33 routes (4.07 miles) would provide non-motorized access to known cultural sites.

3.3 FISH & WILDLIFE EXCLUDING FEDERALLY LISTED SPECIES

AFFECTED ENVIRONMENT

The Proposed Action occurs in a transition zone between the Mojave and Sonoran Deserts. The interface between these two deserts, along with the occurrence of riparian vegetation along the upland washes, results in remarkable diversity of habitat types and wildlife. The diverse flora and fauna have strong ecological value and attraction for the public. Appendix C contains detailed descriptions of these vegetative communities.

Throughout route evaluations, BLM documented habitat use for the following: Desert Tortoise (both Mojave and Sonoran populations), Bighorn Sheep, a wide variety of bats, Mule Deer, and Bobcat. Within the Havasu TMA, 20,303 acres of sensitive, 116,754 acres of movement corridor, and 22,787 acres of seasonal Bighorn Sheep habitat have been identified. Additionally, approximately 7,256 acres of Mojave Category 3, 71,438 acres of Sonoran Category 2, and 172,513 acres of Sonoran Category 3 Desert Tortoise habitat were identified within the Havasu TMA.

ENVIRONMENTAL EFFECTS

Alternative A (No Action) would continue to keep all primitive roads and trails “open” without regard to possible conflicts with sensitive habitat concerns. Management of the routes would be left to future site specific project plans. The No Action alternative would maintain 39.76 miles of

routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 205.01 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 527.34 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 51.53 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. The No Action alternative would not maintain any TVS within Mojave/Sonoran Desert Tortoise habitat. As it pertains to Bighorn Sheep, the No Action alternative would maintain 246.34 miles of routes open to OHV use in and through habitat for the species, 80.77 miles in and through sensitive habitat, and 345.44 miles in and through movement corridors. Foraging habitat for bats may be impacted by OHV use; this alternative maintains 774.82 miles of roads and primitive roads open to OHV use. Furthermore, this alternative maintains 269.52 miles of roads and primitive roads open to OHV use through Bobcat habitat and 605.32 miles through Mule Deer habitat.

Alternative B, by closing or placing restrictions on the most routes would have the least potential for impacts to sensitive habitat values. The Resource Protection alternative would maintain 14.86 miles of routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 130.56 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 244.93 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 26.14 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. Compared to the No Action alternative, this represents a 50% reduction of routes within Mojave/Sonoran Desert Tortoise habitat. The Resource Protection alternative would maintain 2 TVS within Category 3 Sonoran Desert Tortoise habitat. As it pertains to Bighorn Sheep, Alternative B would maintain 151.63 miles of routes open to OHV use in and through habitat, 45.87 miles in and through sensitive habitat, and 209.89 miles in and through movement corridors. In comparison to the No Action alternative, this alternative represents a 38% reduction in open routes within Bighorn Sheep habitat, a 43% reduction within sensitive habitat, and a 39% reduction within movement corridors. Foraging habitat for bats may be impacted by OHV use, this alternative maintains 309.13 miles of roads and primitive roads open to OHV use. Furthermore, this alternative maintains 125.04 miles of roads and primitive roads open to OHV use through Bobcat habitat and 244.29 miles through Mule Deer habitat. In comparison to the No Action alternative, this represents a reduction of 60% of open miles in bat foraging habitat, a 54% of open miles in and through Bobcat habitat, and a 60% of open miles in Mule Deer habitat.

Alternative C closes routes or places a restriction on OHV use on those trails which may have the highest potential to impact sensitive habitat values. The Proposed Action alternative would maintain 28.47 miles of routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 183.31 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 390.73 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 51.28 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. Compared to the No Action alternative, this represents a 21% reduction of routes within Mojave/Sonoran Desert Tortoise habitat. The Proposed Action alternative would maintain 16 TVS within Category 3 Sonoran Desert Tortoise habitat. As it pertains to Bighorn Sheep, Alternative C would maintain 196.92 miles of routes open to OHV use in and through habitat, 63.81 miles in and through sensitive habitat, and 297.77 miles in and through movement corridors. In comparison to the No Action alternative, this alternative represents a 20% reduction in open routes within Bighorn Sheep habitat, a 21% reduction within sensitive habitat, and a 14% reduction within movement corridors. Foraging habitat for bats may be impacted by OHV use, this alternative maintains 529.34 miles of roads and primitive roads open to OHV use. Furthermore, this alternative maintains 202.54 miles of roads and primitive roads open to OHV use

through Bobcat habitat and 407.83 miles through Mule Deer habitat. In comparison to the No Action alternative, this represents a reduction of 32% of open miles in bat foraging habitat, a 25% of open miles in and through Bobcat habitat, and a 33% of open miles in Mule Deer habitat.

Alternative D, due to the number of route identified open to OHV travel, would still contribute to the intrusion or alteration to sensitive habitat values and would have a high potential for impacts to wildlife values. The Access alternative would maintain 34.4 miles of routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 200.78 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 454.9 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 60.22 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. Compared to the No Action alternative, this represents a 9% reduction of routes within Mojave/Sonoran Desert Tortoise habitat. The Access alternative would maintain 21 TVS within Category 3 Sonoran Desert Tortoise habitat. As it pertains to Bighorn Sheep, Alternative D would maintain 219.22 miles of routes open to OHV use in and through habitat, 71.76 miles in and through sensitive habitat, and 326.56 miles in and through movement corridors. In comparison to the No Action alternative, this alternative represents a 11% reduction in open routes within Bighorn Sheep habitat, a 11% reduction within sensitive habitat, and a 5% reduction within movement corridors. Foraging habitat for bats may be impacted by OHV use, this alternative maintains 598.26 miles of roads and primitive roads open to OHV use. Furthermore, this alternative maintains 235.14 miles of roads and primitive roads open to OHV use through Bobcat habitat and 457.13 miles through Mule Deer habitat. In comparison to the No Action alternative, this represents a reduction of 23% of open miles in bat foraging habitat, a 12% of open miles in and through Bobcat habitat, and a 24% of open miles in Mule Deer habitat.

3.4 HAZARDOUS OR SOLID WASTES

AFFECTED ENVIRONMENT

Due to the close proximity to Lake Havasu City, AZ and Havasu Lake, CA, illegal dumping occurs on public land. These illegal dump sites may include hazardous materials and therefore pose a public safety concern. Additionally, extensive historic mining operations have left abandoned mines throughout the Havasu TMA. Other hazard sites may include gas pipelines, evaporation ponds, and power lines.

ENVIRONMENTAL EFFECTS

Alternative A (No Action) would maintain 118 roads, primitive roads, and trails with identified illegal dumping locations. Additionally, 21 roads, primitive roads, and trails with identified hazards, including gas pipelines, abandoned mines, and evaporation ponds, would be open for OHV use.

Alternative B would maintain 37 roads, primitive roads, and trails with identified illegal dumping locations. Additionally, 12 roads, primitive roads, and trails with identified hazards, including gas pipelines, abandoned mines, and evaporation ponds, would be open for OHV use. In comparison to the No Action alternative, this represents a 65% reduction in roads, primitive roads, and trails with identified hazards.

Alternative C would maintain 68 roads, primitive roads, and trails with identified illegal dumping locations. Additionally, 17 roads, primitive roads, and trails with identified hazards, including gas pipelines, abandoned mines, and evaporation ponds, would be open for OHV use. In comparison to the No Action alternative, this represents a 39% reduction in roads, primitive roads, and trails with identified hazards.

Alternative D would maintain 90 roads, primitive roads, and trails with identified illegal dumping locations. Additionally, 17 roads, primitive roads, and trails with identified hazards, including gas pipelines, abandoned mines, and evaporation ponds, would be open for OHV use. In comparison to the No Action alternative, this represents a 23% reduction in roads, primitive roads, and trails with identified hazards.

3.5 MIGRATORY BIRDS

AFFECTED ENVIRONMENT

The Proposed Action occurs in a transition zone between the Mojave and Sonoran Deserts. The interface between these two deserts, along with the occurrence of riparian vegetation along the upland washes, results in remarkable diversity of habitat types and wildlife. The diverse flora and fauna have strong ecological value and attraction for the public. More than 300 bird species occupy the diverse habitats of the planning area, including some neotropical migratory birds that breed in the United States and/or Canada and winter from Mexico to South America. In addition, certain bird species native to Mexico and South America migrate up the Colorado and Bill Williams River systems during the summer months, especially during monsoon storm events. Several raptor and owl species have been documented migrating through, occurring year-round, and/or breeding in the planning area. Additionally, the turkey vulture (*Cathartes aura*) occurs year-round and breeds within the planning area. The greatest variety of bird species (and often the largest numbers) occurs in the riparian and wetland habitats. Natural springs, catchments, and seeps often provide oases within the upland habitats.

ENVIRONMENTAL EFFECTS

There would continue to be routes of all types at varying levels in all alternatives. Thus, implementing any alternative would continue to have some degree of impacts to migratory bird populations and habitat from motorized and non-motorized mechanized travel, in the form of habitat fragmentation, changes to patch size, and barriers to movement, the facilitation of invasions of non-native and/or opportunistic species, species or habitat mortality rates, noise, and other disturbance factors. Direct disturbance to migratory birds due to noise and human actions associated with travel could result in avoidance of suitable habitat or disruption of breeding activities. No current motorized use data on existing roads and trails are available for the project area. Such use data would be helpful when determining actual travel impacts to migratory bird species as well as other wildlife species that inhabit the project area. Travel impacts to migratory birds are also related to topography since topographic features can affect both noise and visual impacts from motorized and non-motorized visitors to the area. Closing and reclaiming roads and trails would improve habitat conditions for migratory birds in the project area. The reduction in the number of miles of routes designated for travel would reduce the area of direct disturbance to migratory birds caused by both motorized and non-motorized travel.

Alternative A (No Action) would continue to keep all primitive roads and trails “open” without regard to possible conflicts with migratory birds. Management of the routes would be left to future site specific project plans. This alternative could lead to impacts to migratory birds and habitat. The No Action alternative would maintain 282.02 miles of routes open to OHV use within washes. In reference to raptors, the No Action alternative would maintain 33.42 miles of routes proximate to cliff sites open to OHV use and 6.34 miles within Gold Eagle habitat.

Alternative B, by closing or placing restrictions on the most routes would have the least potential for impacts to migratory birds or habitat. This alternative would maintain 121.21 miles of routes open to OHV use within washes. In reference to raptors, Alternative B would maintain 21.94 miles of routes proximate to cliff sites open to OHV use and 4.73 miles within Gold Eagle habitat. Compared to the No Action alternative, this alternative represents a 57% reduction in routes open to OHV use within washes, a 34% reduction in open routes proximate to cliff sites, and a 25% reduction in open routes within Golden Eagle habitat.

Alternative C closes routes or places a restriction on OHV use on those trails which may have the highest potential to impact migratory bird habitat values. The Proposed Action would maintain 207.87 miles of routes open to OHV use within washes. In reference to raptors, the Proposed Action would maintain 27.37 miles of routes proximate to cliff sites open to OHV use and 5.21 miles within Gold Eagle habitat. Compared to the No Action alternative, this alternative represents a 26% reduction in routes open to OHV use within washes, a 18% reduction in open routes proximate to cliff sites, and a 17% reduction in open routes within Golden Eagle habitat.

Alternative D, due to the number of routes identified open to OHV travel, would still contribute to the intrusion or alteration to habitat values and would have a high potential for negative impacts to wildlife values. This alternative would maintain 230.39 miles of routes open to OHV use within washes. In reference to raptors, Alternative D would maintain 30.58 miles of routes proximate to cliff sites open to OHV use and 5.21 miles within Gold Eagle habitat. Compared to the No Action alternative, this alternative represents an 18% reduction in routes open to OHV use within washes, a 8% reduction in open routes proximate to cliff sites, and a 17% reduction in open routes within Golden Eagle habitat.

3.6 NATIVE AMERICAN RELIGIOUS CONCERNS

AFFECTED ENVIRONMENT

A need to consider sensitive or traditional use locations of religious and cultural concern to local Native American tribes applies to much of the Havasu TMA. Such areas identified or that become known through Native American notification and consultation will need to be considered during the implementation phase. The tribes to consult with include the Chemehuevi Indian Tribe, the Fort Mojave Indian Tribe, the Cocopah Indian Tribe, the Havasupai Tribe, Hualapai Indian Tribe, Fort Yuman-Quechan Indian Tribe, the Twenty-Nine Palms Band of Mission Indians, the Yavapai-Prescott, and the Colorado River Indian Tribes (CRIT).

ENVIRONMENTAL EFFECTS

Under all Alternatives, the BLM will take no action that would adversely affect areas or sites where Native American Religious Concerns are present without Section 106 and government-to-government consultations as deemed appropriate by Federal guidance and compliance law.

3.7 PUBLIC HEALTH & SAFETY

AFFECTED ENVIRONMENT

Abandoned Mines are the major concern to public safety within the planning area. These include everything from simple prospecting pits to large deep shafts. Many of the inventoried currently used for recreation started as access roads to mines and mill sites. Visitors, especially when traveling at higher rate of speed on ATV's and motorcycles, can encounter these abandoned mines with little warning. During evaluation 59 routes were determined to pose a potential public safety concern to do proximity to open shafts, pits or other concerns.

ENVIRONMENTAL EFFECTS

Alternative A (No Action) would continue to keep all primitive roads and trails "open" without regard to possible conflicts with abandoned mines and other public safety concerns. The No Action alternative would maintain 80.74 miles of routes, identified as a concern for public safety, open to OHV use.

Alternative B, by closing or placing restrictions on some routes, especially those with identified public safety concerns, would reduce the risk of conflict with abandoned mines and other public safety concerns. Physically closing or fencing potential hazards has been identified as appropriate mitigation measures in each alternative. Alternative B would maintain 61.96 miles of routes, identified as a concern for public safety, open to OHV use. Compared to the No Action alternative, this alternative represents a 23% reduction in open routes identified as a concern for public safety.

Alternative C, by closing or placing restrictions on some routes, especially those with identified public safety concerns, would reduce the risk of conflict with abandoned mines and other public safety concerns. Physically closing or fencing potential hazards has been identified as appropriate mitigation measures in each alternative. The Proposed Action would maintain 69.22 miles of routes, identified as a concern for public safety, open to OHV use. Compared to the No Action alternative, this alternative represents a 14% reduction in open routes identified as a concern for public safety.

Alternative D, by closing or placing restrictions on some routes, especially those with identified public safety concerns, would reduce the risk of conflict with abandoned mines and other public safety concerns. Physically closing or fencing potential hazards has been identified as appropriate mitigation measures in each alternative. Alternative D would maintain 71.74 miles of routes, identified as a concern for public safety, open to OHV use. Compared to the No Action alternative, this alternative represents an 11% reduction in open routes identified as a concern for public safety.

3.8 RECREATION

AFFECTED ENVIRONMENT

A wide variety of recreation activities take place within the Havasu TMA. The primary activities include OHV use, hiking, horseback riding, camping, hunting, rock hounding and target shooting. There are two basic seasons of recreation: winter and summer. The winter season runs from late October through late March. Winter activities occur as dispersed recreation, where facilities may not be necessary or needed. Most of the public land is “open” for 14-day camping and OHV use is very popular for back country travel and exploring. Summer’s visitors tend to avoid the desert upland areas, where temperatures often exceed 115°F, and most recreation on the route network is vehicle based at this time.

Special Recreation Permits

Thus far in fiscal year 2013, the LHFO has permitted three motorized and four non-motorized events within the Havasu TMA. Another application has been received for motorized Jeep tours within the Havasu TMA and is currently being processed.

Special Recreation Management Areas/Zones

The planning area is defined in terms of two Special Recreation Management Areas (SRMAs) Lake Havasu SRMA and Havasu Urban SRMA. These SRMA are divided into Recreation Management Zones (RMZ) to manage smaller areas with different or unique planning needs. The rest of the planning area falls under the Extensive Recreation Management Area (ERMA). The major activity within all these requires the use of primitive roads and trails. The 2007 LFHO RMP identified the following as the primary activities within the Lake Havasu SRMA: primitive trekking, ohv touring, wilderness access, rockhounding, wildlife viewing, pet exercise, equestrian, fitness activity, and hunting. Within the Havasu Urban SRMA, the following primary activities were identified: 4x4, ATV,OHV, YTV, hill climbing, motorcycle use, permitted motorcycle and ATV, staging area, dispersed camping opportunities, equestrian/trail riding, rockhounding, back packing, and hiking.

ENVIRONMENTAL EFFECTS

Alternative A (No Action) would continue to keep all roads, primitive roads and trails “open” yet the recreation experiences of trail based users could decline. While the number of routes would stay the same, trail based experiences would not be maximized due to the uncoordinated existing route system. There is the potential for major impacts to natural conditions which is one of the values recreationalists expect to find in the much of the planning area. These impacts come from continuing route proliferation, especially smaller spurs and dumping areas. Parking and staging areas are informal and left to the user to define these areas on their own terms and needs, thus expanding the route footprint. The No Action alternative does increase the opportunities for hunting and rock-hounding activities to access more areas to retrieve game and rocks. Roads, primitive roads, and trails open to

Alternative B, by closing or placing restrictions on the most miles would have an impact to recreational opportunities by reducing geographic extent in which visitors can disperse their use and increase the likelihood of visitor interactions with each other. This alternative would create a defined travel network with monitoring to limit route proliferation. With defined parking, trailheads and staging areas, the footprint of recreational activities can be limited and natural appearing landscape protected. In comparison to the No Action alternative, Alternative B

represents a 53% reduction of miles with documented use of standard four wheel drive vehicles, a 54% reduction of miles with documented use of ATVs, a 52% reduction of miles with documented use of UTVs, and a 55% reduction of miles with documented use of single-track vehicles. Similar to the No Action alternative, this alternative would maintain two TVS. Additionally, this alternative would represent a 54% reduction of miles with document use of non-motorized, mountain bicycles and a 72% reduction in routes identified as access to primitive campgrounds.

Alternative C, closes or abolishes routes that have the highest potential to impact other resources, thus protecting the opportunity for outdoor enjoyment but providing easy access. These alternatives also create a defined travel network with monitoring to limit route proliferation. With defined parking, trailheads and staging areas, the footprint of recreational activities can be limited and natural appearing landscape protected. In comparison to the No Action alternative, the Proposed Action represents a 23% reduction of miles with documented use of standard four wheel drive vehicles, a 23% reduction of miles with documented use of ATVs, a 20% reduction of miles with documented use of UTVs, and a 23% reduction of miles with documented use of single-track vehicles. An increase of 14 TVS, for a total of 16, would be maintained in this alternative. Additionally, this alternative would represent a 5% reduction of miles with document use of non-motorized, mountain bicycles and a 41% reduction in routes identified as access to primitive campgrounds.

Alternative D closes or abolishes routes that have the highest potential to impact other resources, thus protecting the opportunity for outdoor enjoyment but providing easy access. This alternative also creates a defined travel network with monitoring to limit route proliferation. With defined parking, trailheads and staging areas, the footprint of recreational activities can be limited and natural appearing landscape protected. In comparison to the No Action alternative, the Alternative D represents a 12% reduction of miles with documented use of standard four wheel drive vehicles, a 10% reduction of miles with documented use of ATVs, a 8% reduction of miles with documented use of UTVs, and a 10% reduction of miles with documented use of single-track vehicles. An increase of 19 TVS, for a total of 21, would be maintained in this alternative. Additionally, this alternative would represent a 8% reduction of miles with document use of non-motorized, mountain bicycles and a 21% reduction in routes identified as access to primitive campgrounds.

