



**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

**VERMILION CLIFFS NATIONAL MONUMENT
AND ARIZONA STRIP FIELD OFFICE (FERRY SWALE)
TRAVEL MANAGEMENT PLAN**

September 2015



*Vermilion Cliffs National Monument
Arizona Strip Field Office
Arizona Strip District
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VERMILION CLIFFS NATIONAL MONUMENT AND ARIZONA STRIP FIELD OFFICE (FERRY SWALE) TRAVEL MANAGEMENT PLAN

SIGNATURE PAGE

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1.0 INTRODUCTION

In February 2008, the Bureau of Land Management (BLM) approved the Vermilion Cliffs National Monument (VCNM) Resource Management Plan (RMP) (BLM 2008a) and the Arizona Strip Field Office (ASFO) RMP (BLM 2008b). These RMPs established route designation decisions for VCNM and the Ferry Swale area of the ASFO and directed the development of a travel management plan (TMP) to coordinate the implementation of the designated transportation network.

The VCNM and ASFO (Ferry Swale) TMP documents the implementation and management of the travel management network designated in the VCNM and the ASFO RMPs (referred to in this document as *VCNM and ASFO RMPs* or *RMPs*). This document will set forth a plan to implement, manage and maintain this designated transportation network, while adequately accommodating access needs and uses and ensuring resource protection, including the protection of Monument objects for which the Monument was created. No further environmental review associated with development of this TMP is necessary.

1.1 Overview of the TMP Area

On November 9, 2000, Presidential Proclamation 7374 created Vermilion Cliffs National Monument (referred to in this document as *VCNM* or the *Monument*) under the Antiquities Act of 1906 (34 Stat. 225, 16 U.S. Code 431) to ensure protection of a wide array of scientific, biological, geological, hydrological, cultural, and historical objects. These objects, both individually and collectively, in the context of the natural environments that support and protect them, are referred to as “Monument objects,” “Monument resources,” or “Monument values” throughout this document. Monument objects have been preserved by the Monument’s lack of easy road access through limited travel corridors. VCNM is known for its remoteness and its world-class natural features, encompassing spectacular scenic vistas from the lofty heights of the Vermilion Cliffs to the dramatic depths of the Paria Canyon.

VCNM is located in Coconino County, Arizona, part of the BLM Arizona Strip District, which also encompasses Grand Canyon-Parashant National Monument (GCPNM) and the ASFO. VCNM and the Paria Canyon-Vermilion Cliffs Wilderness partially contained within it are part of the BLM’s National Conservation Lands, whose mission is to “conserve, protect and restore these nationally significant landscapes that have outstanding cultural, ecological and scientific values for the benefit of current and future generations.”

The Monument is adjacent to portions of Grand Staircase-Escalante National Monument and the Kanab Field Office of the BLM in Utah to the north, borders Glen Canyon National Recreation Area (NRA) to the east and southeast, and borders the Kaibab National Forest to the west. It contains 279,566 acres of BLM-administered land, 13,438 acres of Arizona State Trust lands, and 683 acres of private land.

The lands addressed in this TMP (also referred to in this document as *TMP area*) comprise both VCNM and Ferry Swale, a 9,020-acre portion of the ASFO between VCNM and Glen Canyon NRA (see Map

I). Because of its location, Ferry Swale was included in the same travel management-delineated sub-region as the VCNM (the Paria Plateau sub-region) when the VCNM RMP (BLM 2008a) and ASFO RMP (BLM 2008b) were developed, becoming the only area in the ASFO that underwent a complete route inventory and designation process at the time. Ferry Swale is included in this TMP to allow for cohesive management of joint routes across the ASFO and VCNM.