TABLE 5: RECREATIONAL OPPORTUNITIES

Type	Alternative A		Alternative B		Alternative C		Alternative D	
	Miles		Miles	% Reduction from Alt A	Miles	% Reduction from Alt A	Miles	% Reduction from Alt A
4 Wheel Drive	697.80		324.60	53%	538.10	23%	616.94	12%
ATV	707.02		325.16	54%	547.85	23%	634.07	10%
UTV	657.11		316.75	52%	526.44	20%	600.12	8%
Mountain Bike	76.24		35.35	54%	72.54	5%	69.92	8%
Equestrian	333.31		175.02	47%	272.26	18%	307.39	8%
Hunting	536.38		264.60	51%	420.74	22%	468.71	13%
Hiking	495.13		260.40	47%	417.67	16%	456.82	8%

3.9 SOCIOECONOMICS

AFFECTED ENVIRONMENT

“2.2 million visitors come to the Arizona West Coast annually; 69% of those who travel here are from out of Arizona; that equals 1,518,000 out of state visitors.”⁴ The 2008 Lake Havasu City Tourism Survey estimated 31% of the visitors to Lake Havasu would hike or walk trails, another 27% would visit cultural and historical sites, and 8% reported they would participate in Off Road Touring. All these activities require a network of primitive roads and trails. It was also reported in a 2003 study that an estimated 26% of households in Mohave County are OHV Users.⁵ For a complete listing of relevant studies, see Appendix D.

In summary, visitors to the area and their use of the planning area’s routes are important to the local economy. It is the local community members who especially value the availability of access to public lands. According to articles on the American Trails Website (www.americantrail.org), the presences of “trail systems” can be essential to preserve a higher quality of life in the local communities. The actual property values within communities can also increase due to “trails.” The ability of a local community to market their OHV, mountain bike and/or hiking trails requires a system which clearly invites use and meets user objectives. The economic value is not only the quantity of routes available, but also in the quality of the experience provided. No specific revenue data is available for ranching and mining operations located within the planning area.

ENVIRONMENTAL EFFECTS

Alternative A (No Action) will keep all inventoried primitive roads and trails “open” or “limited” without regard to possible conflicts with other resources. The economic value of the primitive roads and trails are not only based on the number of trails, but also in the ability for users to

⁴ Arizona’s West Coast, Regional Tourism Profile, Compiled for the Arizona Department of Tourism, Overview Of Mohave County Population, Earnings, And Personal Income

⁵ The Economic Importance of Off Highway Vehicle Recreation to Arizona., Arizona State Parks, 2003

navigate routes in order to meet their objectives. This alternative would not enhance the recreation opportunity, therefore making it difficult to market OHV recreation to visitors. The No Action alternative would maintain 112.61 miles of published touring roads and primitive roads and 375.26 miles with identified vista/sightseeing/photography use.

Alternative B abolishes the most routes, with the objective to protect natural condition of public lands, yet limits the visitor's opportunity to experience a full range of what the backcountry has to offer. This alternative may have impacts to the socioeconomic resources due to the reduction of OHV riding opportunities. This alternative would maintain 92.24 miles of published touring roads and primitive roads and 221.26 miles roads and primitive roads with identified vista/sightseeing/photography use. In comparison with the No Action alternative, this represents a reduction of 18% of published touring roads and primitive roads and a 41% reduction of roads and primitive roads with identified vista/sightseeing/photography use.

Alternative C will provide a clearly defined travel network and the ability to allow the public to navigate the network to meet their objectives. Similar to the No Action alternative, the following activities will still be available to the public: four wheel drive touring, ATV and UTV exploration, scenic and cultural viewing opportunities, rock crawling, hiking, mountain biking, motorcycle use, equestrian use, and wildlife viewing. Maps and trail markers may serve as a marketing tool for socioeconomic benefits. The Proposed Action would maintain 111.24 miles of published touring roads and primitive roads and 319.66 miles roads and primitive roads with identified vista/sightseeing/photography use. In comparison with the No Action alternative, this represents a reduction of 1% of published touring roads and primitive roads and a 15% reduction of roads and primitive roads with identified vista/sightseeing/photography use.

Alternative D will provide a clearly defined travel network and the ability to allow the public to navigate the network to meet their objectives. Similar to the No Action alternative, the following activities will still be available to the public: four wheel drive touring, ATV and UTV exploration, scenic and cultural viewing opportunities, rock crawling, hiking, mountain biking, motorcycle use, equestrian use, and wildlife viewing. Maps and trail markers may serve as a marketing tool for socioeconomic benefits. This would maintain 112.61 miles of published touring roads and primitive roads and 345.29 miles roads and primitive roads with identified vista/sightseeing/photography use. In comparison with the No Action alternative, this represents a reduction of 0% of published touring roads and primitive roads and an 8% reduction of roads and primitive roads with identified vista/sightseeing/photography use.

3.10 SOILS

AFFECTED ENVIRONMENT

The Soil Conservation Service identified two dominant soil types: Carrizo and Gunsight-Havasu. The Carrizo soils are highly permeable, very gravelly loamy sand contained in floodplains. It comes from rhyolite, andesite and granite. The Gunsight-Havasu Soils are moderately permeable, very gravelly sandy loam located on fan terraces and hillsides. It is derived from andesite, granite, gneiss and schist. Soils in the project area commonly have a rocky surface armor known as desert pavement, which protects finer-textured subsurface soils from erosion in the absence of abundant vegetation. An exception to these described soils can be found in the alluvial bottom lands associated with rivers and ephemeral drainage channels. Alluvial soils can be some of the most productive, and conversely some of the most barren, depending on watershed characteristics. Many

washes, characterized by this soil type, on both private and public lands are used for OHV travel. Erosion can damage areas, such as paths and trails, where vegetative cover has been lost. Soils that have accumulations of salts and sodium are also a concern.

ENVIRONMENTAL EFFECTS

Alternative A (No Action), could over time see an increase in the number and miles of non-authorized routes and hill climbing. Additional surface disturbances would increase soil erosion and sediment loading into the lower Colorado River. This alternative would maintain 56.79 miles of routes with identified impacts to soils.

Alternative B would reduce the geographic extent, but would shift and concentrate use to the remaining open routes. Repeated vehicle use depending on soil type could have a negative effect on travel surfaces and add to local soil erosion for the remaining open routes under Alternative B. This alternative would maintain 26.83 miles of routes, a 53% reduction from the No Action alternative, with identified impacts to soils.

Alternative C increases management by establishing a travel network, and along with reducing the geographic extent, will lower potential for direct impacts to soils. The level of reduction would be dependent on the number of routes closed, along with the type of use, season of use, and the amount use. This alternative would maintain 49.61 miles of routes, a 13% reduction from the No Action alternative, with identified impacts to soils.

Alternative D increases management by establishing a travel network, and along with reducing the geographic extent, will lower potential for direct impacts to soils. The level of reduction would be dependent on the number of routes closed, along with the type of use, season of use, and the amount use. This alternative would maintain 51.99 miles of routes, an 8% reduction from the No Action alternative, with identified impacts to soils.

3.11 THREATENED AND ENDANGERED SPECIES/SPECIAL STATUS SPECIES

AFFECTED ENVIRONMENT

The Proposed Action occurs in a transition zone between the Mojave and Sonoran Deserts. The interface between these two deserts, along with the occurrence of riparian vegetation along the upland washes, results in remarkable diversity of habitat types and wildlife. The diverse flora and fauna have strong ecological value and attraction for the public. Appendix C contains detailed descriptions of these vegetative communities.

BLM manages habitats for species listed by United States Fish and Wildlife Service (USFWS) as endangered, threatened, (T&E species) or proposed under the authority of the Endangered Species Act (ESA). Table 6 outlines eight endangered, three threatened, and two proposed wildlife species which occur or have the potential to occur on lands within the planning area. Sixty-seven special status species, BLM identified species that may be declining or for which habitat may be limited or susceptible to alteration, have the potential to occur within the planning area.

TABLE 6: FEDERALLY THREATENED, ENDANGERED, OR CANDIDATE SPECIES

	Common Name	Scientific Name	Status	Where Species May Occur in Project Area	County
Fish	Bonytail chub	<i>Gila elegans</i>	FE CH	Colorado River	La Paz, Mohave, San Bernardino
	Razorback sucker	<i>Xyrauchen texanus</i>	FE CH	Colorado River	La Paz, Mohave, San Bernardino
Reptiles	Desert tortoise (Mojave population)	<i>Gopherus agassizii</i>	FT	Colorado River	San Bernardino
Birds	California brown pelican	<i>Pelecanus occidentalis</i>	FE	Colorado River	La Paz, Mohave, San Bernardino
	California condor	<i>Gymnogyps californianus</i>	FE	Colorado River	La Paz, Mohave, San Bernardino
	Bald eagle	<i>Haliaeetus leucocephalus</i>	FT	Colorado River, Desert	La Paz, Mohave, San Bernardino
	Mountain plover	<i>Charadrius montanus</i>	FPE	Colorado River	La Paz, Mohave, San Bernardino
	Yuma clapper rail	<i>Rallus Longirostris yumanensis</i>	FE	Colorado River	La Paz, Mohave, San Bernardino
	Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE	Colorado River	La Paz, Mohave
	Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FPE	Colorado River	La Paz, Mohave, San Bernardino
Plants	Munz's onion	<i>Allium munzii</i>	FE	Colorado River	San Bernardino
	Pierson's milk-vetch	<i>Astragalus magdalenae</i> var. <i>peirsonii</i>	FT	Colorado River	San Bernardino
Designations: FE Federally Listed Endangered FT Federally Listed Threatened FPE Federally Proposed Endangered FPT Federally Proposed Threatened CH Critical Habitat designated					

Two species of Desert Tortoise may occur within the planning area. In California, Category 3 Mojave Desert Tortoise habitat, as well as Category 2 and 3 Sonoran Desert Tortoise habitats in Arizona are identified within the planning area. Site specific evaluations have determined much of the flat habitat located throughout the planning is not likely to have resident Sonoran Desert Tortoise. The

Southwestern Willow Flycatcher (*Empidonax traillii extimus*), a listed endangered species, has not been documented using riparian habitat within the planning area; therefore, this species is unlikely to occur there. The 2007 LHFO RMP identifies approximately 20,300 acres of sensitive Bighorn Sheep habitat and six movement corridors within the Havasu TMA.

Potential negative impacts include fragmentation of wildlife habitat, noise disturbance during breeding and/or lambing seasons, movement corridor disruption, and indirect disturbance near water sources. Currently, the number of vehicle users on any one OHV route is low enough that direct wildlife mortality from vehicles is negligible.

TABLE 7: SPECIAL STATUS SPECIES, BLM SENSITIVE, AND STATE DESIGNATED SPECIES

	Common Name	Scientific Name	Status	Where Species May Occur	County
Amphibians	Arizona toad	<i>Bufo microscaphus</i>	CSP	Colorado River	Mohave, San Bernardino
	Couch's spadefoot toad	<i>Scaphiopus couchi</i>	CSC	Colorado River, Desert	Mohave, San Bernardino
	Lowland leopard frog	<i>Rana yavapaiensis</i>	AZ, CSC, CSP	Colorado River, Desert	Mohave, San Bernardino
Reptiles	Arizona skink	<i>Eumeces gilberti arizonensis</i>	AZ	Desert	La Paz
	Banded Gila monster	<i>Heloderma suspectum cinctum</i>	S	Colorado River, Desert	Mohave, San Bernardino
	Chuckwalla	<i>Sauromalus ater</i>	S	Colorado River, Desert	Mohave, San Bernardino
	Desert tortoise (Sonoran population)	<i>Gopherus agassizii</i>	S, AZST Management Agreement Species	Colorado River, Desert	Mohave
	Mojave fringe-toed lizard	<i>Uma scoparia</i>	AZ	Colorado River	Mohave, San Bernardino
	Rosy boa	<i>Charina trivirgata</i>	S	Colorado River, Desert	Mohave, San Bernardino
	Southern rubber boa	<i>Charina bottae umbratica</i>	CSC, CST	Colorado River	Mohave, San Bernardino
	American bittern	<i>Botaurus lentiginosus</i>	AZ	Colorado River	Mohave, San Bernardino
	American peregrine falcon	<i>Falco peregrinus</i>	CSE	Colorado River, Desert	Mohave, San Bernardino
	American white pelican	<i>Pelecanus erythrorhynchos</i>	CSC	Colorado River	Mohave, San Bernardino
	Arizona Bell's vireo	<i>Vireo bellii arizonae</i>	CST	Colorado River, Desert	Mohave, San Bernardino
	Bank swallow	<i>Riparia riparia</i>	CST	Colorado River	Mohave, San Bernardino
	Belted kingfisher	<i>Ceryle alcyon</i>	AZ	Colorado River	Mohave, San Bernardino
	Bendire's thrasher	<i>Toxostoma bendirei</i>	S	Colorado River, Desert	Mohave, San Bernardino
	Brown-crested flycatcher	<i>Myiarchus tyrannulus</i>	CSC	Colorado River, Desert	Mohave, San Bernardino
	California black rail	<i>Rallus longirostris obsoletus</i>	CST	Colorado River	Mohave, San Bernardino

TABLE 7: SPECIAL STATUS SPECIES, BLM SENSITIVE, AND STATE DESIGNATED SPECIES

	Common Name	Scientific Name	Status	Where Species May Occur	County
	Clark's grebe	<i>Aechmophorus clarki</i>	AZ	Colorado River	Mohave, San Bernardino
	Common black-hawk	<i>Buteogallus anthracinus</i>	AZ	Colorado River	Mohave, San Bernardino
	Cooper's hawk	<i>Accipiter cooperii</i>	CSC	Colorado River, Desert	Mohave, San Bernardino
	Double-crested cormorant	<i>Phalacrocorax auritus</i>	CSC	Colorado River	Mohave, San Bernardino
	Elf owl	<i>Micrathene whitneyi</i>	CSE	Colorado River, Desert	Mohave, San Bernardino
	Ferruginous hawk	<i>Buteo regalis</i>	AZ	Colorado River, Desert	Mohave, San Bernardino
	Gila woodpecker	<i>Melanerpes uropygialis</i>	CSE	Colorado River, Desert	Mohave, San Bernardino
	Gilded northern flicker	<i>Colaptes auratus chrysoides</i>	CSE	Colorado River, Desert	Mohave, San Bernardino
	Golden eagle	<i>Aquila chrysaetos</i>	CSC	Colorado River, Desert	Mohave, San Bernardino
	Gray vireo	<i>Vireo vicinior</i>	S	Desert	Mohave
	Great egret	<i>Casmerodius albus</i>	AZ	Colorado River	Mohave, San Bernardino
	Greater sandhill crane	<i>Grus canadensis tabide</i>	CST	Colorado River	Mohave, San Bernardino
	Gray catbird	<i>Dumetella carolinensis</i>	AZ	Colorado River, Desert	Mohave, San Bernardino
	Large-billed savanna sparrow	<i>Passerculus sandwichensis rostratus</i>	S, CSC	Colorado River	San Bernardino
	Least bittern	<i>Ixobrychus exilis</i>	AZ	Colorado River	Mohave, San Bernardino
	Le Conte's thrasher	<i>Toxostoma lecontei</i>	S	Colorado River	Mohave, San Bernardino
	Loggerhead shrike	<i>Lanius ludovicianus</i>	AZ	Colorado River, Desert	Mohave, San Bernardino
	Mississippi kite	<i>Ictinia mississippiensis</i>	AZ	Colorado River	Mohave, San Bernardino
	Northern goshawk	<i>Accipiter gentiles</i>	AZ	Colorado River, Desert	Mohave, San Bernardino
	Northern cardinal	<i>Cardinalis cardinalis superba</i>	CSC	Colorado River	Mohave, San Bernardino

TABLE 7: SPECIAL STATUS SPECIES, BLM SENSITIVE, AND STATE DESIGNATED SPECIES

	Common Name	Scientific Name	Status	Where Species May Occur	County
	Osprey	<i>Pandion haliaetus</i>	AZ	Colorado River	Mohave, San Bernardino
	Redhead	<i>Aythya americana</i>	CSC	Colorado River	Mohave, San Bernardino
	Snowy egret	<i>Egretta thula</i>	AZ	Colorado River	Mohave, San Bernardino
	Snowy plover	<i>Charadrius alexandrinus</i>	AZ	Colorado River	Mohave, San Bernardino
	Summer tanager	<i>Piranga rubra</i>	CSC	Colorado River	Mohave, San Bernardino
	Swainson's hawk	<i>Buteo swainsoni</i>	CSC, CST	Colorado River	Mohave, San Bernardino
	Thick-billed kingbird	<i>Tyrannus crassirostris</i>	AZ	Colorado River	Mohave, San Bernardino
	Tropical kingbird	<i>Tyrannus melancholicus</i>	AZ	Colorado River	Mohave, San Bernardino
	Western burrowing owl	<i>Athene cunicularia hypugea</i>	S, CSC burrow sites	Colorado River, Desert	Mohave, San Bernardino
	White-faced ibis	<i>Plegadis chichi</i>	S, CSC	Colorado River	Mohave, San Bernardino
	Vermillion flycatcher	<i>Pyrocephalus rubinus</i>	CSC	Colorado River	Mohave, San Bernardino
	Willow flycatcher	<i>Empidonax traillii</i>	CSE	Colorado River	Mohave, San Bernardino
	Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	CSE	Colorado River	Mohave, San Bernardino
	Yellow-breasted chat	<i>Icteria virens</i>	CSC	Colorado River, Desert	Mohave, San Bernardino
Mammals - Bats	Allen's big-eared bat	<i>Idionycteris phyllotis</i>	S	Colorado River, Desert	Mohave, San Bernardino
	Arizona myotis	<i>Myotis lucifugus occultus</i>	S	Colorado River	Mohave, San Bernardino
	Big free-tailed bat	<i>Nyctinomops macrotis</i>	S, CSC	Colorado River, Desert	Mohave, San Bernardino
	California leaf-nosed bat	<i>Macrotus californicus</i>	CSC, AZ	Colorado River, Desert	Mohave, San Bernardino

TABLE 7: SPECIAL STATUS SPECIES, BLM SENSITIVE, AND STATE DESIGNATED SPECIES

	Common Name	Scientific Name	Status	Where Species May Occur	County
	Cave myotis	<i>Myotis velifer</i>	S, CSC	Colorado River	Mohave, San Bernardino
	Pallid bat	<i>Antrozous pallidus</i>	S, CSC	Colorado River, Desert	Mohave, San Bernardino
	Pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>	S, CSC	Colorado River, Desert	Mohave, San Bernardino
	Spotted bat	<i>Euderma maculatum</i>	S, AZ, CSC	Colorado River, Desert	Mohave, San Bernardino
	Townsend's western big-eared bat	<i>Corynorhinus townsendii</i>	S	Colorado River, Desert	Mohave, San Bernardino
	Western mastiff bat	<i>Eumops perotis californicus</i>	S	Colorado River, Desert	Mohave, San Bernardino
	Western red bat	<i>Lasiurus blossevillii</i>	AZ	Colorado River	Mohave, San Bernardino
	Western yellow bat	<i>Lasiurus xanthinus</i>	AZ	Colorado River	Mohave, San Bernardino
	Yuma myotis	<i>Myotis yumanensis</i>	S, CSC	Colorado River, Desert	Mohave, San Bernardino
Mammals - Other	Desert bighorn sheep	<i>Ovis canadensis nelsoni</i>	S, CSC	Colorado River, Desert	Mohave, San Bernardino
	Ringtail cat	<i>Genus bassariscus</i>	CA full protection	Colorado River, Desert	Mohave, San Bernardino
	Southwestern river otter	<i>Lutra canadensis sonora</i>	AZ	Colorado River	Mohave, San Bernardino
Plants	Algodones Dunes sunflower	<i>Helianthus niveus spp. tephrodes</i>	CSE	Colorado River	Mohave, San Bernardino
	Scaly-stemmed sand plant	<i>Pholisma arenaria</i>	S, AZNP	Desert	Mohave, San Bernardino
Designations: S BLM Sensitive AZ Arizona State Wildlife of Special Concern AZNP Arizona Native Plant Law, Highly Safeguarded Species AZST Arizona State Management Agreement Species CSE California State-Listed Endangered CST California State-Listed Threatened CSR California State-Listed Rare CSC California State Candidate for Listing CSP California State Proposed					

ENVIRONMENTAL EFFECTS

Alternative A (No Action) would continue to keep all primitive roads and trails “open” without regard to possible conflicts with sensitive habitat concerns. Management of the routes would be left to future site specific project plans. This alternative could lead to negative impacts to these sensitive habitat values. The No Action alternative would maintain 39.92 miles of routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 218.73 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 659.54 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 51.53 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. This alternative would maintain 12.22 miles of non-motorized trails proximate to Bonytail Chub and Razorback Sucker critical habitat. Related to special status species, this alternative would maintain 102.19 miles open to OHV use within Banded Gila Monster habitat, 250.53 miles within Chuckwalla habitat, and 6.34 miles within identified Burrowing Owl habitat.

Alternative B, by closing or placing restrictions on the most routes would have the least potential for negative impacts to sensitive habitat values. This alternative would maintain 14.95 miles of routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 130.43 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 258.33 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 26.14 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. Compared to the No Action alternative, this represents a 56% reduction of open routes within Mojave/Sonoran Desert Tortoise habitat. Alternative B would maintain 2 TVS within Category 3 Sonoran Desert Tortoise habitat. This alternative would maintain 4.73 miles of non-motorized trails proximate to Bonytail Chub and Razorback Sucker critical habitat. Related to special status species, this alternative would maintain 52.03 miles open to OHV use within Banded Gila Monster habitat, 84.75 miles within Chuckwalla habitat, and 4.73 miles within identified Burrowing Owl habitat. In comparison to the No Action alternative, this represents a reduction of 61% of non-motorized trails proximate to Bonytail Chub/Razorback Sucker critical habitat, 49% of miles open of OHV use within Banded Gila Monster habitat, 66% of miles open to OHV use within Chuckwalla habitat, and 25% of miles open to OHV use within Burrowing Owl habitat.

Alternative C closes routes or places a restriction on OHV use on those trails which may have the highest potential to impact sensitive habitat values. The Proposed Action would maintain 28.57 miles of routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 184.21 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 442.73 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 51.28 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. Compared to the No Action alternative, this represents a 29% reduction of open routes within Mojave/Sonoran Desert Tortoise habitat. The Proposed Action would maintain 16 TVS within Category 3 Sonoran Desert Tortoise habitat. This alternative would maintain 6.77 miles of non-motorized trails proximate to Bonytail Chub and Razorback Sucker critical habitat. Related to special status species, this alternative would maintain 67.38 miles open to OHV use within Banded Gila Monster habitat, 175.06 miles within Chuckwalla habitat, and 5.22 miles within identified Burrowing Owl habitat. In comparison to the No Action alternative, this represents a reduction of 45% of non-motorized trails proximate to Bonytail Chub/Razorback Sucker critical habitat, 34% of miles open of OHV use within Banded Gila Monster habitat, 30% of miles open to OHV use within Chuckwalla habitat, and 17% of miles open to OHV use within Burrowing Owl habitat.

Alternative D, due to the number of route identified open to OHV travel, would still contribute to the intrusion or alteration to sensitive habitat values and would have a high potential for impacts to wildlife values. This alternative would maintain 34.5 miles of routes open to OHV use within Category 3 Mojave Desert Tortoise habitat; 202.76 miles of routes open to OHV use within Category 2 Sonoran Desert Tortoise habitat; and 509.71 miles of routes open to OHV use within Category 3 Sonoran Desert Tortoise habitat. Additionally, 60.22 miles of routes would provide non-motorized access throughout Category 3 Sonoran Desert Tortoise habitat. Compared to the No Action alternative, this represents a 19% reduction of open routes within Mojave/Sonoran Desert Tortoise habitat. Alternative D would maintain 21 TVS within Category 3 Sonoran Desert Tortoise habitat. This alternative would maintain 9.27 miles of non-motorized trails proximate to Bonytail Chub and Razorback Sucker critical habitat. Related to special status species, this alternative would maintain 72.82 miles open to OHV use within Banded Gila Monster habitat, 197.20 miles within Chuckwalla habitat, and 5.22 miles within identified Burrowing Owl habitat. In comparison to the No Action alternative, this represents a reduction of 24% of non-motorized trails proximate to Bonytail Chub/Razorback Sucker critical habitat, 29% of miles open of OHV use within Banded Gila Monster habitat, 21% of miles open to OHV use within Chuckwalla habitat, and 17% of miles open to OHV use within Burrowing Owl habitat.

3.12 TRAVEL MANAGEMENT

AFFECTED ENVIRONMENT

In the planning area there are approximately 798 miles of existing roads, primitive roads and trails. The 2007 LHFO RMP designated the Aubrey Hills area as non-motorized public use, which encompasses 70 miles of routes. The existing route system offers a range of experiences for both motorized and non-motorized users alike; however, the existing route system is not signed and maps are not available for the public.

ENVIRONMENTAL EFFECTS

Under Alternative A (No Action), there would be no change to the existing roads and trails designation. Without adequate signage, route proliferation and illegal cross-country travel will continue to be a concern. Both non-motorized and motorized travel is hindered by a lack of clearly defined travel routes. The No Action alternative would maintain 684.41 miles of roads and primitive roads open to OHV use.

Alternative B, directly impacts transportation as it closes the most routes. These closures limit the size and range of opportunities of the travel network. This alternative would maintain 334.36 miles of roads and primitive roads open to OHV use. In comparison to the No Action alternative, this alternative represents a 51% reduction in miles open to OHV use.

Alternative C establishes a travel network that provides reasonable, safe, and environmentally prudent access to public land. The Proposed Action would maintain 571.44 miles of roads and primitive roads open to OHV use. In comparison to the No Action alternative, this alternative represents a 17% reduction in miles open to OHV use.

Alternative D would provide the least impact to the travel network, allowing the greatest amount of access for OHV use. By allowing more OHV access and a larger route network, OHV opportunities would increase. This alternative would maintain 660.95 miles of roads and primitive roads open to OHV use. In comparison to the No Action alternative, this alternative represents a 3% reduction in miles open to OHV use.

3.13 VEGETATION/ INVASIVE & NON-NATIVE SPECIES

AFFECTED ENVIRONMENT

The planning area occurs in a transition zone between the Mojave and Sonoran Deserts. The planning area encompasses four vegetation communities: Upland Sonoran Desert Scrub, Lower Sonoran Desert Scrub, Mohave Desert Scrub and Riparian. Descriptions of these vegetation communities can be found in Appendix C. Occurring within the planning area are the federally-listed Munz's onion and Peirson's milk-vetch. Also found in the area are the Algodones Dunes sunflower, a California state-listed endangered plant and the Scaly-stemmed sand plant, a highly safeguarded species outlined in the Arizona Native Plant Law.

Within the project area, certain invasive and noxious weed species are present that typically out-compete desirable native plants. Invasive plant species present in the planning area include Bermuda grass, fountain grass, rabbit's foot grass and salt cedar, Sahara mustard, and bufflegress.

ENVIRONMENTAL EFFECTS

Alternative A (No Action) may lead to additional vegetation loss and increased potential for the spread of noxious weeds due increased route proliferation and illegal cross-country travel. The No Action alternative would maintain 280.44 miles of roads and primitive roads with identified invasive/noxious weed concerns open to OHV use.

Alternative B would allow closed routes to recover and rehabilitate to its natural condition, and reduce the potential for the spread of noxious weeds. This alternative would maintain 149.52 miles of roads and primitive roads with identified invasive/noxious weed concerns open to OHV use. In comparison to the No Action alternative, this represents a reduction of 47% of miles with identified invasive/noxious weed concerns open to OHV use.

Alternative C would allow some recovery and rehabilitation of closed routes to its natural condition and slightly reduce the potential for the spread of noxious weeds. The Proposed Action would maintain 214.91 miles of roads and primitive roads with identified invasive/noxious weed concerns open to OHV use. In comparison to the No Action alternative, this represents a reduction of 23% of miles with identified invasive/noxious weed concerns open to OHV use.

Alternative D would allow some recovery and rehabilitation of closed routes to its natural condition and slightly reduce the potential for the spread of noxious weeds. This alternative would maintain 235.25 miles of roads and primitive roads with identified invasive/noxious weed concerns open to OHV use. In comparison to the No Action alternative, this represents a reduction of 16% of miles with identified invasive/noxious weed concerns open to OHV use.

3.14 VISUAL RESOURCES

AFFECTED ENVIRONMENT

Visual Resource Management (VRM) is a process BLM uses to identify and manage scenic values to reduce visual impacts of development or other surface-disturbing activities on public lands. The 2007 LHFO RMP designated 898 acres of public land within the planning area as a VRM Class I (Chemehuevi Mountain Wilderness), 76,319 acres as a VRM Class II, 73,774 acres as a VRM Class III, and 66,037 acres as a VRM Class IV. Definitions for VRM Classes can be found in the 2007 LHFO RMP, page 118.

Primitive roads and trail impact visual resources where existing routes create contrasting lines (often straight) which do not follow natural curves found on the landscape. Changes in color and form from road cuts and cribbing for trails also create visible impacts. Changes to line, color, and form in the landscape are measured from “key observation points.” These are points where the most number of individuals, will observe the different individual routes. Key observation points for the travel network are most often from within adjacent communities, high traveled roads like Arizona Highway 95, or popular routes within the network like Mohave Wash. In the desert environment, the amount of contrast can diminish over time, but vehicle tracks and hiking trails can be visible years after the traffic has stopped.

ENVIRONMENTAL EFFECTS

Alternative A (No Action), there would be no change to the existing roads and trails designation. This situation has failed to manage or control route proliferation and increasing contrasting linear disturbances on the landscape. This alternative would maintain the following miles of roads, primitive roads, and trails within each VRM class: 0 miles of Class I, 240.81 miles of Class II, 203.33 miles of Class III, and 141.31 miles of Class IV.

Alternative B, while closing the most number of routes, will place additional use on the remaining routes and this could increase change in color and line as vegetation and soils are impacted. This alternative would maintain the following miles of roads, primitive roads, and trails within each VRM class: 0 miles of Class I, 71.29 miles of Class II, 93.25 miles of Class III, and 65.24 miles of Class IV. See Table 8 for percent reduction from the No Action alternative.

Alternative C provides a selective route network. Direct visual impact would remain where routes cross the landscape. Over time, visual impacts could decrease as closed routes recover and rehabilitate. This alternative would maintain the following miles of roads, primitive roads, and trails within each VRM class: 0 miles of Class I, 150.72 miles of Class II, 159.41 miles of Class III, and 112.01 miles of Class IV. See Table 8 for percent reduction from the No Action alternative.

Alternative D with the highest number of open routes is the most visually impacting of the three alternatives. This alternative would maintain the following miles of roads, primitive roads, and trails within each VRM class: 0 miles of Class I, 174.69 miles of Class II, 175.06 miles of Class III, and 128.84 miles of Class IV. See Table 8 for percent reduction from the No Action alternative.

TABLE 8: MILES OF OPEN ROADS/PRIMITIVE ROADS/TRAILS PER VRM CLASS BY ALTERNATIVE

	VRM I		VRM II		VRM III		VRM IV	
	Miles	% Reduction from Alt. A	Miles	% Reduction from Alt. A	Miles	% Reduction from Alt. A	Miles	% Reduction from Alt. A
Alternative A	0		240.81		203.33		141.31	
Alternative B	0	0%	71.29	70%	93.25	54%	65.24	54%
Alternative C	0	0%	150.72	37%	159.41	22%	112.01	21%
Alternative D	0	0%	174.69	27%	175.06	14%	128.84	9%

4.0 MITIGATION MEASURES FOR THE PROPOSED ACTION

- (1) Desert Tortoise: Routes that are impassable, and where crews are not able to restore the route to its previous condition without the use of heavy equipment, will have a tortoise monitor on site prior to the use of heavy equipment to ensure no desert tortoises will be harmed and that no new habitat is disturbed.
- (2) Road Signing: After the decision has become effective, all open/limited/non-motorized routes will be signed accordingly. Newly proliferated routes not included in the EA will be closed and restored without further public review.
- (3) Restoration: BLM will implement restoration on any route designated closed which is causing harm to resources. Newly proliferated roads will be restored (see mitigation measure 2 above).
- (4) Route Monitoring Strategy: All routes will be regularly monitored. BLM will develop a monitoring program (see Havasu TMP) with metrics to evaluate route use and impacts to surrounding resources. The routes will be regularly monitored and results compiled. Route monitoring may include, but is not limited to, sign replacement, traffic counts, damage assessments to cultural and biological resources, Site Stewardship reports, sign vandalism, and Law Enforcement contacts. BLM will continue to involve the public in route monitoring efforts.
- (5) Changes to Route Network: Decisions to change route designations will be pursuant to 43 CFR 8342.3 and based on results of information (metrics) collected over time. A separate analysis, public scoping, and decision record will be completed. See Havasu TMP.
- (6) Develop educational materials for users including site specific maps, brochures, interpretive exhibits, trailhead information kiosks.
- (7) All workers onsite will be given a Service approved desert tortoise briefing and the BLM's desert tortoise fact sheet to educate them on various aspects of desert tortoise life history and legal protection, as well as to inform them of the stipulations required as part of the proposed action.

- (8) If a tortoise is encountered, it shall be avoided and allowed to move out of harm's way of its own volition. No tortoises will be handled. The BLM's wildlife staff will be notified at (928) 505-1200 if any tortoises are observed during project activities.
- (9) All workers associated with Havasu TMP implementation will be instructed to check underneath their vehicles and around the tires before moving them to check for tortoises sheltering underneath. The vehicle may not be moved until the tortoise has moved itself out of harm's way. The BLM's wildlife staff will be contacted if a tortoise will not move out from under a vehicle and a work stoppage has resulted.
- (10) No trash or food items will be deposited onsite.
- (11) A speed limit of 15 miles-per-hour shall be required during implementation activities.
- (12) The BLM's TMP representative, Jen House (928) 505-1263, and the Service's Arizona Ecological Services Field Office (602)-242-0210 must be notified of any desert tortoise death or injury due to project activities immediately, or if no phone or radio reception is available by close of business on the following working day.
- (13) All vehicle traffic will be restricted to designated open and limited routes, as identified in the approved Havasu TMP.
- (14) During reclamation activities, only native seed mixtures will be planted. Where soil disturbance will occur, all equipment will be required to be cleaned and inspected prior to use within the monument. Public education and signs promoting the use of clean vehicles preventing the spread of weeds, shall be included in entry kiosks and on literature.

5.0 CUMULATIVE IMPACTS ANALYSIS

As defined in 40 CFR 1508.7 (Council on Environmental Quality [CEQ] regulations for implementing the NEPA) a cumulative impact is an impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (federal or nonfederal) or person undertakes such other actions.

5.1 ANALYSIS AREA

The geographic extent of cumulative impacts varies by the type of resource and impact. The timeframes, or temporal boundaries, for those impacts may also vary by resource. Four different spatial and temporal cumulative impact analysis areas (CIAA) have been developed and are listed with their total acreage in Table 9.

TABLE 9: CUMULATIVE IMPACT ANALYSIS AREA BY RESOURCE

Resource	Cumulative Impact Analysis Area (CIAA)	Total CIAA Acreage	Temporal Boundary
ACEC, Soils, Vegetation, Recreation, Travel Management, Hazardous or Solid Waste, Public Health & Safety, Cultural/Paleontological, Native American Religious Concerns, Visual Resources, Fish & Wildlife Excluding Federally Listed Species, Threatened & Endangered Species, Invasive & Non-Native Species	Havasu TMA	356,312	10 years (estimated life of project)
Greenhouse Gas Emissions, Socioeconomics, Travel Management	Lake Havasu Field Office (LHFO)	2,096,937	10 years (estimated life of project)

5.2 PAST, PRESENT, & REASONABLY FORESEEABLE ACTIONS

The primary past and present actions that would affect the resources analyzed in this EA are mineral exploration and mining operations, various transmission lines, recreational OHV use, and organized OHV events. The BLM LR2000 database was used to query the past and present mineral exploration and mining activities (authorized Notices, expired Notices, and closed Notices) that have been approved in the CIAA. An estimate of existing, land-disturbing Rights-of-Way (ROW) was determined and included within Tables 9 and 10. At the time of route inventory, 781.96 miles of roads, primitive roads, and trails were identified. Acreage of route disturbance was assumed at an average width of three feet.

Reasonably foreseeable future actions (RFFAs) are those for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends. The 2007 LHFO RMP allows for up to 2,000 acres of disturbance for mineral and mining operations, yet within the temporal boundary of the Havasu TMP only 100 acres within the Havasu TMA and 500 acres within the LHFO of disturbance would be considered RFFAs. In relation to ROW and roads/primitive roads/trails, no RFFAs have been identified. The LHFO will be developing TMPs for the Cactus Plain/Bouse and Alamo/Wenden TMAs, but the development of new roads, primitive roads, and trails is expected to be minimal.

TABLE 10: PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS BY CIAA

Cumulative Impact Analysis Area (CIAA)	Past Development Activity (Acres)	Present Development Activities (total acres, incl. routes)	Past or Current Route Disturbance (Miles)	Reasonably Foreseeable Future Actions (RFFAs)
Havasu TMA	18,665.32	57	781.96	100
LHFO	74,107.97	292.68	6,283.96	500
*Route acreage assumes an average route width of 3 feet.				

5.3 CUMULATIVE IMPACT ANALYSIS

Impacts from past and present actions within the Havasu TMA total 18,722.32 acres from activities such as mining operations, roads/primitive roads/trails, and existing ROW on public land. In relation to the 356,312 acres of within the Havasu TMA, public land represents 61%. Therefore, the total acreage of past and present actions is minor in comparison to public lands within the Havasu TMA. Similarly, the 74,400.11 acres of past and present actions on public land is minor in comparison to the 1,359,043 acres of public land within the LHFO. Some of the impacts related to past and present actions included habitat fragmentation, disturbance of cultural sites, Bighorn Sheep movement corridor disruption, soil loss, and reduced opportunity for coordinated recreational opportunities.

Reducing the availability of open routes may not equal a reduction in the amount of OHV use. By implementing a route network, OHV use may become more concentrated on open routes. These routes may likely increase in use, width and size. Creating localized impacts to habitat quality/quantity as routes become larger, wider and more braided.

Cultural resources are impacted through heavy visitor use in the Crossman Peak ACEC. Many sites have routes that lead directly to them. Roads that lead directly to these cultural sites are the main vector for the overuse and abuse that these sites are receiving. These sites receive damage resulting from OHV proliferation and cross country travel.

When the RFFAs are compiled with past and present actions on public land, the percent increase in disturbance within the two CIAA is relatively minor in comparison to the total acreage of public land. The continued effort to designate roads/primitive roads/trails throughout the field office will lead to improved resource management throughout the LHFO.

Cumulatively, the Proposed Action will maintain a variety of recreational opportunities, reduce route proliferation, maintain access to mineral operations, reduce potential for additional habitat fragmentation, improve public safety, and provide an opportunity to improve socioeconomics through the trail maps and signs.