No communities exist within the Monument or the Ferry Swale area, although several small residential/commercial areas lie along the Monument boundary at the foot of the Vermilion Cliffs along U.S. Highway 89A in the vicinity of Marble Canyon. Other close communities include Page and Fredonia, Arizona, and Kanab and Big Water, Utah. Popular recreational activities in this area include hiking, mountain biking, horseback riding, off-highway vehicle (OHV) use, hunting, photography and study of the area's archeology and history. In addition to access by the general public, there are Special Recreation Permits (SRPs) that authorize commercially guided recreational activities in the area, such as big game hunting and photography tours.

While U.S. Highway 89A provides passage along the southern boundary of the Monument, there are no paved routes within VCNM and much of the Monument's landscape of steep cliffs, deep canyons, and loose sand present a formidable barrier, making vehicular entry challenging. Spectacular scenic vistas are common from the rims of the Paria Plateau and visitors are offered a sense of isolation and remoteness in much of the area.

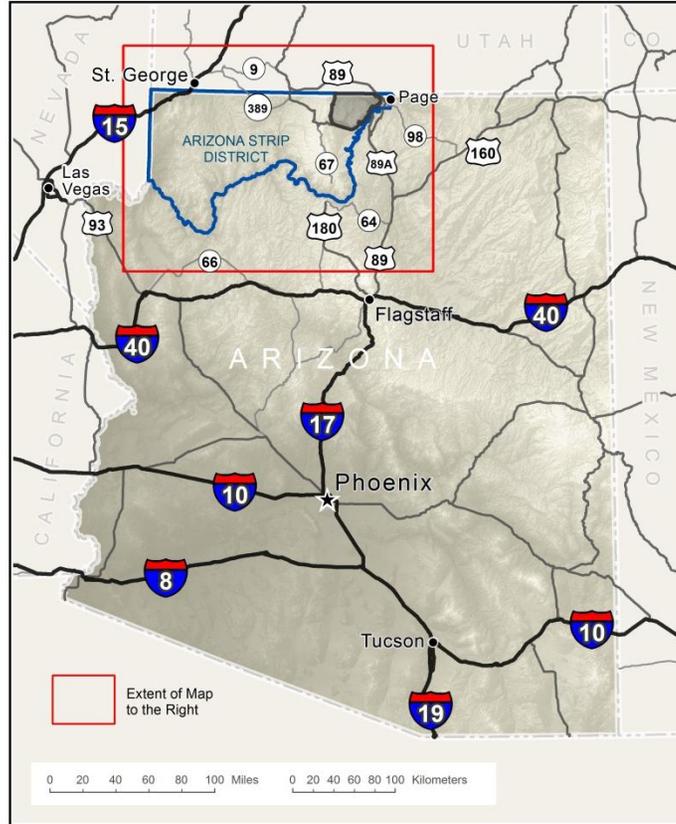
Figure 1. A primitive road leading into Vermilion Cliffs National Monument.



Vermilion Cliffs - Ferry Swale Travel Management Plan

Produced by BLM - Arizona Strip District GIS Program
September 2015 File: VCNM_TMP_Area_Overview.mxd
Map Projection: NAD 1983 UTM Zone 12N

State of Arizona and Major Highway Network



Arizona Strip District and Vicinity - Surface Owner and Special Management Units



Overview Maps - State of Arizona and Arizona Strip District

National Landscape Conservation System		Surface Owner	Transportation Routes
Travel Management Area	Bureau of Land Management	National Park Service	Interstate
Arizona Strip District Boundary	US Forest Service	USFS Designated Wilderness	US Highway
USA State Boundaries	Indian Reservation	State	State Highway
BLM National Monument	Private		Other Paved Road
National Conservation Area			Major Unpaved Road
BLM Designated Wilderness			
National Scenic and Historic Trails			

No warranty is made by the Bureau of Land Management (BLM) as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. Routes depicted on non-BLM lands are displayed for information purposes only and do not grant access to non-BLM lands. Information in this document only applies to BLM lands within the planning area.