6.0 CONSULTATION AND COORDINATION

6.1 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

Arizona Game & Fish Department, Region IV,
(AZGFD)
Arizona Department of Transportation
Arizona OHV Coalition
Arizona State Lands Department
Arizona State Parks
Advanced Resource Solutions (ARS)
BLM, Kingman Field Office (KFO)
BLM, Needles Field Office (NFO)
BLM, Arizona State Office (ASO)
BLM's Resource Advisory Council (RAC)
BLM, Colorado River District (CRD)
Bureau of Reclamation (BOR)
The Chemehuevi Indian Tribe, Havasu Lake, CA
US Fish & Wildlife Service (USFWS)

6.2 LIST OF PREPARERS

Those individuals with a single asterisk () next to their name prepared and reviewed the Environmental Assessment Document as well as being members of the Interdisciplinary Route Evaluation Team. Those individuals with two asterisks (**) only worked on this document, and were not part of the Interdisciplinary Route Evaluation Team.*

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APPENDICES

A. WORKS CITED

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B. PUBLIC COMMENTS AND NOTES

The first 30-day public comment period started with an Open House event held August 18, 2010. Initially, public comments consisted of requests for an extended comment period to allow the public to check proposed route designations in the field when weather permitted. The first extension added allowed for an additional 43 days, ending October 31st 2010, for public comments. Public input requested even more time to allow seasonal visitors to take part in the comment process. The LHFO authorized a second extension to February 28th 2011. Cumulatively, the LHFO received 2,233 public comments over the six month public comment period. Throughout the summer and fall of 2011, LHFO staff reviewed all public comments and made changes, as appropriate, to the range of alternatives of the Havasu TMP. Below is a synopsis of the public comments received for the Havasu TMP throughout 2010 and 2011.

Comments	Totals	Percent
Total Comments (Submissions)	2233	
Extend the Public Comment Period	769	34.4%
Keep All Routes Open	200	9.0%
Local Economy	199	8.9%
Alternative/Map D with Changes	166	7.4%
Alternative/Map D	158	7.1%
Family Use	141	6.3%
Disabled/Retired/Senior Use	133	6.0%
Mining Collection Sites	102	4.6%
Alternative A/Map A/No Action	89	4.0%
GIS/GPS Data- Need better data and maps with landmarks for public review	74	3.3%
Jupiter Mine Access	48	2.1%
Mixed-use recreation	45	2.0%
General Complaint	43	1.9%
Extend Open area at top of C to meet east/west southern border on main map , which appears to be at 34.30.0N.Extend western border of insert 5 to the eastern jurisdiction line Southern border of inset 5 Extend open area to interface with state and wilderness lands	38	1.7%
Wing Mine Access	38	1.7%
Increase Law Enforcement	32	1.4%
Route Wear	29	1.3%
Alternative/Map A or D	21	0.9%
Safety	17	0.8%
Economic Impact Study needs to be completed	17	
OHV enthusiasts participate in trash pickups	17	

Havasu Mid Mohave to West Mohave-All are two track stock 4X4 trails. This is a long used cut across from West to Mid Mohave. All are part of a loop trail and a connector to several other trails, and save miles of extra driving over desert trails. All of the routes/trails should be open and not closed or even not open mitigated.	17	
Travel Management Plan should include connector links to move off-road traffic around lambing areas and other sensitive areas	15	
Hunting (2-Close routes to limit OHV hunting/10-keep them open for disabled hunters)	12	
Develop parking areas/trail heads/facilities for off roaders/better signs	11	
History/Historic Value	11	
NEPA - were standards followed - which staff members and consulting agency members were involved	10	
In closed areas, use the natural features as boundaries	9	
Environmental Impact Statement/ EA	9	
BLM has failed to comply with the FLPMA, in designating a travel network	6	
Alternative/Map C	6	
Close routes to protect wildlife	5	
Route Evaluation Tree is flawed	5	
Alternative A with changes	5	
Re-evaluate closures due to plants/tortoise habitat/wildlife	4	
Importance of social network for senior citizen outweighs importance of assumed environmental impacts	4	
Retain single track motorcycle trails	4	
Target Shooting	3	
Unable to Open Public Comment Form Attachment	3	
Paperwork too difficult/Public Comment process confusing	3	
Close Routes	3	
Concern with "open with mitigation"	3	
Request access to the archeological site locations, SHPO status, in order to assist BLM in reestablishing a new more easily defined and enforceable boundary. / Request information on cultural sites	3	
Pittsburg Mine Access	3	
Close Proliferated and Party Routes	3	
Women's Use	2	
Create Routes Instead of Closing Them	2	
Keep looped, long distance routes open	2	
Close routes for Preservation	2	
Yahoo entire stippled area "EVIDENCE of CONSTRUCTION" into the "Regularly Maintained" Under the "SPECIAL RESOURCES" these trails should be considered as an 'Indirect' Public Use' should be changed to read 'Semi- Technical to Technical ROUTE REDUNDANCY should be changed to No' because these are specific stand alone trails	2	
Must Honor BLM's Wild Lands Policy (Secretarial Order 3310) updated inventories and Wild Lands designations are incorporated into revised or amended plans	2	

Errors in trail inventory	2	
TMP must disclose and analyze effects of the human environment in the proper context	2	
Plans for a future trail from the new housing developments	2	
OHV enthusiasts willing to help.	2	
Alternative/Map B	2	
Extend Technical Area	2	
El Campo Mine Access	2	
Need More Information	2	
Develop single track and two track trails	2	
Close redundant 4X4 routes and dead ends	1	
How will SRM areas be managed	1	
Allow rerouting up to 1/4 mile	1	
Implement OHV Sticker Fund	1	
Use 501c3 organizations to help financially	1	
Why Are Some Routes Closed to ATVs and Open to Other Vehicles	1	
Why are River Routes Closed	1	
Define Access Terms	1	
Why Close Trails East of OHV area	1	
Butch Flat	1	
Designate long distance routes connecting to Kingman and Phoenix	1	
Shared mitigation techniques	1	
Thanks for extension	1	
Special Recreation Permitting process can be streamlined in the travel management plan	1	
Has BLM done a "detailed" analysis on each route, road or trail in order to determine? Impact on each specific route if left open or closed. Skill level required to travel on each route.	1	
Determine logical significance criteria for socio-economic and recreational opportunity impacts	1	
Identify any RMZ areas that are appropriate and include them in at least one Alternative.	1	
Keep washes open	1	
impacts on dispersed campsites	1	
Draft Alternatives seem to represent a lack of understanding in the "use pattern." None of the Alternatives seem to make any sense "on the ground."	1	
parallel or redundant routes are not necessarily a bad thing	1	
tertiary road unpaved extension of El Dorado wash, is blocked by various debris with no trespassing signs attached, cattle gate better choice	1	
Open, unmanaged areas are not acceptable	1	
Recognize Lands with Wilderness Characteristics	1	
don't close any of the trails in the area south of Havasu Landing Resort	1	

Standard Wash-The boundaries should extend out to West Mohave Wash and to the North towards the Challenger Wash area.	1	
Majority of local OHV users are responsible citizens	1	
Map C effectively closes 100% of our Havasu 4 Wheelers trails by closing 80 critical segments of the 1143 route HN Segments.	1	
Inadequate publicity and input	1	
Assessment of local users not adequately considered	1	
Many areas already closed to Off Highway travel in area (Wilderness)	1	
Route decisions do not account for current circumstances	1	
Routes should not be categorically excluded from being incorporated into the final plan simply because they lie within a soils or watershed "polygon."	1	
implement policy on existing resource management plans	1	
Very limited area field checked or verified	1	
User input data of use patterns not used	1	
Environmental Stewardship	1	
Use a Citizens' advisory group	1	
Updated inventories and Wild Lands designations are incorporated into revised or amended plans	1	
For land use plans currently under revision or amendment, BLM must inventory for wilderness characteristics in accordance with Secretarial Order 3310 and designate lands with wilderness characteristics as Wild Lands in the RMP	1	
Rescind Attachment 1-9 and 1-10 of Instruction Memorandum No. AZ-2005-007, as this policy is no longer applicable for BLM land use planning in Arizona.	1	
Traffic patterns must be considered	1	

TABLE 2: HAVASU TMP PUBLIC COMMENTS – ROUTES RECEIVING SPECIFIC COMMENTS

Specific Routes	Desired Actions or Comments	Number of Comments
HN 816	Old mining area access.	148
HN004A	Needle Mtn/1-40	113
HN015	Connection to the two crossing points over Interstate 40	97
HN020	Part of Yellowstone Trail	89
HN021A	Family Use, Local Economy	85
HN025	Family Use, Local Economy	82
HN029	Used for prospecting, connects with HN04B.	81
HN032	Route HN032 continues on to land of which the BLM has no jurisdiction	81
HN044	Blankenship Wash	79
HN046	Blankenship Wash	78
HN048	Blankenship Wash	77
HN049	Blankenship Wash	74
HN050	Goat Hill Trail	72

HN053	1 mile connector route	72
HN053A	.79 mile route that connects with HN071 and HN053 a very favorite and scenic route of min	70
HN059	Enjoyable route, Blankenship Wash	69
HN064	Allows access to chalcedony collection site	69
HN065	Enjoyable route	67
HN068	Enjoyable route	66
HN069	Scenic, challenging alternative connecting HN071 to HN064	64
HN069A	Incorrect need to be deleted, Goat Hill	64
HN069B	Scenic, challenging alternative connecting HN071 to HN064	63
HN071	Multiple routes under one HN #. At 34 37'10.39" N-114 degree 22'3.07"W there is a cliff making it impassible- but otherwise good for beginners, Goat Hill	62
HN071A	Incorrect, Red Line Trail , Goat Hill Trail	60
HN071A1	River City 4X4 favorite	60
HN079	Yellowstone trail continues West to HN079	58
HN07A1	Good route for rock-crawling Loop route Red Line Trail	58
HN08J	The Maze Trail, Black Falls Loop	56
HN08J	Spaghetti A, Black Falls Loop	56
HN090	Part of Yellowstone Trail	56
HN091	Part of Yellowstone Trail	55
HN099	Northwest Passage Trail-scenic connector trails challenging	54
HN09J	Public uses are wrong, ATV is incorrect. Should be non-stock 4x4. This is not Route Proliferation it is a technical loop route. Redline Trail	51
HN100	Northwest Passage Trail-leads to a mine view turnaround and scenic view Havasu 4 wheelers will fence for safety	51
HN101	Yellowstone trail continues North to State land Section almost at I 40 ., West on State land to open HN 101	50
HN12J	Rattlers Pass- critical track for technical use of out of town users. Yahoo Pass	49
HN130	Northwest Passage Trail-decreases distance to get to pipeline rd. and eliminates need to cross state land	48
HN153	Maze B	46
HN154	The Lost Trail- Standard Wash area HN420 links to these trails to provide scenery and challenges and connections to the South East. Also part of the Maze Trail- part of a 18.5 miles scenic loop. Red Trail This is a Loop and Connector route. It is a Dual Track width, not ATV Track. Route Proliferation is not an issue. Red Line Trail. Connector trail from HN623 to HN624. Opportunities for predator hunting.	45
HN157	GPS and geocache- route that goes to Havasu Heights	44
HN158	Continuation of HN157 GPS and geocache- route that goes to Havasu Heights	43
HN158A	Geocache continuation of HN158 access to HN159	42
HN159A	Highline Trail, Spur off of Northwest Trail with 4 foot falls for training trail climbers, Family Use, Local Economy, Connects HN158 and HN159 access to Havasu Heights	41
HN15A	There is no reason for this route to be closed. Redline Trail	41

HN160A	Family Use, Local Economy	39
HN164	Makes a loop and provides connections between HN162 and HN232A. The southern 1/3 and northern 1/3 of this trail could be closed	39
HN165	Connector trail, Highline Trail	39
HN166	Connector trail	38
HN168	Highline Trail	38
HN16B	Highline Trail Listed at a standard stock 4X4 route. It is a Moderate 3 trail	37
HN176	Connector trail, Family Use, loop and provides connection with HN223A and HN 162, Havasu Heights use	37
HN177 to HN290 to HN291	Allows access to gold mining claim	37
HN181	Access to Rams Peak	37
HN182	Access to Rams Peak/Scotts Well 30 mi trail, Family use, Disabled use	37
HN182A	Cut across to Rams Peak/Scotts Well	36
HN183	Access to Rams Peak/Scotts Well, Family use	36
HN186	Long way around Scotts Well	35
HN19A	There is no reason for this route to be closed. Redline Trail	34
HN200	Yellowstone trail starts at Havasu Heights west turn off on HN200	34
HN218A	allows access for highway legal users to enter to and from highway 95	34
HN222	Highline Trail. Connector trail between HN 223 and HN 224. Gold seeking	34
HN224	HN222 Connects to this route	33
HN224	Connector trail	33
HN229	Family Use, Local Economy, completes a loop starting at HN228A and connecting to HN 232	33
HN22C	Allows access to claim HGS16	33
HN22F	Local Economy, Family Use	33
HN22J	Missed Route Connects to HN890 Snake Pit/Flood's Folly	33
HN230	Connector route from the power line easement to HN 229	33
HN231	Connector running in a wash alongside a gravel pit an mining area from HN 228A to HN 232	33
HN232A	Connector trail to-HN224-HN176- HN166- HN165	32
HN236A	runs into a private parcel of land and offers ohv access to this parcel and continues through the private parcel to HN236	32
HN237	Safer and less traveled route than HN152	32
HN238	Safer and less traveled route than HN152	32
HN239	In a wash that leads to some other missed routes	30
HN23C	Allows access to claim HGS16	29
HN242	Allows access to meteorite collection site, alternative to HN243, connector to HN628	29
HN243	Allows access to meteorite collection site	28
HN245	Allows access to meteorite collection site	28
HN24C	Allows access to claim HGS16	27

HN24F	Older people like to ride in the desert for the scenery	26
HN256	A connector route to HN758A	26
HN258	The Lost Trail- Standard Wash area HN420 links to these trails to provide scenery and challenges and connections to the South East, Family Use, Access to Jupiter Mines A, B and Lower Jupiter, The Maze Trail- part of a 18.5 miles scenic loop, Intermediate level with historic significance and lunch spots. Maze Trail, Spaghetti A	26
HN262	Crossman Peak Trail	26
HN26F	Local Economy, Family use	25
HN273	Access geocache	24
HN279	Crossman Peak Trail	23
HN284	Go-around HN287	22
HN287A	Allows access to mining claims	21
HN28A	Family Use	21
HN28G	Family Use	20
HN291	Allows access to mining claims	18
HN293	Local Economy, Family use, connector off of route HN291	18
HN29A	Acquire From Public Land, Gold Springs Trail	18
HN301 thru HN307	Allows access to one of our member's claims	18
HN302	Access to mining claims	14
HN304	Access to mining claims	13
HN306	Disabled Use	13
HN315	connector route from HN323 and HN387	13
HN317	Allows access to mining claims	12
HN319	Allows access to mining claims	10
HN31A	older people like to ride in the desert for the scenery	10
HN321	Allows access to mining claims	10
HN323	it connect to HN287	10
HN325A	Allows access to common dig area	9
HN326	Allows access to common dig area	9
HN328	Allows access to common dig area	8
HN32A	Shown as a Spur and a Loop. It is not a Spur, it is a Loop and Connector (to HN94A) Redline Trail	8
HN330	Allows access to Mining Claims HGS17 and HGS18	8
HN332	The Lost Trail- Standard Wash area HN420 links to these trails to provide scenery and challenges and connections to the South East	8
HN334	older people like to ride in the desert for the scenery	8
HN336 to HN621	Connector Route. Dual Track/Motorcycle. Public use includes 4x4. Proliferation is not an issue. Redline Trail	8
HN339	Allows access to mining claims	7
HN344 thru HN387	Allows access to HGS1, HGS2, HGS3, HGS4, HGS5, HGS6, HGS7	7
HN346	Allows access to mining claims	7
HN347	continues to HN272 and HN339 in the main road in Franconia wash	6

HN348	Allows access to mining claims for low clearance vehicles	6
HN349	Close as long as HN348 is open	6
HN349	Crossman Peak Trail	6
HN350	Allows access to mining claims	6
HN359	Allows access to mining claims	6
HN35B	Wing Mine- easily accessible loop and connector trails	6
HN376	connects HN377 and HN361	6
HN379	connects HN355 and HN380	5
HN385	it connects HN384 and HN386	5
HN386	connects HN385 and HN384	5
HN415	enjoyable route	5
HN417	Crossman Peak Trail	5
HN420	Crossman Peak Trail	5
HN422	Crossman Peak Trail	5
HN427	Crossman Peak Trail	4
HN429	1.2 mile route	4
HN433	Rattlers Pass and Technical Area south of this route. Yahoo Pass	4
HN443	Rattlers Pass- broken route. Allows a loop back to highway from HN608. Also allows for best obstacles and emergency exit. Yahoo Pass / Gold Springs Trail	4
HN446	Crossman Peak Trail	4
HN452	1 mile connector route	4
HN45C1	Allows access to mineral collection sites	4
HN460 thru HN476	Open for Rattlers Pass, Boulder Gulch	4
HN463	Dos Mohave, Mohave Wash Loop	4
HN464A	Dos Mohave, Mohave Wash Loop	4
HN465	Boulder Gulch Trail-too extreme for administrative use.	3
HN466	Connects to HN478 and is missing off maps. Boulder Gulch. Havasu Mid Mohave to West Mohave All the routes originating from highway 95 south of Standard wash going through the Sharkstooth-Casendra trail area which include McCracken cabin, McGuffies cabin, Swansea, Signal, Maggie Wash, Alamo Lake, etc. use this trail. Mohave Loop	3
HN467	Diamondback/Sidewinder Trail, Redline Trail	3
HN46B	Local Economy, Family Use, loop for Wing Mine	3
HN471	1.3 mile route open the route up the point that HN472 departs from	3
HN472	Connects to 471	3
HN475	This is a Connector route that combined with adjacent routs creates a Loop. This is a Dual Track not a Motorcycle Track width as used with this trail. Redline Trail Public use includes 4x4. Route Proliferation is not an issue.	3
HN476	Cut across to Boulder Gulch, Mohave Wash and Cabin Trail	3
HN478	Cut across to Boulder Gulch, Havasu Mid Mohave to West Mohave	3
HN479	Havasu Mid Mohave to West Mohave	3
HN47B	Bat Cave- Wing Mine	3

HN490	Alternative to McCracken Mine B, departs from HN450 and runs into the Kingman BLM management area where it connects with a network of trails	3
HN492	A short spur trail connects to HN460	3
HN493	Castaneda/Sharktooth Loop & McCracken Mine B Trails	3
HN494	Signal Mine Town A	3
HN497	.14 mile spur departing from approved route HN950 necessary for dry camping RV parking	2
HN54G	Family Use	2
HN55G	Family Use	2
HN589	Mohave Wash and Cabin Trail	2
HN591 to HN608	Gold Springs Trail, HN591-Black Falls Loop	2
HN592	1.22 mile HN621 connector route , Spaghetti C	2
HN594	Close	2
HN599	Rattlers Pass. Yahoo Pass A .44 mile spur trail off of HN589	2
HN605	Yahoo Pass, Mohave Wash and Cabin Trail. Rattler Pass, Red Line Trail	2
HN606	Rattlers Pass. Yahoo Pass / Gold Springs Trail. Castaneda-Sharks Tooth Loop and McCracken Mine B Trail, Red Line Trail	2
HN607	Connects to HN07A1,Family Use	2
HN608	Gold Springs Trail	2
HN610A	Broken	2
HN611	Rattlers Pass- broken route. Yahoo Pass, Mohave Wash and Cabin Trail	2
HN612	leaves HN476 at 34 27'16n -114 08'62w and returns to HN420 at 34 28'45n - 114 07'57w	2
HN613	older people like to ride in the desert for the scenery	2
HN614	Close(2 comments) /Keep Open as Part of Maze Trail	2
HN616	hunting, prospecting, geo-caching, rock hound	2
HN617	Family Use	2
HN619	The Maze Trail- part of a 18.5 miles scenic loop, Red Line Trail, Spaghetti A	2
HN620	The Maze Trail- part of a 18.5 miles scenic loop ties to HN644 a single track route	2
HN621	Rattlers Pass. Yahoo Pass / Gold Springs Trail, Red Line Trail	2
HN623	Red Line Trail	2
HN624	The Maze Trail- part of a 18.5 miles scenic loop, Family Use, Part of Jupiter Mines A and B These are intermediate level drives with historic significance and a good lunch spot. Red Trail. Jupiter Mines, Red Line Trail, Hawks Nest, Lost Trail, Spaghetti A	2
HN625	Rattlers Pass-broken route. Yahoo Pass	2
HN632	The Maze Trail- part of a 18.5 miles scenic loop, Family Use This is a Connector route that combined with adjacent routs creates a Loop. Route Proliferation is not an issue. Redline Trail	2
HN633	older people like to ride in the desert for the scenery	2
HN634	Jupiter Mine Trails	2
HN644	Single track Use, Close Adjacent Duplicates, Used by Havasu 4 Wheelers	2
HN649	Rattler/Python	2

HN651	The Maze Trail- part of a 18.5 miles scenic loop	2
HN652	Emergency out of rattler pass, Boulder Gulch	2
HN654	River City 4X4 favorite	2
HN657	From Scenic View toward Dutch Flats- access from Standard Wash	2
HN661	Family Use	1
HN664	Anniversary Trail / Diamondback/Sidewinder Trail, single track	1
HN675	Family Use	1
HN676	The Lost Trail- Standard Wash area HN420 links to these trails to provide scenery and challenges and connections to the South East, Family Use, Access to Jupiter Mines A, B and Lower Jupiter, Dos Mohave, Hawks Nest, Spaghetti A	1
HN684	Gold Springs Trail, Red Line Trail	1
HN686	Family Use	1
HN687	Family Use	1
HN689	Dutch Flat Road	1
HN690	Diamondback/Sidewinder Trail, Dutch Flat Road, Red Line Trail	1
HN692	Hawks Nest is a semi-technical to technical trail used as a step up challenge and for training. Indirect access from Standard Wash and Dutch Flat Road / Gold Springs Trail falls under evidence of construction into the regularly maintained category. This is a semi-technical to technical trail and is used by beginning off roaders as a step up in challenge. Can be run from north to south or south to north. Under the Special Resources, this trail should be considered as an indirect, not direct Access is from Standard Wash & the Dutch Flat Road which has been in existence since the 1880's.under Public use, this trail is more challenging than a standard stock 4X4 can accommodate. Lost Trail	1
HN693	Close / Keep Open for access to Private Lands	1
HN696	Close to limit Crossing Private Land to HN29A / Gold Springs Trail	1
HN700	Red Line Trail	1
HN700A	Connects to HN07A1, Family Use, Gold Springs Trail, is a maintained route used by all off-road venues. This fact is not noted on the RER under "Public Uses" so the report is in error.	1
HN701	main connector for Hn702	1
HN710	Anniversary Trail/Diamondback/Sidewinder Trail/Gold Springs/ This is a Loop and a Connector. High Density Route Polygon does not apply. Redline Trail	1
HN721	Family Use, Local Economy	1
HN758	Red Line Trail	1
HN764	Access historic mining areas around Jupiter and El Campo Mines.	1
HN765	Access historic mining areas around Jupiter and El Campo Mines.	1
HN766	older people like to ride in the desert for the scenery	1
HN768	Access historic mining areas around Jupiter and El Campo Mines.	1
HN773	Anniversary Trail -Connector Trail	1
HN782	Red Line Trail	1
HN785	Anniversary Trail	1
HN800	Beautiful road	1

HN801	Local Economy, Family Use	1
HN802	Anniversary Trail	1
HN804	short section in an area that provides a unique riding experience	1
HN805	Listed as a spur when in fact it connects to HN802. / 1 comment to close it	1
HN806	connector trail	1
HN807	could be closed with no adverse effects	1
HN808	assists in connecting the other trails	1
HN809	Scenic, Local economy	1
HN810	Family Use	1
HN811	Fork off of HN800, nice dead end area to hike from or target shoot	1
HN812	Lunch spot	1
HN813	provides access to HN818A	1
HN814	no purpose other than to access a hill we should not be operating on with vehicles, close it	1
HN815	Mine road to Pittsburg Mine, an historic route, and great view from the tailings pile of the lake.	1
HN818A	Historic mining area access.	1
HN819	HN819 is not a required spur. OK to CLOSE	1
HN822	Dead ends about 100 feet into a canyon, used by shooters as a good back drop to shoot into.	1
HN826	CLOSE them as they only serve for gun shooting.	1
HN827	It could be CLOSED.	1
HN829	CLOSE them as they only serve for gun shooting.	1
HN830	is a good trail and should not be on the closed	1
HN831	short loop hill climb	1
HN832	Havasu OHV Group sees no particular reason to keep this loop in service, H4W uses route as Copperhead Trail	1
HN834	Havasu Falls/Plan Wreck Trail Havasu 4 Wheeler club will fence off mine if it is left open.	1
HN835	serves no particular need so it could be CLOSED	1
HN836	Close short spurs with no good intentions.	1
HN838	Close short spurs with no good intentions.	1
HN839	required open in this area	1
HN840A	hunt, prospect, geo-cache, rock hound or riding pleasure	1
HN841	This route can be closed	1
HN842	OK to Close	1
HN843	Ok to Close	1
HN858	Access to Target Shooting Area, Disabled Use	1
HN862	Access to Target Shooting Area, Disabled Use	1
HN865	older people like to ride in the desert for the scenery	1
HN867	older people like to ride in the desert for the scenery	1
HN868	older people like to ride in the desert for the scenery	1

HN871	older people like to ride in the desert for the scenery	1
HN874	Highline Trail	1
HN885	Highline Trail	1
HN887	Allows access to mining claim HGS21	1
HN888	Wing Mine- easily accessible loop and connector trails, spur to mine entrance, access for HGS	1
HN889	Good Beginner trail, doesn't connect to HN22J, Snake Pit/ Floods Folly, local economy	1
HN890	River City 4X4 favorite	1
HN890A	Allows access to mining claim HGS21	1
HN893	Snake Pit A	1
HN894	Gold Springs Trail	1
HN895	Rock-hounding, Scenic, Snake Pit/ Floods Folly	1
HN895A	Allows access to mining claims	1
HN895B	Allows access to mining claims, Local Economy	1
HN899	Allows access to mining claims/collection sites	1
HN900	Allows access to crystal collection site	1
HN902	River City 4X4 favorite	1
HN903	Much like HN904, good for spotting Bighorn Sheep	1
HN904	Allows access to mineral collection site, local economy	1
HN905	Allows access to mining claims, Floods Folly Trail	1
HN907	Allows access to crystal collection site. Local economy	1
HN908	Occasional Use, doesn't connect to HN895 or HN923 Floods/Floods Folly Trail/Snake Pit Trail But does connect to Havasu OHV Riders trail	1
HN912	Allows access to crystal collection site, Local economy, Connects to HN982	1
HN915	Allows access to crystal collection site/Floods Folly Trail	1
HN916	Floods Folly Trail (Go-Around HN915)	1
HN919	A .51 mile spur off of HN982	1
HN922	Allows access to mining claims, Floods Folly Trail	1
HN923	Senior Use, Snake pit / Floods Folly , local economy, connecting trail, well used	1
HN924	Snake Pit/ Floods Folly, local economy	1
HN928	.69 trail that with HN922 connects HN915 and HN965. Most of the OHV use from the North end of LHC and Havasu Heights.	1
HN930	.5 mile connector route couples to HN922 after departing HN965	1
HN93F	Family Use	1
HN949	.06 connector loop from HN950 necessary for dry camping RV parking	1
HN94A	Not a Spur, it is a Loop and Connector (to HN32A) Redline Trail	1
HN951	Can't read maps	1
HN95A	Maze Trail, Red Line Trail	1
HN965	Fun	1
HN967	Canyon forks at the end, nice well-worn in trail, the fork to the right has a nice shady palo verde tree.	1

HN980	The Lost Trail- Standard Wash area HN420 links to these trails to provide scenery and challenges and connections to the South East	1
HN982	Gold Springs Trail	1
HN984	Rockhounding, connects to HN985	1
HN985	Rockhounding, single track	1

C. VEGETATIVE COMMUNITIES

The following excerpts on vegetation communities are taken from:

The Proposed Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management-APPENDIX C -VEGETATION COMMUNITIES AND ASSOCIATED WILDLIFE SPECIES
http://www.blm.gov/pgdata/etc/medialib/blm/az/pdfs/nepa/library/fuels.Par.5479.File.dat/appendix_c.pdf

Upland Sonoran Desert Scrub

The Upland Sonoran Desert Scrub vegetation is at times referred to as the Arizona Desert or Paloverde- Cacti Desert. This vegetation is mainly associated with the Lower Sonoran Desert Scrub. It occurs on BLM land in the western part of the state and is the largest vegetation community at 3,280,602 acres. Cacti plants are characteristic of this desert scrub and include buckhorn cholla, cane cholla, chain fruit cholla, teddy bear cholla, desert Christmas cactus, pencil cholla, Klein cholla, Devils club ground cholla, fishhook pincushion, Thornber pincushion, fish-horn barrel cactus, compass barrel cactus, and saguaro. Non-cactus dominant woody plants are blue palo verde, foothill palo verde, ironwood, creosotebush white bursage, whitethorn acacia, limber bush, ocotillo, jojoba, little-leaved ratany, crucifixion thorn, and bush buckwheat. Fire is not common in this vegetation community....

A great majority of this vegetation occurs on slopes and broken ground giving it the name of Upland Sonoran Desert Scrub. Elevations range between 984-3,280 ft. Average annual precipitation is unreliable and bi-seasonal which averages 12-16 inches with approximately 30–60% occurring during summer months. Temperatures are warm and characteristic of subtropical deserts with a winter temperature range of 9–19 °C and summer range of 22–27 °C. Soils are variable but predominately sand characteristically covered with desert pavement. Historic fire had a return interval of decades to hundreds of years and was probably not common in this vegetation community (Rogers and Steele 1980). However, today the risk of wildfire may increase after abnormally high annual precipitation which encourages abundant growth of red brome and buffelgrass (McAuliffe 1995).

Lower Sonoran Desert Scrub

The Lower Sonoran Desert Scrub vegetation on BLM land occurs mainly in western Arizona. It is the second most common vegetation type on BLM land as it occupies 2,727,540 acres. This vegetation type is relatively species rich in comparison with the Great Basin Desert Scrub as there is a mixture of different shrub species throughout this type. The Sonoran Desert Scrub vegetation is associated with Mohave Desert Scrub and Upland Sonoran Desert Scrub. Characteristic shrubs are creosotebush, whitebursage, octillo, brittlebrush, foothill palo verde, fourwing saltbush, and Ironwood. Saguaro is a characteristic cactus. Western honey mesquite, ironwood, catclaw acacia, blue palo verde, desert willow, and smoketree are usually associated with washes. Big galleta grass is an important grass species. Invasive weedy species include exotic species such as buffelgrass, red brome, filaree, prickly lettuce, Russian thistle, and London rocket. Fire is not common in this vegetation community.

As a result of high temperatures and low precipitation, plant growth is typically opened and simple reflecting intense competition for soil water among individuals. Annual precipitation varies between 2 and 9 inches. Winter temperatures are mild but summer months are hot, and desert

pavement is common. Vegetation tends to occur along washes and small drainages. Sand dunes are common in some areas. Historic fire had a return interval of decades to hundreds of years and was probably not common in this vegetation community (Rogers and Steele 1980). However, today the risk of wildfire may increase after abnormally high annual precipitation which encourages abundant growth of red brome and buffelgrass (McAuliffe 1995).

Mohave Desert Scrub

Mohave Desert Scrub vegetation is located on 1,165,687 acres. The Mohave Desert Scrub vegetation mixture is intermediate between Great Basin Desert Scrub and Sonoran Desert Scrub. The characteristic shrubs include creosotebush, Joshua tree, all-scale, brittlebush, desert holly, white burrobrush, shadscale, blackbrush, and many more shrubs. Cacti are well represented and include Engelmann hedgehog, silver cholla, Mohave pricklypear, beavertail cactus, many-headed barrel cactus. Ephemeral plants, many of which are endemic (approximately 90 out of 250 species), are characteristic of Mohave Desert Scrub. These short-lived plants that complete their life cycle in one growing season are divided into two major groups: winter and summer annuals. The winter and summer annuals respond to winter and summer precipitation, respectively.

The Mohave Desert Scrub is a warm temperate desert with scanty precipitation that occurs mainly during winter months. Elevation for the Mohave Desert Scrub is broad in Arizona and ranges from below 980 feet to 4,000 feet. Precipitation is low with annual values ranging between 2 and 8 inches and occurs with a predominately winter and summer bi-modal pattern. Temperatures are relatively low in the winter and high in the summer. Temperatures can range from approximately 0 °C in the winter months to 40 °C in summer months. Dry lakes are common. Historic wildfire was probably not common in this vegetation community.

Riparian

Riparian vegetation is found on 176,927 acres of BLM land in association with streams and rivers. The area occupied by riparian vegetation is relatively small in relationship with other vegetation types but their biological and ecological importance is larger than their limited geographic occurrence. Riparian vegetation is important to wildlife as forage, cover, breeding, and migration corridors. Riparian corridors have been greatly disturbed by a variety of activity such as grazing, mining, tree harvesting, and stream flow alteration.

The nature and species composition of the riparian vegetation changes depending on elevation and associated upland vegetation community. For example, at high elevation stream gradients are steep with relatively high precipitation and cool temperatures, while at low elevations stream gradients are gentle, low precipitation, and warm temperatures. At the higher elevations Pacific willow, bigtooth maple, narrowleaf cottonwood, box elder, black cherry, sycamore, Arizona walnut, velvet ash and western soapberry and red willow are the woody plants. At lower elevations mesquite, Gooddings willow, netleaf hackberry, western soapberry, velvet ash, Wright's sycamore and black cherry characterize riparian vegetation. Russian olive and saltcedar are two invasive woody plants that have colonized large expanses of low- to mid-elevation riparian corridors.

D. SOCIOECONOMIC STUDY

Background for the socioeconomic section of the Environmental Assessment was derived from the following eight published articles and websites found on online. These articles looked at economic value of tourism; recreation trails, and OHV use. These studies, for the most part, were specific to the area of the Havasu Travel Management Area, Western Arizona, Mohave County, and Lake Havasu City, AZ. Some of these articles discussed had a national scope.

Below are listed the articles consulted by title, year, authority with a website link. Also we have included is a short abstract of the information provided in the article for this analysis.

1	Title:	<i>Arizona's West Coast, Regional Tourism Profile, Compiled for the Arizona Department of Tourism, Overview Of Mohave County Population, Earnings, And Personal Income</i>
	Year:	2004
	Author(s):	Ron Walker, County Manager
	Website/Link:	http://resource.co.mohave.az.us/File/General/MohaveEconomy.pdf
	Abstract:	<p>A study of visitors to the "west coast" of Arizona, where do they come from and what is their economic value to the region:</p> <p><i>"2.2 million visitors come to the Arizona West Coast annually. 69% of those who travel here are from out of Arizona; that equals 1,518,000 out of state visitors. The Los Angeles area provided 37%, or 561,660 of these visitors."</i></p> <p><i>"The average Arizona domestic overnight visitor spent \$75 per person per day in 2002. Arizona's West Coast Domestic Overnight Leisure visitors stayed for an average of 3.1 nights. Using these figures, over \$500,000,000 comes into the Arizona West Coast economy annually from tourism."</i></p>
2	Title:	<i>2010 County Business Patterns (NAICS) for State: Arizona Areadname: Mohave AZ</i>
	Year:	2010/2000
	Author(s):	United States Census
	Website/Link:	http://censtats.census.gov/cgi-bin/cbpnaic/cbpsect.pl
	Abstract:	<p>The total number of business establishments for Mohave county in 2010 was 3,713 that was an increase of 267 from 2000. Over the decade, there was a decrease in "Agriculture, Forestry, Fishing and Hunting" of two, while there was an increase in "Arts, entertainment and recreation" of two business for a total 43 establishments. It is unknown if these were specifically in "recreation." Other business known for using routes within planning area for commercial purposes are mining, which increased by 11 establishments, and utilities which decreased by 2 businesses. So overall the number of the type of business that might have directly use the roads, primitive roads and trails has stayed relatively constant over the past ten years.</p>

3	Title:	<i>Lake Havasu City Tourism Survey</i>																																																																				
	Year:	2008																																																																				
	Author(s):	Prepared for the Arizona Office of Tourism By Arizona Hospitality Research & Resource Center Center for Business Outreach The W. A. Franke College of Business Northern Arizona University.																																																																				
	Website/Link :	http://www.azot.gov/documents/Lake Havasu City Final Report 8 7 08.pdf																																																																				
	Abstract	This visitor survey collected 711 responses from Lake Havasu from July 2007 through June 2008 – <i>“a more than sufficient sample size to provide reliable results”</i> <i>“Generally, the Lake Havasu City area is a primary destination for affluent Baby-boomer aged individuals on leisure vacations, who stay multiple nights, enjoy water recreation, hike and shop in the area...In conclusion, it appears that visitors to Lake Havasu City appreciate the community and the natural resources of the area and choose extended stays in pursuit of many leisure activities, all of which redounds to the economic benefit of local retail, hospitality, and area attractions”</i>																																																																				
	Table from Survey:	<table border="1"> <thead> <tr> <th>Did/Will you participate?</th> <th>Count</th> <th>Percentage participating</th> </tr> </thead> <tbody> <tr><td>Visiting beaches-parks</td><td>230</td><td>54.5%</td></tr> <tr><td>Shopping</td><td>226</td><td>53.6%</td></tr> <tr><td>Lake Tours</td><td>155</td><td>36.7%</td></tr> <tr><td>Boating-Waterskiing-Wakeboarding</td><td>149</td><td>35.3%</td></tr> <tr><td>Playing golf</td><td>139</td><td>32.9%</td></tr> <tr><td>Hiking or walking trails</td><td>134</td><td>31.8%</td></tr> <tr><td>Visiting national and state parks</td><td>120</td><td>28.4%</td></tr> <tr><td>Bird watching and observing wildlife</td><td>120</td><td>28.4%</td></tr> <tr><td>Visiting cultural and historic sites</td><td>116</td><td>27.5%</td></tr> <tr><td>Visiting national Wildlife Refuges</td><td>84</td><td>19.9%</td></tr> <tr><td>Going to movie theatre</td><td>83</td><td>19.7%</td></tr> <tr><td>Fishing</td><td>67</td><td>15.9%</td></tr> <tr><td>Camping - Recreation Vehicle (RV) stay</td><td>67</td><td>15.9%</td></tr> <tr><td>Rock Climbing</td><td>50</td><td>11.8%</td></tr> <tr><td>Special event</td><td>39</td><td>9.2%</td></tr> <tr><td>Kayaking - canoeing</td><td>36</td><td>8.5%</td></tr> <tr><td>Off Road Tours (i.e. Jeep, OHV)</td><td>33</td><td>7.8%</td></tr> <tr><td>Go cart racing</td><td>24</td><td>5.7%</td></tr> <tr><td>Bowling</td><td>22</td><td>5.2%</td></tr> <tr><td>Mountain Biking</td><td>11</td><td>2.6%</td></tr> <tr><td>Totals</td><td>422</td><td>100.0%</td></tr> </tbody> </table>			Did/Will you participate?	Count	Percentage participating	Visiting beaches-parks	230	54.5%	Shopping	226	53.6%	Lake Tours	155	36.7%	Boating-Waterskiing-Wakeboarding	149	35.3%	Playing golf	139	32.9%	Hiking or walking trails	134	31.8%	Visiting national and state parks	120	28.4%	Bird watching and observing wildlife	120	28.4%	Visiting cultural and historic sites	116	27.5%	Visiting national Wildlife Refuges	84	19.9%	Going to movie theatre	83	19.7%	Fishing	67	15.9%	Camping - Recreation Vehicle (RV) stay	67	15.9%	Rock Climbing	50	11.8%	Special event	39	9.2%	Kayaking - canoeing	36	8.5%	Off Road Tours (i.e. Jeep, OHV)	33	7.8%	Go cart racing	24	5.7%	Bowling	22	5.2%	Mountain Biking	11	2.6%	Totals	422	100.0%
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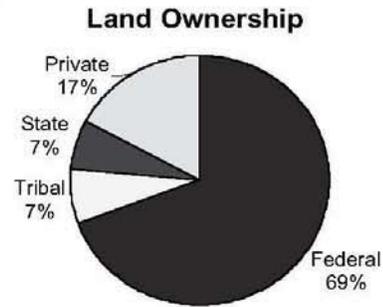
4	Title:	<i>The Economic Importance of Off Highway Vehicle Recreation to Arizona.</i>
Year:		2003
Author(s):		Arizona State Parks
Website/Link:		http://azstateparks.com/ohv/downloads/OHV_Economic.pdf
Abstract:		This report presents the economic impact OHV activities had on Arizona in 2002. In the introduction it was stated that, 21% of Arizonans, or 1.1 million people, consider themselves OHV enthusiasts with 25.5 OHV Days per year . One OHV Recreation Day = One household spending at least part of a day participating in an OHV recreational activity. The following are the 2 pages from this report covering Mohave County.