Map I. TMP Area Overview

1.1.1 AREAS OF SPECIAL EMPHASIS

The special designations and areas of special management emphasis within the TMP area include:

- Vermilion Cliffs National Monument
- Paria Canyon-Vermilion Cliffs Wilderness
- Dominguez-Escalante Historic Trail
- Honeymoon/Old Arizona Road Historic Trail
- Great Western Trail
- Vermilion Cliffs Highways Scenic Drive
- Paria River Proposed Wild and Scenic River Segments
- Ferry Swale Off-Highway Vehicle (OHV)/All-Terrain Vehicle (ATV) intensive use area

There are no Areas of Critical Environmental Concern or nationally designated trails within the TMP area.

1.2 Background of Travel and Transportation Management

In the 1980s, in response to Presidential Executive Orders 11644 and 1989, the BLM began to address public concerns regarding the proliferation of unplanned roads and trails and their impact on public land resources and uses. This involved designating all public lands as either "open," "limited," or "closed" to OHV use in accordance with the Code of Federal Regulations (CFR), under 43 CFR 8342.1.

National BLM policy requires State and Field Offices to develop travel and transportation management plans using a comprehensive, interdisciplinary approach to integrating travel and transportation management with land use planning and resource management programs in a process called Travel and Transportation Management or Comprehensive Travel and Transportation Management (CTTM); see BLM Handbook 8342, Travel and Transportation Handbook. This planning process addresses all resource values and uses (recreational, traditional, commercial, authorized, and other); and includes all modes of access (e.g., motorized, mechanized, non-motorized, and non-mechanized) and conditions of travel on the public lands.

CTTM goals are to:

- Provide and improve sustainable access for public needs and experiences;
- Protect natural and cultural resources and settings;
- Promote the safety of public land users; and
- Minimize conflicts among the various users of public lands.

2.0 TRAVEL MANAGEMENT PLANNING PROCESS

An extensive inventory was completed for VCNM and the Ferry Swale area of the ASFO prior to approval of the RMPs in 2008. Route inventories for the remainder of the ASFO continued for several years after 2008. This effort involved BLM staff, contractors, volunteers, and seasonal fire crews using GPS/GIS technology, aerial photography, and historic information. The inventory formed the basis of the route evaluations and subsequent route designations. For the purposes of this TMP, roads, primitive roads, and trails may be collectively or individually referred to as *routes*. The inventory classified routes in the following categories: Primary Paved, Primary Unpaved, Secondary Paved, Secondary Unpaved, Tertiary Unpaved, Single Track and Reclaiming.

As stated previously, the purpose of this TMP is to define and document the course of action necessary to implement the route designation decisions for VCNM and Ferry Swale. This TMP addresses implementation of route designations, including maintenance standards, criteria to open and close routes in the future, route interpretation, sign guidelines, enforcement, monitoring, and other guidance that will facilitate an effective implementation process.

2.1 Public Participation

A variety of Federal, state, county, local, and tribal groups played a vital role in the travel planning process by attending meetings, providing databases and general information, and assisting with the development of the transportation management alternatives for VCNM and Ferry Swale that were included in the environmental impact statement (EIS) that was developed for the VCNM and ASFO RMPs. The RMP EIS public participation process provided opportunities for the public and agencies to review and comment on specific route uses or impacts. Information from these public and internal reviews allowed final adjustments to be made to the route network for the final route designations.

The resulting route designations and networks covered by this TMP addressed the varied aspects of the transportation and access issue expressed in terms of either resource protection or motorized use. Because VCNM is a national monument, primary consideration was given toward protecting resources, particularly monument objects for which this monument was designated, while still providing motorized access in many portions of the monument.

3.0 TRAVEL MANAGEMENT DECISIONS

3.1 RMP Decisions and Current Management Settings

Land use planning decisions are broad-scale decisions which guide future land management actions and subsequent site-specific implementation decisions. These decisions identify specific areas of public land where certain uses or management actions are allowed, are excluded, or may be restricted in order to achieve a desired future condition or to protect certain resource values. Land use planning decisions fall into two categories: desired outcomes (goals and objectives) and allowable uses and actions anticipated to achieve desired outcomes.