MOHAVE COUNTY



Economic Importance of Off-Highway Vehicle Recreation to Mohave County

Mohave County is located in the northwestern part of the state. It has 3% (155,032) of the state's population and 11.8% (8,627,206 acres or 13,480 square miles) of the state's land base. This averages out to 11 people per square mile. The landscape ranges from Mohave Desert to forested mountain ranges offering a wide range of outdoor recreation and OHV opportunities. There are many back roads and jeep trails to explore.



- 26% of households in Mohave County are OHV users; state percentage is 21%.
- 11% of all Arizona OHV trip destinations for past 12 months were to Mohave County.
- 780,111 OHV Recreation Days occur annually in Mohave County; 6.4% of Arizona's total.
 - 604,266 OHV Recreation Days (77%) are from Mohave County residents.
 - 175,846 OHV days (23%) are from other Arizona residents traveling to Mohave County.
- 77% of Mohave County OHV households are satisfied with their overall OHV experience.

Total Economic Impact to Mohave County from OHV Recreation is \$219 MILLION/year

DIRECT ECONOMIC IMPACT—(\$ in millions)

<i>Off-Highway Vehicle Related Expenditures</i>	<i>Total for Mohave County</i>	<i>By County Residents</i>	<i>By Other Arizona Residents</i>
OHV Trips—Fuel/Gasoline	\$16.6 M	\$14.7 M	\$1.9 M
Lodging/Campgrounds	\$3.9 M	\$2.0 M	\$1.9 M
Restaurants/Bars	\$8.9 M	\$7.5 M	\$1.4 M
Groceries/Liquor	\$12.4 M	\$10.9 M	\$1.5 M
Other (event fees, souvenirs, etc.)	\$8.1 M	\$5.8 M	\$2.3 M

- Total OHV Recreation Trips \$49.9 M
- Off-Highway Vehicles + \$45.8 M
- Tow Vehicles/Trailers + \$16.7 M
- OHV Equipment + \$69.7 M

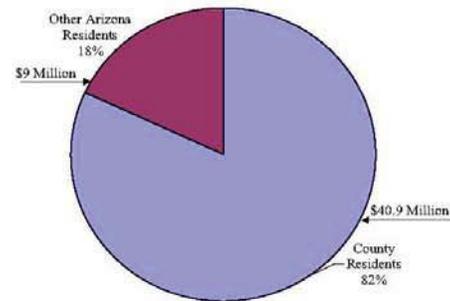
Total OHV Expenditures = \$182.1 Million

TOTAL IMPACT- Multiplier Effect* \$219.5 Million

INDIRECT ECONOMIC IMPACT

- Full-time/Part-time Jobs (#) 1,929
- Salaries/Wages \$40.7 Million
- State Tax Revenues \$9.2 Million

OHV Trip Expenditures—\$49.9 Million



Economic Importance of OHV Recreation to Mohave County

- ☐ Creates a statewide economic impact of \$219.5 million (multiplier effect)*
- ☐ Contributes \$182 million to local economies through OHV-related expenditures
- ☐ Adds \$9.2 million to annual state tax revenues
- ☐ Provides \$40.7 million in income (salaries/wages) for Mohave County residents
- ☐ Supports 1,929 jobs in Mohave County

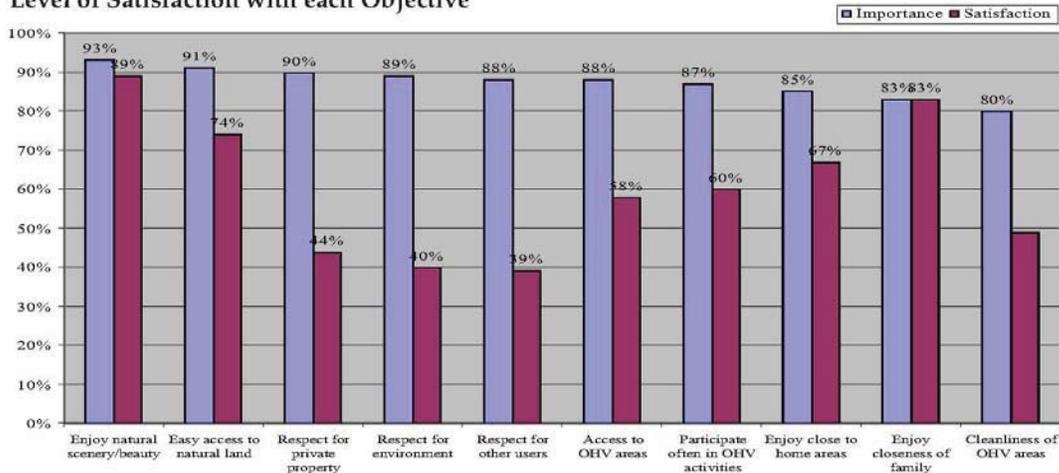
"Top Ten" Main Reason for taking last OHV Trip

• Sightseeing	21%
• Driving backroads	19%
• Trail riding-ATVs	15%
• Camping	8%
• Visiting historic/arch. sites	4%
• Hiking or walking	4%
• Fishing	3%
• Hunting	3%
• Rock crawling	2%
• Trail riding-motorbikes	2%

"Top Ten" Outdoor Activities done on last OHV Trip

• Driving backroads	81%
• Sightseeing	66%
• Hiking or walking	41%
• Picnicking	39%
• Trail riding-ATVs	33%
• Visiting historic/arch. sites	31%
• Hill climbing	27%
• Photography	26%
• Rock crawling	24%
• Camping	23%

Evaluation of Last OHV Recreation Trip—"Top Ten" Objectives Rated as Most Important and Level of Satisfaction with each Objective



Type of Vehicle(s) used on last OHV Trip

• 4WD Pickup Truck	43%
• Sport Utility Vehicle/Jeep	38%
• All Terrain Vehicle (ATV)	28%
• Trail Motorcycle	6%
• Dune Buggy/Sand Rail	5%
• 2WD Pickup Truck	2%
• Snowmobile	0%

*Multiplier Effect: sum of OHV expenditures, secondary effects generated by local re-expenditure of money, and induced impact from salaries paid by directly and indirectly impacted industries.



For more information contact:
 Arizona State Parks
 Recreational Trails
 1300 W. Washington St.
 Phoenix, AZ 85007
 Tel & TTY (602) 542-7174
www.azstateparks.com

5	Title:	<i>The Outdoor Recreation Economy</i>
	Year:	2012
	Author(s):	Outdoor Industry Association
	Website/Link:	http://www.outdoorindustry.org/images/researchfiles/OIA_OutdoorRecEconomyReport2012.pdf
	Abstract:	This report looks at current economic values of outdoor recreation on a national scope. Nationally there is \$646 billion in direct sales of outdoor recreation products and trips and related spending. It also stated that outdoor recreation economy actually grew 5% during the recession rather than contracted. As part of the conclusion the report states that the nation's public recreation lands and waters support this economy and access to quality places is fundamental.

6	Title:	<i>Arizona Trails 2010: A Statewide Motorized & Non-Motorized Trails Plan</i>
	Year:	2010
	Author(s):	Arizona State Parks and Arizona State University.
	Website/Link:	http://azstateparks.com/publications/downloads/2009_Trails_2010_Final_c.pdf
	Abstract:	This planning document details the results of extensive surveys of 5,000 Arizonans' thoughts, preferences and priorities regarding trails and OHV routes. The questions were asked via telephone, online (Internet), mail, at public meetings and open forums, and in the field at trailheads. The survey and workshop results can be found throughout this document and in the appendices. The portion of Executive Summary covering the survey as follows

Summary of Survey Findings

- The telephone survey results show that 68.6% of Arizonans have used a trail for recreation during their time in Arizona; 31.4% of residents do not use trails for recreational purposes.
- Statewide, 63.7% of respondents indicated that they had engaged in non-motorized activities on trails at some point during their time in Arizona, and 58% of trail users indicated that the *majority* of their trail use is non-motorized.
- Statewide, 21.5% of respondents indicated that they had engaged in motorized activities on trails at some point during their time in Arizona, and 10.7% of trail users said that motorized use accounted for the *majority* of their trail use.
- The percentage of non-motorized trail users ranged from a high of 68.3% in Coconino County to a low of 34.6% in Yuma, La Paz, and Mohave Counties. The percentage of motorized trail users ranged from a high of 22.2% in Yuma, La Paz, and Mohave Counties to a low of 7.9% in Pima County.
- Overall, 87% of respondents are either very satisfied or satisfied with non-motorized trails in Arizona, and 65% are either very satisfied or satisfied with motorized trails.
- The most common non-motorized trail activities for non-motorized trail users are: trail hiking, backpacking, mountain biking, and horseback riding.
- The most common motorized pursuits for motorized users are: all-terrain vehicle driving, four wheel driving or other high clearance vehicle driving, and motorized biking/dirt biking.
- Overall, the top three areas of environmental concern for *all trail users* are litter or trash dumping,

decreased wildlife sightings, and erosion of trails. The top three concerns for *motorized users* are litter or trash dumping, damage to vegetation, and decreased wildlife sightings. The top three environmental concerns for *non-motorized users* are litter or trash dumping, erosion of trails, and decreased wildlife sightings.

- Overall, the top concerns about social conditions for *all trail users* are vandalism, urban development limiting trail access or use, and lack of trail ethics by other users. The top three concerns about social conditions for *motorized users* are urban development limiting trail access or use, vandalism, and closure of trails. The top three concerns about social conditions for *non-motorized users* are vandalism, urban development limiting trail access or use, and lack of trail ethics by other users.
- The top three trail planning and management priorities for *motorized users* are acquiring land for trails and trail access, keeping existing trails in good condition, and mitigating damage to environment surrounding trails. The top three issues for *non-motorized users* are keeping existing trails in good condition, mitigating damage to environment surrounding trails, and enforcing existing rules and regulations in trail areas.
- When asked, given limited funding, which one management priority is the most important, motorized trail users indicated acquiring land for trails and access (20%) was most important, whereas non-motorized users replied keeping existing trails in good condition (32%). Non-motorized users are more likely to respond that trails should be designated for multiple activities but with motorized and non-motorized users separated, or trails should be designated for a single activity.
- Both motorized and non-motorized users tend to use trails in groups of 1-5 people, although motorized users were more likely to recreate in groups of 5 or more.
- Nearly half of motorized users (44.4%) believe that access to off-highway vehicle roads and trails has declined in the last five years. In contrast just 11% of both groups believe that access to non-motorized trails has declined.
- On non-motorized trails, both groups tend to prefer social environments with very few or some other people around but not dense social settings with lots of other people present.
- The three most important desired OHV trail features for motorized users are loop trails, trails that offer challenge and technical driving opportunity, and cross-country travel areas (where riding anywhere is permitted).
- The results indicate that, by and large, respondents do not experience recreation conflict with other trail users, although there are some areas of potential concern. For instance, 13.7% of non-motorized users reported experiencing conflict with mountain bikers somewhat or very often. Also, 33.4% of motorized trail users experienced conflict with all-terrain vehicle or quad riders somewhat or very often.
- More than 50% of motorized users and more than 40% of non-motorized users are willing to volunteer their time to build or maintain trails in Arizona. To encourage volunteerism, the most important consideration is providing information about when and where to show up.

7	Title:	<i>California State Parks Off-Highway Motor Vehicle Recreation Division Strategic Plan</i>
	Year:	2009
	Author(s):	California State Parks
	Website/Link:	http://ohv.parks.ca.gov/pages/25010/files/ohmvr%20strategic%20plan.pdf
	Abstract:	This document is less on economic value as on goals for management of OHV use in California. The California State Park's OMVR is the Division that oversees the Green Sticker program and funds Grants for the Maintenance of OHV Trails in California. The report shows where funding has been spent since 2000. It shows a jump in spending in 2007 and 2008 in Education and Safety Grant Funding. It also shows that BLM has been the leader in receiving grants from the OMVR.

8	Title:	<i>American Trails Website</i>
	Year:	etal
	Author(s):	N/A
	Website/Link:	www.american trail.org
	Abstract:	This website is a resource for numerous articles and studies on all types of trails. Including a section on Economic of trails.

E. PLANNING CRITERIA

The methodology provided by ARS served as a tool for documenting current uses and resources, while identifying potential impacts. The table below outlines the planning criteria used to organize potential impacts to current uses and resources. Planning Criteria used in this process fall under three general categories: (1) Commercial, administrative, private- property and economic issues (CAPE); (2) Public uses; (3) Special resource concerns.

CAPE	Resources	Public Uses
Monitoring Site	Areas of Critical Environmental Concern	OHV (Open) Areas
Compliance/Enforcement Monitoring	Bats (Generally)	Route Contributes to Public Safety
Fire Suppression / Management	Bobcat	Camping - Developed
Wildlife Water / Guzzler / Catchment	Bony-tail chub (E) (Critical Habitat)	Route Contributes to User Conflicts
BOR access	Burro	Wilderness Access
Fence	Chuckwalla	Street Legal Vehicles
Livestock Water (Tank, Reservoir, Well, Windmill)	Burrowing Owl (USFWS- SC, BLM-S, AZGFD- WSC)	Public Use Site Access / Interpretative Panel
Pipeline	Desert Bighorn Sheep	ATV Use
Corral	Desert Tortoise (T)	Motorcycle Use
In Allotment	Dumping	Shoreline Fishing
Gate	Gila Monster	Rock hounding
Cattle guard	Hazards	Technical 4 WD
Springs	High Density Route Polygon	Geocaching
Private Property Access	Invasive / Noxious Weeds	Touring (Published)
State Trust Land Access	Ironwoods	Dual Sport Touring
Tribal Nation Land Access	Known Cultural Sites	Hunting
State Park Access	MSCP Habitat Types	Vistas, Sightseeing, Photography
Kingman FO Access (Undesignated)	Mule Deer	Equestrian
National Wildlife Refuge	National Register of Historic Places- Eligible	Hiking
Prospect(s)	Prescribed Recreation Settings (ROS)	Hill-Climbing
Active Mine(s)	Raptors	Mountain Biking
Mining Claim(s)	Razorback sucker (E) (Critical Habitat)	Shooting
Inactive Mine(s)	Route Proliferation	Parking Area
Mineral Material Site(s)	Soils	Staging Area(s)
Airport / Airstrip	Visual Resource Management Zone	Birding
County Assertion	Special Recreation Management Area	Camping - Primitive/Dispersed
Route is recognized as contributing to the local economy (tourism)	Special Cultural Resource Management Areas	4x4 (Standard Stock 4x4)
Route is recognized in a local plan (inter-agency planning)	Wash	Utility Terrain Vehicle (UTV)
Connectivity (inter-regional or intra-regional)	Wilderness	Special Recreation Permit
Electrical Transmission / Power line	Wilderness Characteristics (WC)	Wildlife Watching
Commercial Pipeline (Gas or Water)	Other	Cultural/Historical Sightseeing
Telephone		Route is a Concern for Public Safety
Communication Site		Other
Other		

F. ROUTE DESIGNATION REPORTS

Due to the 3,024 pages, route reports are being provided electronically via the following website: http://www.blm.gov/az/st/en/prog/travel_mgmt/lhfo/hav-tmp/maps.html. Table 1, below, outlines the full list of designations with definitions.

<i>TABLE 1: DESIGNATION DEFINITIONS</i>		
Alternative Code	Authorized Users (for limits)	Description
C		Closed to all uses
ML-TransAllNM		Limited to non-motorized use only with mitigation/maintenance/monitoring
ML-TransMotorized		Limited to motorcycles with mitigation/maintenance/monitoring
ML-TransNonMotorized		Limited to equestrian use with mitigation/maintenance/monitoring
ML-UserAdminMtrPermitteeMtr	Administrative and Permittee	Limited to authorized users only with mitigation/maintenance/monitoring
ML-UserAdminMtrPermitteeMtrPvtPropMtr	Administrative, Permittee, and Private Property Owner	Limited to authorized users only with mitigation/maintenance/monitoring
ML-UserAdminMtrPermitteeMtr-TransPublicNM	Administrative and Permittee	Limited to non-motorized use for the public and motorized use for authorized users with mitigation/maintenance/monitoring
ML-UserAdminMtrPermitteeMtr-TransPublicNMM	Administrative and Permittee	Limited to non-motorized non-mechanized use for the public and motorized use for authorized users with mitigation/maintenance/monitoring
ML-UserAdminMtrPvtPropMtr	Administrative and Private Property Owner	Limited to authorized users only with mitigation/maintenance/monitoring
ML-UserAdminOnlyMtr	Administrative	Limited to authorized users only with mitigation/maintenance/monitoring
ML-UserAdminOnlyMtr-TransPublicNM	Administrative	Limited to non-motorized use for the public and motorized use for authorized users with mitigation/maintenance/monitoring
L-TransAllNM		Limited to non-motorized use only
L-TransMotorized		Limited to motorcycles
L-UserAdminMtrPermitteeMtr	Administrative and Permittee	Limited to authorized users only

L- UserAdminMtrPermitteeMtrPvtPropMtr	Administrative, Permittee, and Private Property Owner	Limited to authorized users only
L-UserAdminMtrPermitteeMtr- TransNonMotorized	Administrative and Permittee	Limited to equestrian use for the public and motorized use for authorized users
L-UserAdminMtrPermitteeMtr- TransPublicNM	Administrative and Permittee	Limited to non-motorized use for the public and motorized use for authorized users
L-UserAdminMtrPvtPropMtr- TransPublicNM	Administrative and Private Property Owner	Limited to non-motorized use for the public and motorized use for authorized users
L-UserAdminOnlyMtr	Administrative	Limited to authorized users only
L-UserAdminOnlyMtr-TransPublicNM	Administrative	Limited to non-motorized use for the public and motorized use for authorized users
MO		Open with mitigation/maintenance/monitoring
O		Open

H. TECHNICAL REVIEW

Resource Issue	NP	PNI	PI	Rationale	Signature Name/Title	Date
Air Quality*		x		Mohave County is in Attainment Area.	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Areas of Critical Environmental Concern			x	See Section 3.1	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Cultural/Paleontological Resources			x	See Section 3.2	<u>/s/ George Shannon Authenticated: Jen House</u> George Shannon, Archeologist	9/2/13
Environmental Justice		x		No minority or low income group would be disproportionately impacted by health or environmental effects.	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Farmlands*	x			No farmlands are present within the Havasu TMA	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Fish Habitat*		x		No motorized access near Lake Havasu.	<u>/s/ Doug Adams Authenticated: Jen House</u> Doug Adams, Fisheries Biologist	9/2/13
Fish & Wildlife Excluding Federally Listed Species			x	See Section 3.3	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Wildlife Biologist	9/3/13
Floodplains*		x		No floodplains will be impacted by route designations	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Forests and Rangelands*	x			No designated forests/rangelands within the Planning Area	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Fuels/Fire Management		x		Fuels/Fire Management will not be impacted by route designations	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Grazing		x		Grazing will not be impacted by route designations	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13

Greenhouse Gas Emissions (Climate Change)		x		The Havasu TMP will determine which routes will be open to motorized use, but has no authority over the amount of motorized use within the TMA.	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Hazardous or Solid Wastes*			x	See Section 3.4	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Migratory Birds*			x	See Section 3.5	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Wildlife Biologist	9/3/13
Minerals		x		Access for any mining activity is described and approved in the associated mining plan or notice. Includes a reclamation plan for any disturbance created to access mining areas.	<u>/s/ Amy Titterington Authenticated: Jen House</u> Amy Titterington, Geologist	9/4/13
Native American Religious Concerns*			x	See Section 3.6	<u>/s/ George Shannon Authenticated: Jen House</u> George Shannon, Archeologist	9/2/13
Public Health & Safety			x	See Section 3.7	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Recreation			x	See Section 3.8	<u>/s/ Amanda Deeds Authenticated: Jen House</u> Amanda Deeds, Outdoor Rec. Spec.	9/3/13
Socioeconomics			x	See Section 3.9	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Soils			x	See Section 3.10	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Threatened and Endangered Species*			x	See Section 3.11	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Wildlife Biologist	9/3/13
Travel Management			x	See Section 3.12	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13

Vegetation/ Invasive & Non- Native Species			x	See Section 3.13	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Wildlife Biologist	9/3/13
Visual Resources			x	See Section 3.14	<u>/s/ Amanda Deeds Authenticated: Jen House</u> Amanda Deeds, Outdoor Rec. Spec.	9/3/13
Water Quality (Drinking or Groundwater)*		x		No motorized access near Lake Havasu.	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Wetlands/Ripa rian Zones*		x		No motorized access near Lake Havasu	<u>/s/ Doug Adams Authenticated: Jen House</u> Doug Adams, Fisheries Biologist	9/2/13
Wild & Scenic Rivers*	x			No Wild & Scenic Rivers in Planning Area	<u>/s/Jen House Authenticated: Jen House</u> Jen House, Project Lead	9/3/13
Wilderness*		x		Several routes access the Chemehuevi Mountain Wilderness, but do not enter or impact the designated Wilderness Area	<u>/s/ Amanda Deeds Authenticated: Jen House</u> Amanda Deeds, Outdoor Rec. Spec.	9/3/13
NP = Not Present PNI = Present Not Impacted PI = Present Impacted						

Review:

Prepared by: /s/Jen House Authenticated: Jen House 9/3/13
Jen House, Wildlife Biologist Date
Project Lead

Reviewed by: /s/Dave Daniels Authenticated: Jen House 9/4/13
Dave Daniels Date
CRD Planning & Environmental Coordinator

Reviewed by: /s/Jayson Barangan Authenticated: Jen House 9/4/13
Jayson Barangan Date
Assistant Field Manager
Recreation & Visitor Services

Reviewed by: /s/Kimber Liebhauser Authenticated: Jen House 9/4/13
Kimber Liebhauser Date
Field Manager
Lake Havasu Field Office

G. ALTERNATIVE MAPS

Havasu Travel Management Area (TMA) Alternative A - No Action

Havasu TMP

Route Designation

- Open to all uses
- Limited to motorized Administrative use only
- Closed to all motorized uses

Legend

Land Status

- Bureau of Land Management
- Indian Lands
- Private
- State
- City, County, & State Park
- US Fish & Wildlife Service
- Wilderness Area

ACEC_NAME

- Area of Critical Environmental Concern
- Limited to Existing Seasonal Use
- Lands with Wilderness Characteristics
- Standard Wash OHV Open Area

Highways

- Interstate Highways
- State Highway

Roads

- County Road - Paved
- County Road - Unpaved
- Paved Road
- Unpaved Road

Other Features

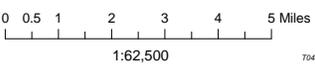
- Lake Havasu Field Office Boundary
- Incorporated City Boundary
- Township Grid
- Powerline
- Railroad
- Fence
- Rivers
- Lakes, Rivers, and Canal

Travel Management Plan Units Index

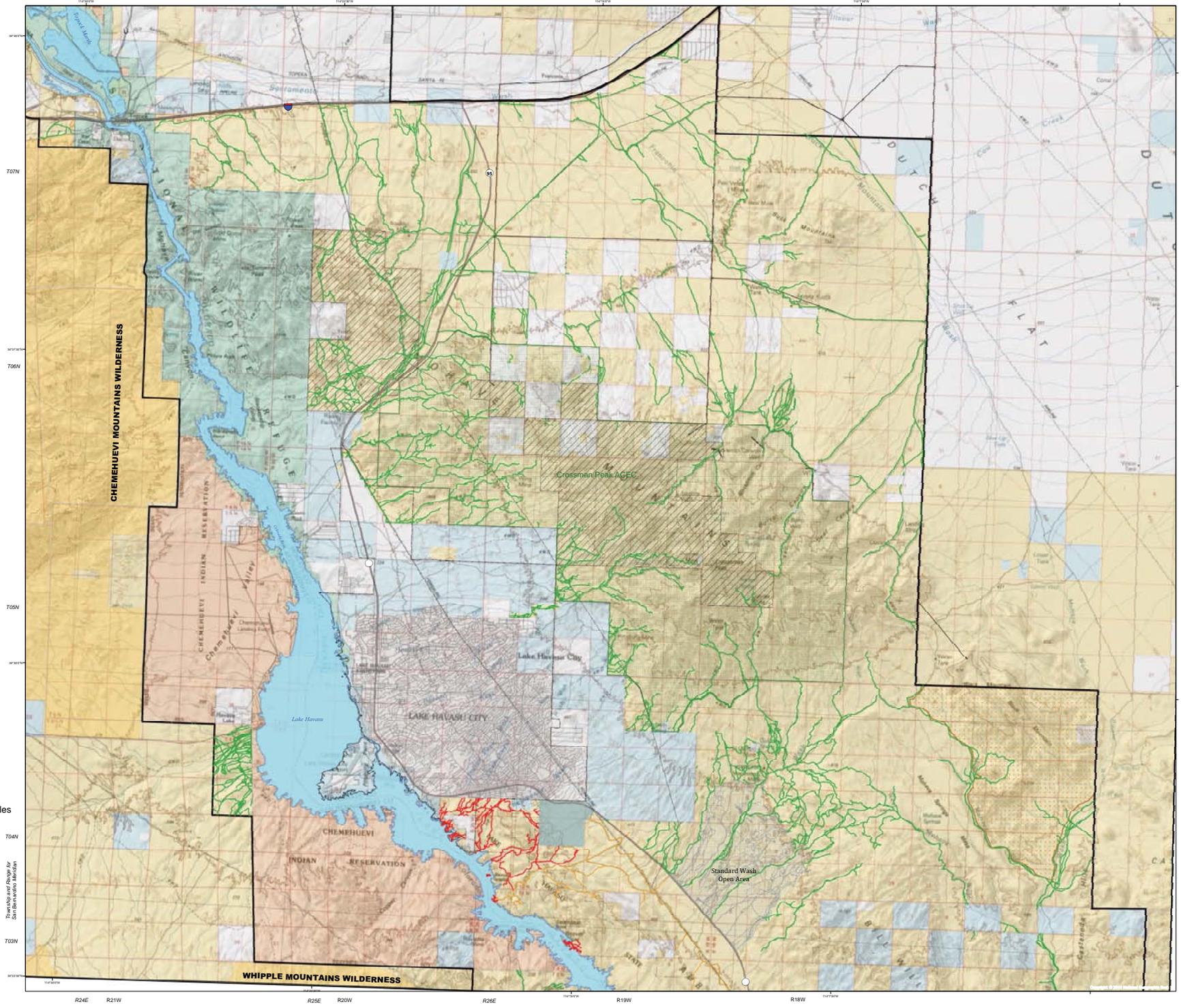
Arizona

Inventoried routes on public land within the field office boundary are numbered on this map. The routes are not currently numbered on the ground as of 2011.

The Bureau of Land Management makes no warranties, implied or expressed, with respect to information shown on this map
May 2011



LAKE HAVASU FIELD OFFICE
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management



Township and Range for San Bernardino, Mohave

R24E R21W R25E R20W R26E R19W R18W

Route Designation

- Open to All Uses
- Limited to Single Track Motorized Use
- Limited to Motorized Admin/Permittee use only
- Limited to Non-Motorized Use
- Limited to Equestrian Use
- Closed to All Motorized Uses

Legend

Land Status

- Bureau of Land Management
- Indian Lands
- Private
- State
- City, County, & State Park
- US Fish & Wildlife Service
- Wilderness Area
- Standard Wash Open Area

Highways

- Interstate Highways
- State Highway

Roads

- County Road - Paved
- County Road - Unpaved

Other Features

- Lake Havasu Field Office Boundary
- Incorporated City Boundary
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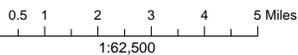
Travel Management Plan Units Index

Arizona

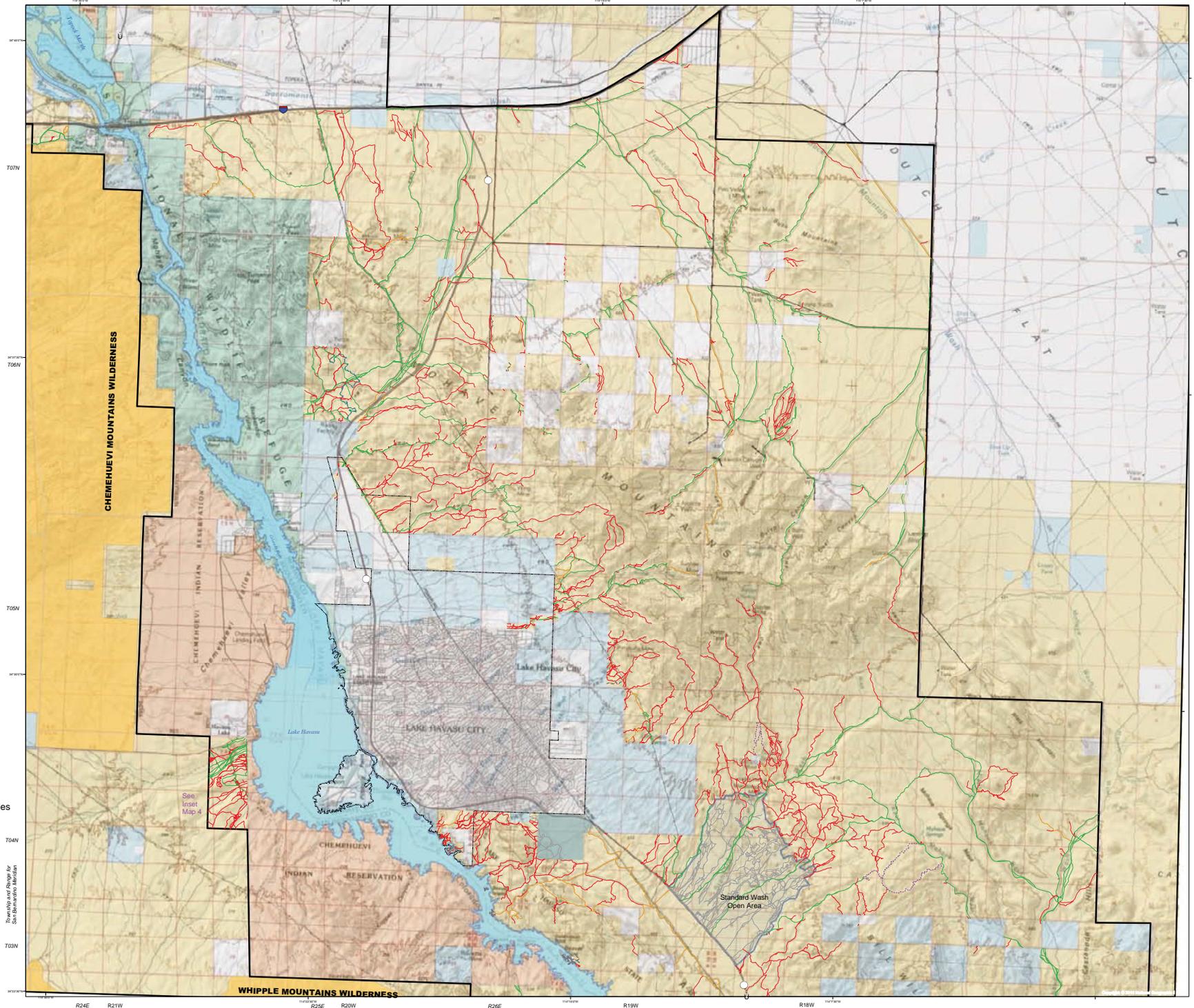
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May 2011



LAKE HAVASU FIELD OFFICE
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management



Township and Range for San Bernardino, California

R24E R21W R25E R20W R26E R19W R18W

Havasu Planning Unit - Travel Management Plan Alternative C - Proposed Action

- Route Designations**
- Open
 - Limited to Authorized Users
 - Non-Motorized Use Only
 - Single Track Only
 - Equestrian and Non-Motorized Use
 - - - Technical Vehicle Site
 - Closed to Motorized Use

- Legend**
- Land Status**
- Bureau of Land Management
 - Indian Lands
 - Private
 - State
 - City, County, & State Park
 - US Fish & Wildlife Service
 - Wilderness Area
 - Areas of Critical Environmental Concern (ACEC)
 - Lands with wilderness characteristics
- Highways**
- Interstate Highways
 - State Highway
- Roads**
- County Road - Paved
 - County Road - Unpaved
 - Paved Road
 - Unpaved Road
- Other Features**
- Lake Havasu Field Office Boundary
 - Incorporated City Boundary
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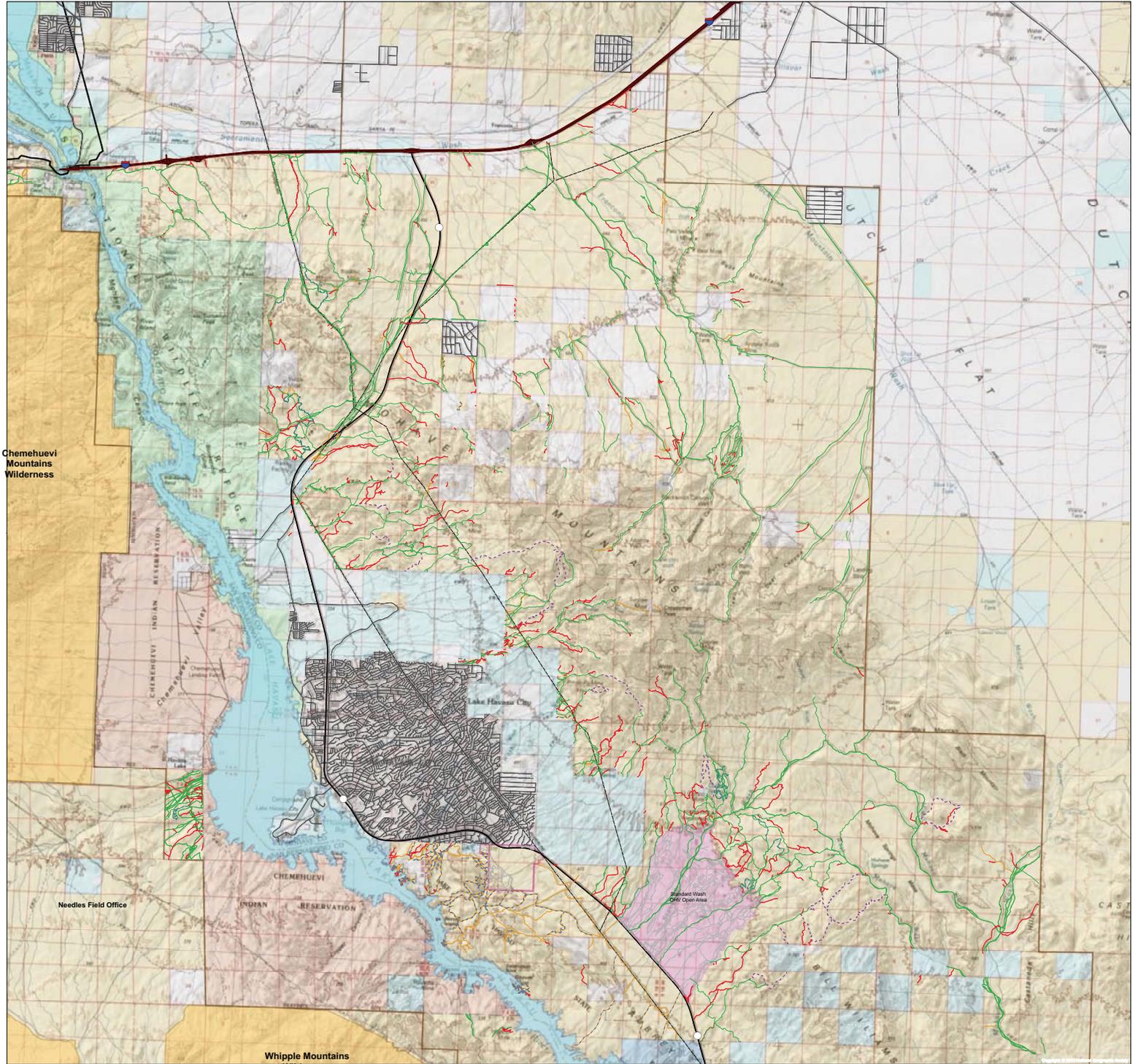
Inventoried routes on public land within the field office boundary are numbered on this map. The routes are not currently numbered on the ground as of 2011.

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April 2013
1:65,000



LAKE HAVASU FIELD OFFICE



Whipple Mountains
Wild

FINDING OF NO SIGNIFICANT IMPACT

LAKE HAVASU FIELD OFFICE Havasu Travel Management Plan (TMP) Environmental Assessment Mohave County, AZ and San Bernardino County, CA DOI-BLM-AZ-C030-2013-0020-EA

Background

This Travel Management Plan (TMP) is the product of extensive public and agency input. Its intent is to establish a comprehensive travel network, and meet both current and future access needs to the area's public lands while resolving conflicts of users of the travel network identified in this document. This document identifies a proposed system of roads, primitive roads and trails, and the terms for their use and maintenance. Additionally, it outlines facilities to be developed in support of recreation through creation of new routes, and closure of other routes. The travel network identified in this TMP comprises both motorized and non-motorized trails.