The VCNM and ASFO RMPs (BLM 2008a and BLM 2008b) made land use planning and implementation-level decisions relating to travel management (see Tables 2.14. of the VCNM and ASFO RMPs).

3.1.1 DESIRED OUTCOMES

Desired outcomes (or goals and objectives) provide overarching direction for BLM actions in meeting the agency's legal, regulatory, policy, and strategic requirements. Goals are broad statements of desired outcome, but generally are not quantifiable. Objectives are more specific statements of a desired condition that may include a measurable component. Desired outcomes are expressed in the VCNM and ASFO RMPs as desired future conditions (DFCs), and represent land or resource conditions that are expected to result if planning goals and objectives are fully achieved.

This TMP incorporates the DFCs for travel management as set forth in the VCNM and ASFO RMPs. These DFCs provide the goals for travel throughout the TMP area, including specific objectives for the travel management areas (TMAs) and transportation facilities. These DFCs are listed in Table I.

Table 1. RMP Desired Outcomes Related To Travel Management

RMP Desired Outcomes Related To Travel Management	
Vermilion Cliffs National Monument RMP	
DFC-TM-01	The region’s remoteness, scenic beauty, open spaces, and Monument objects will be maintained by careful travel management.
DFC-TM-02	A variety of existing motorized, mechanized, and non-motorized trail and travel opportunities will be sustained, where needed, to meet public and administrative needs.
DFC-TM-03	Compatible traditional, current, and future use of the land will be sustained by establishing a transportation system that contributes to protection of sensitive resource, promotes dispersed recreation, and minimizes user conflicts.
DFC-TM-04	Public use, resource management, regulatory needs, and Monument objects will be considered through travel management planning, incorporating consideration of the effects of, and interactions among, all forms of travel including motorized, mechanized, non-motorized/non-mechanized, equestrian and other livestock, walking, mountain biking, and other travel modes.
DFC-TM-08	The building of new roads, or altering or upgrading of existing roads, will be minimized to the greatest extent possible, except as needed to protect natural and cultural resources on public lands or support achieving other resource management objectives identified in this Approved Plan.
DFC-TM-09	Transportation facilities that will be available, suitable, and appropriate in the Monument will vary by TMA.
Arizona Strip Field Office RMP	
DFC-TM-01	The region’s remoteness, scenic beauty, open spaces, and Monument objects will be maintained by careful travel management.
DFC-TM-02	A variety of existing motorized, mechanized, and non-motorized trail and travel opportunities will be sustained, where needed, to meet public and administrative needs.
DFC-TM-03	Compatible traditional, current, and future use of the land will be sustained by establishing a transportation system that contributes to protection of sensitive resource, promotes dispersed recreation, and minimizes user conflicts.
DFC-TM-04	Public use, resource management, and regulatory needs objects will be considered through travel management planning, incorporating consideration of the effects of, and interactions among, all forms of travel including motorized, mechanized, non-motorized/non-mechanized, equestrian and other livestock, walking, mountain biking, and other travel modes.
DFC-TM-09	The building of new roads, or altering or upgrading of existing roads, will be minimized to the greatest extent possible, except as needed to protect natural and cultural resources on public lands or support achieving other resource management objectives identified in this Approved Plan.
DFC-TM-10	Transportation facilities that will be available, suitable, and appropriate in the Monument will vary by TMA.

In addition, each RMP contains desired outcomes (i.e., objectives, primary travelers served, and setting characteristics) for its travel management areas:

VCNM RMP (BLM 2008a)

- **DFC-TM-05** provides desired outcomes for management of the Backways TMA;
- **DFC-TM-06** provides desired outcomes for management of the Specialized TMA;
- **DFC-TM-07** provides desired outcomes for management of the Primitive TMA.

ASFO RMP (BLM 2008b)

- **DFC-TM-05** provides desired outcomes for management of the Rural TMA;
- **DFC-TM-06** provides desired outcomes for management of the Backways TMA;
- **DFC-TM-07** provides desired outcomes for management of the Specialized TMA;
- **DFC-TM-08** provides desired outcomes for management of the Primitive TMA.