This TMP covers public land south of Interstate 40 to just north of Cattail State Park, and from the Colorado River east to the field office boundary.

Determination

On the basis of the information contained in the Havasu Travel Management Plan (TMP) Environmental Assessment (DOI-BLM-AZ-C030-2013-0020-EA), I have determined that the Proposed Action does not constitute a federal action having a significant effect on the human environment. Therefore an environmental impact statement (EIS) is not required.

This finding is based on my consideration of the Council on Environmental Quality (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the *context* and *intensity* of the impacts described in the EA.

Context

The Havasu TMP designates 845.33 miles roads, primitive roads, and trails and sixteen Technical Vehicle Sites (TVS) on public lands within Mohave County, Arizona and San Bernardino County, California administered by the LHFO. The Havasu TMP is one of six Travel Management Areas (TMA) within the LHFO. The Bullhead TMP was completed in 2009.

The Proposed Action would consist of 571.44 miles of roads/primitive roads open to off-highway vehicle (OHV) use, 49.15 miles of trails open to non-motorized use, and 69.43 miles of roads/primitive roads limited to authorized users/vehicles. The remaining 155.31 miles of roads, primitive roads, and trails would be closed to motorized and mechanized use. Additionally, fourteen TVS would be established for a total of sixteen TVS throughout the planning area.

Intensity

1) Impacts that may be both beneficial and adverse.

The Proposed Action would impact resources as described in the EA. Measures to reduce impacts were incorporated into the design of the action alternatives. None of the environmental effects discussed in detail in the EA and associated appendices are considered significant.

2) The degree to which the Proposed Action affects public health or safety.

The Havasu TMP is designed to minimize impacts to health and public safety by reducing public use conflicts, establishing a labeled travel network, and restricting motorized access to hazardous sites. Although off-roading activities have some inherent risk to public safety, the TMP includes measures that reduce safety risks.

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The project area is located on public lands administered by the Lake Havasu Field Office. There are no farmlands, wetlands, wild and scenic rivers, or ecologically critical areas in the project area.

4) The degree to which the effects on the quality of human environment are likely to be highly controversial.

Scoping for the Proposed Action and background information was made available to affected and interested agencies during the 6-month scoping period that was held between August 2010 and February 2011. A second, 60-day public scoping was held between February 6, 2013 and April 8, 2013. No controversies were identified.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

There are no highly uncertain, unique or unknown risks in implementation of the Proposed Action.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Proposed Action would not establish a precedent for future actions with significant effects. Any other actions would be subject to separate analysis under NEPA.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

A cumulative effects analysis was conducted as part of the EA, and it determined that there were no cumulatively significant effects associated with the selected alternative.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss of destruction of significant scientific, cultural, or historical resources.

BLM has made the determination that the project would not affect historic resources. Design features for managing sites that are determined to be potentially impacted by motorized and non-motorized use include: use limitations on routes with known resources, closure of routes in and through known resources, and prohibiting off route travel, and prohibiting artifact collection and disturbance of archaeological sites.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

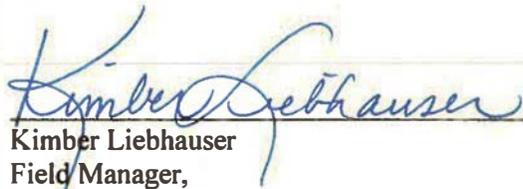
No federally listed species under the ESA, or critical habitat for such species, will be adversely affected by the Havasu TMP. LHFO performed an informal consultation with the U.S. Fish & Wildlife Service to determine potential impacts to threatened and endangered species and its critical habitat. To ensure that the Proposed Action will not likely adversely affect threatened and endangered species and its critical habitat, mitigation measures were built into the project design.

10) Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

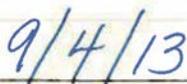
The Proposed Action is in conformance with the 2007 Lake Havasu Field Office Resource Management Plan. The action does not violate any known federal, state, local or tribal law or requirement imposed for the protection of the environment.

FONSI

I have reviewed this environmental assessment including the discussion of environmental impacts. I have determined that the Proposed Action with the mitigation measures described below will not have any significant impacts on the human environment and that an Environmental Impact Statement is not required. I have determined that the proposed project is in conformance with the approved land use plan.



Kimber Liebhauser
Field Manager,
Lake Havasu Field Office



Date

DECISION RECORD

LAKE HAVASU FIELD OFFICE Havasu Travel Management Plan (TMP) Environmental Assessment Mohave County, AZ and San Bernardino County, CA DOI-BLM-AZ-C030-2013-0020-EA

INTRODUCTION

This Travel Management Plan (TMP) is the product of extensive public and agency input. Its intent is to establish a comprehensive travel network, and meet both current and future access needs to the area's public lands while resolving conflicts of users of the travel network identified in this document. This document identifies a proposed system of roads, primitive roads and trails, and the terms for their use and maintenance. Additionally, it outlines facilities to be developed in support of recreation through creation of new routes, and closure of other routes. The travel network identified in this TMP comprises both motorized and non-motorized trails.

This TMP covers public land south of Interstate 40 to just north of Cattail State Park, and from the Colorado River east to the field office boundary.

SCOPING AND PUBLIC INVOLVEMENT

Over the course of several weeks between 2009 and 2013, the Proposed Action was evaluated by the BLM's interdisciplinary team. Issues that were raised during the review included:

Cultural:

- How would the route designations impact existing cultural resources?

Minerals:

- How would the route designations impact access to mining claims?

Recreation:

- How would the route designations impact family recreational opportunities?
- How would the route designations contribute to loop routes and connectivity?
- How will the route designations impact access to prospecting, hunting opportunities, geocaching, and scenic view points?
- How would the route designations impact public safety?

Socioeconomic Resources:

- How would routes closures impact the local economy, specifically the sales of off-road vehicles, parts, fuel, and the tourism industry?
- How would the route designations impact seasonal visitor frequency and use of travel network?

Wildlife:

- How would the route designations impact bighorn sheep movement corridors and lambing grounds?
- How would the proposed action impact desert tortoise habitat quality?

On August 18, 2010 the BLM initiated a six month scoping period. Additionally, a public information meeting was held on November 9, 2012 to encourage public involvement throughout the route designation process. During this time proposed route designations for each alternative were available online in the form of maps and downloadable data. Maps and information was also available at the Lake Havasu Field Office. Public comments resulted in changes to proposed designations in three of the alternatives.

On February 6, 2013 the BLM released the Preliminary Havasu TMP/EA for a 60 day public review and comment. Comments received were reviewed but did not result in changes to the document.

LAND USE CONFORMANCE

The Proposed Action complies with the *Lake Havasu Field Office Resource Management Plan* (RMP) approved on May 10, 2007 and is in conformance with the RMP. It is consistent with the following RMP objectives, terms and conditions:

- TM-1 Designations will be made and management implemented for a balance of opportunities for the entire range of motorized and non-motorized access needs, while in balance with other resource values found on public lands. (Page 112)
- TM-2 Reasonable, safe, and environmentally sound access will be provided to visitors, local residents, licensed or permitted activities, and property owners. Lake Havasu Field Office will be linked with other state, regional, and land management agencies or interest groups to better facilitate travel management. (Page 112)
- TM-3 Travel between communities within the planning area will be made safer. (Page 112)
- TM-4 Public access easements will be acquired across private or state lands where public access to federal lands and waterways is not available. (Page 112)
- TM-5 Instill and strengthen a more effective and responsible user ethic through public outreach programs for motorized and non-motorized users. (Page 112)
- TM-6 The BLM will continue to provide motorized and non-motorized access across public lands, with emphasis on development of non-motorized trails and trailheads. (Page 113)
- TM-8 Opportunities for “touring” and “loop” travel beyond the boundaries of the planning area will be maintained or enhanced when creating the travel management network for the planning area. (Page 113)
- TM-9 OHV area designations are shown in Table 8 and on Map 31. Generally, the planning area will be classified as “limited to existing roads and trails” for motorized travel, unless a specific classification has been applied to the area as in

Table 8. Existing roads and trails for motorized use will be defined as those routes and trails found on route inventories completed in the period between 1990 and 2004 and shown on the Lake Havasu Field Office inventory maps (Map 32). (Page 113)

- TM-10 Washes in areas designated Open, are available for motorized travel. In areas designated "existing road or trails" only washes with routes shown on inventory maps will be open to motorized trail. After the TMP is completed only washes with designated routes will be open for travel. All other washes will be closed to motorized travel unless at a later date reviewed as a new route or trail and evaluated under the route evaluation process as outlined in Appendix L. (Page 114)
- TM-11 Between the ROD and the completion of the TMP, three areas totally 30,943 acres (see Map 31) will retain seasonal closures for motorized vehicles from January 1 to June 30, to protect sensitive habitats, ACEC values, recreational settings, and/or cultural sites. These areas were originally seasonally closed under the YRMP for bighorn sheep lambing grounds. All routes in these areas will be evaluated and designated in the TMP and the area allocation dropped. This does not affect areas currently limited to designated routes. (Page 114)
- TM-12 "Limited to Existing Roads and Trails" areas will be converted to "Limited to Designated Roads and Trails" following the Travel Management Network Plan. (Page 114)
- TM-13 Wheeled non-motorized carts will be allowed except in WAs. (Page 114)
- TM-14 Motorized vehicles may be allowed to pull off an existing/designated route 100 feet on either side of centerline. This use 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 a designated route 100 feet of centerline in those areas where resource damage has exceeded limits of acceptable change. (Page 114)
- TM-15 Technical Vehicle Specialized Sport Sites could be identified and managed as an RMZ or specific sites within RMZ or the ERMA and not part of the travel management network. (Page 114)
- TM-16 Foot and equestrian cross-country travel will be allowed on public lands. California and Arizona state laws consider bicycles vehicles and cross-country travel will not be allowed except in designated open area. Except in WAs, all roads and trails will be open to bicycles unless designated otherwise. (Page 114)
- TM-24 Standard Wash and Shea Road/Osborne Wash RMZs will be allocated "Open" following compliance with NHPA and the Endangered Species Act and the successful resolution of adverse effects to historic properties and threatened and

endangered species. Until these consultations are completed in these two RMZs, travel will remain restricted to existing roads and trails. (Page 115)

- TM-26 Within the Lake Havasu Aubrey Hills area, motorized use will be limited to authorized users. (See Map 31) (Page 115)
- TM-29 The BLM will require permittees (e.g., for hunting, wood gathering, livestock operators) to comply with field office route designations. Exceptions may be authorized on a case-by-case basis. (Page 116)
- TM-30 Impacts of motorized activity (except for authorized vehicles) will be evaluated and the areas converted to limited to administrative access to motorized vehicles within 0.25 miles of any spring. If necessary to maintain access, a new route may be established. (Page 116)
- TM-32 No new permanent motorized routes will be authorized in lands managed to maintain wilderness characteristics, except those required by law. (Page 116)
- TM-33 Upon completion of the TMP process, the route network will be limited to *designated* roads, primitive roads, and trails. Upon completion of each TMP, a map will be published showing the status, maintenance intensity, and other relevant information for all roads, primitive roads, and trails within each respective Travel Management Area. (Page 116)
- TM-34 The BLM will not develop, endorse, or establish route or trail ratings. The BLM may describe physical characteristics of a route. (Page 116)
- TM-36 Use of authorized ROWs will be managed for public access and through the TMPs designated either open or limited. (Page 116)
- TM-37 On BLM published maps, areas designated as limited to authorized users will be shown as closed to general motorized use. (Page 116)
- TM-39 Prior to completing the TMP and route designation process, any vehicle routes not represented on the route inventory maps will be subject to restoration actions as described in *Administrative Actions and Standard Operating Procedures*, Appendix B. After site-specific cultural and wildlife clearances are accomplished, the restoration action could be completed without further NEPA or public notice. (Page 117)

AUTHORITY

Implementation of the Proposed Action is under the authority of the Federal Land Policy and Management Act of 1976 and regulations found at 43 CFR 8342.

ENVIRONMENTAL CONTAMINENTS

Areas of Critical Environmental Concern

- 131.7 miles, a 19% reduction, of routes would remain open for OHV use

Cultural/Paleontological Resources

- 61 routes, a 63% reduction, open to OHV use would access known cultural sites
- 31 routes would provide non-motorized access to known cultural sites

Fish & Wildlife Excluding Federally Listed Species

- Route designations would reduce off-trail travel, therefore reducing habitat fragmentation and wildlife harassment
- Stipulations allow for protection of important plant and animal species

Hazardous or Solid Wastes

- 17 routes, a 39% reduction, with identified potential hazards would remain open to OHV use

Migratory Birds

- 121.2 miles, a 57% reduction, of washes would be open to OHV use

Native American Religious Concerns

- No action would adversely affect areas or sites with Native American Religious Concerns

Public Health & Safety

- 69.2 miles, a 14% reduction, of routes with identified concerns for public safety would remain open for OHV use

Recreation

- 571.44 miles of roads/primitive roads open to off-highway vehicle (OHV) use, 49.15 miles of trails open to non-motorized use, and 69.43 miles of roads/primitive roads limited to authorized users/vehicles.

Socioeconomics

- The majority of published routes and routes with vista/sightseeing/photography would remain open for OHV use

Soils

- 49.61 miles of routes, a 13% reduction, with identified impacts to soil would remain open to OHV use

Threatened and Endangered Species

- A 29% reduction of routes open to OHV would occur within Mojave/Sonoran Desert Tortoise habitat
- In desert tortoise habitat, project-related vehicles shall not exceed 10 miles per hour on unpaved roads.
- Care shall be taken not to disturb or destroy tortoises or their burrows. Handling, collecting, damaging, or destroying desert tortoises are prohibited by Arizona State Law. During all activity special care should be given to watch for and avoid any desert tortoise that may be present on a route or roadway.
- If a tortoise is endangered by any activity that activity shall cease until either the tortoise moves out of harm's way of its own accord, or until an authorized biologist is able to

remove the tortoise to safety. Tortoises shall be handled only by a BLM authorized Wildlife Biologist or AZGFD Wildlife Manager, and shall be moved solely for the purpose of preventing death or injury. The authorized biologist shall be responsible for taking appropriate measures to ensure any desert tortoise relocated from the project site is not exposed to temperature extremes, which could be harmful to the animal.

- If a vehicle is left for any occasion the driver shall inspect underneath any parked vehicles immediately prior to moving. If a desert tortoise is beneath the vehicle, the authorized biologist shall move the tortoise from harm's way. Otherwise, the vehicle shall not be moved until the desert tortoise has left of its own accord.

Travel Management

- 571.4 miles of roads and primitive roads would be open to OHV use

Vegetation/Invasive & Non-Native Species

- Whenever possible, pockets of native vegetation within the general area of disturbance shall be left to hasten the re-establishment of native flora.
- State protected plant species (all cactus, ocotillo, and native trees) shall be avoided. If they cannot be avoided they will be salvaged and replanted during reclamation. The operator shall report all State protected species destroyed or damaged to the Lake Havasu Field Office Biologist at (928) 505-1200.

Visual Resources

- This alternative would maintain the following miles of roads, primitive roads, and trails within each VRM class: 0 miles of Class I, 150.72 miles of Class II, 159.41 miles of Class III, and 112.01 miles of Class IV. See Table 8 for percent reduction from the No Action alternative.

SPECIAL STIPULATIONS

1. Desert Tortoise: Routes that are impassable, and where crews are not able to restore the route to its previous condition without the use of heavy equipment, will have a tortoise monitor on site prior to the use of heavy equipment to ensure no desert tortoises will be harmed and that no new habitat is disturbed.
2. Road Signing: After the decision has become effective, all open/limited/non-motorized routes will be signed accordingly. Newly proliferated routes not included in the EA will be closed and restored without further public review.
3. Restoration: BLM will implement restoration on any route designated closed which is causing harm to resources. Newly proliferated roads will be restored (see mitigation measure 2 above).
4. Route Monitoring Strategy: All routes will be regularly monitored. BLM will develop a monitoring program (see Havasu TMP) with metrics to evaluate route use and impacts to surrounding resources. The routes will be regularly monitored and results compiled. Route monitoring may include, but is not limited to, sign replacement, traffic counts, damage assessments to cultural and biological resources, Site Stewardship reports, sign vandalism, and Law Enforcement contacts. BLM will continue to involve the public in route monitoring efforts.
5. Changes to Route Network: Decisions to change route designations will be pursuant to 43 CFR 8342.3 and based on results of information (metrics) collected over time. A

separate analysis, public scoping, and decision record will be completed. See Havasu TMP.

6. Develop educational materials for users including site specific maps, brochures, interpretive exhibits, trailhead information kiosks.
7. All workers onsite will be given a Service approved desert tortoise briefing and the BLM's desert tortoise fact sheet to educate them on various aspects of desert tortoise life history and legal protection, as well as to inform them of the stipulations required as part of the proposed action.
8. If a tortoise is encountered, it shall be avoided and allowed to move out of harm's way of its own volition. No tortoises will be handled. The BLM's wildlife staff will be notified at (928) 505-1200 if any tortoises are observed during project activities.
9. All workers associated with Havasu TMP implementation will be instructed to check underneath their vehicles and around the tires before moving them to check for tortoises sheltering underneath. The vehicle may not be moved until the tortoise has moved itself out of harm's way. The BLM's wildlife staff will be contacted if a tortoise will not move out from under a vehicle and a work stoppage has resulted.
10. No trash or food items will be deposited onsite.
11. A speed limit of 15 miles-per-hour shall be required during implementation activities.
12. The BLM's TMP representative, (928) 505-1200, and the Service's Arizona Ecological Services Field Office, (602)-242-0210, must be notified of any desert tortoise death or injury due to project activities immediately, or if no phone or radio reception is available by close of business on the following working day.
13. All vehicle traffic will be restricted to designated open and limited routes, as identified in the approved Havasu TMP.
14. During reclamation activities, only native seed mixtures will be planted. Where soil disturbance will occur, all equipment will be required to be cleaned and inspected prior to use within the monument. Public education and signs promoting the use of clean vehicles preventing the spread of weeds, shall be included in entry kiosks and on literature.

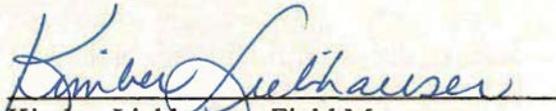
RATIONALE

Under the Proposed Action, 571.44 miles of roads/primitive roads open to off-highway vehicle (OHV) use, 49.15 miles of trails open to non-motorized use, and 69.43 miles of roads/primitive roads limited to authorized users/vehicles. The remaining 155.31 miles of roads, primitive roads, and trails would be closed to motorized and mechanized use. Additionally, fourteen TVS would be established for a total of sixteen TVS throughout the planning area. The actions analyzed in the Environmental Assessment will not constitute a major federal action that would significantly affect the quality of the human environment; therefore, an Environmental Impact Statement was not required and a finding was made of no significant impact.

DECISION

It is my decision to authorize the Proposed Action as described in Environmental Assessment DOI-BLM-AZ-C030-2013-0020-EA. The Proposed Action will be subject to the stipulations attached to this environmental assessment.

APPROVED


Kimber Liebhauser, Field Manager
Lake Havasu Field Office

Date 9/4/13

APPEALS

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4. If an appeal is taken, your notice of appeal must be filed in the Lake Havasu Field Office, 2610 Sweetwater Avenue, Lake Havasu City, AZ 86406 within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with the Lake Havasu Field Office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied,
- (2) The likelihood of the appellant's success on the merits,
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.