TMA's are discussed in more detail in Appendix B: Route Evaluation and Travel Planning Process.

3.1.2 ALLOWABLE USES AND MANAGEMENT ACTIONS

After establishing desired outcomes, the BLM identifies allowable uses (land use allocations) and management actions that are anticipated to achieve the goals and objectives.

3.1.2.1 Allowable Uses

These decisions identify uses, or allocations, that are allowable, restricted, or prohibited, based on desired outcomes. Both RMPs include specific land use restrictions to meet desired outcomes and exclude certain land uses to protect resource values. The RMPs designated or delineated land management units with area-specific goals and/or desired outcomes, including OHV area designations and TMA's.

Motorized and mechanized vehicle use is limited to designated roads, primitive roads and trails within the TMP area. Cross country travel by motorized or mechanized means is not permitted off of designated roads, except for authorized administrative and emergency purposes. The cross country use of non-motorized, wheeled game carriers to retrieve game is allowed, except in designated wilderness.

The OHV area designations for the TMP area are:

VCNM

LA-TM-02: 89,598 acres will be **closed** to motorized and mechanized vehicle use, which includes designated wilderness. Motorized and mechanized vehicle use will be **limited** to designated roads on 203,863 acres.

Ferry Swale¹

All 9,020 acres of Ferry Swale are designated as **limited** to designated roads, primitive roads or trails.

The TMA delineations for the TMP area are:

VCNM

LA-TM-01: TMAs will not be formally allocated or designated. Per Land Use Planning Handbook, H-1601-I, TMAs will be delineated as follows:

- Rural 0 ac. 0%
- Backways 5,857 ac. 2%
- Specialized 96,116 ac. 33%
- Primitive 191,716 ac. 65%

Ferry Swale²

All 9,020 acres of Ferry Swale are delineated as Specialized TMA.

¹ Decision No. LA-TM-02 in the ASFO RMP provides OHV area designations for the entire ASFO, including the Ferry Swale area.

² Decision No. LA-TM-01 in the ASFO RMP provides TMA delineations for the entire ASFO, including the Ferry Swale area.

3.1.2.2 Management Actions

Table 2 shows management actions from the VCNM and ASFO RMPs which relate to the conditions of route use within the TMP area:

Table 2. Management Actions Related To Travel Management

Management Actions Related To Travel Management	
Vermilion Cliffs National Monument RMP	
MA-TM-01	State of Arizona traffic law statutes will continue to apply to all motorized vehicle use on State, County, and BLM routes. Motor vehicle “registration requirement would not apply on lands under BLM jurisdiction to an all-terrain vehicle or an off-road recreational motor vehicle operating on a dirt road that is located in an unincorporated area of this state. For the purposes of this paragraph, “dirt road” means an unpaved or ungraveled road that is not maintained by this state or a city, town, or county of this state” (ARS 28-2153, D).
MA-TM-02	Motorized, mechanized, or non-motorized/non-mechanized use of routes that are designated as “limited” will be restricted to the specific users, seasons, or vehicle types as identified on a route-by-route evaluation and designation.
MA-TM-03	Motorized or mechanized use of administrative routes are subject to the terms of an appropriate authorization instrument, such as ROW, permit, lease, maintenance agreement, or transportation plan that specifies the authorized administrative user, routes, destinations, potential frequencies, and acceptable intensities maintenance.
MA-TM-04	Motorized or mechanized use of administrative routes in “closed” areas are the minimum necessary for the administration of the area or the exercise of the right or permitted use (see Glossary for definition of “administrative routes”).
MA-TM-05	All vehicular travel in the Monument is allowed only on roads designated as part of the transportation system. To protect Monument objects, no areas are authorized for driving off these designated roads, except for authorized administrative and emergency purposes.
MA-TM-06	In areas along national trails, motorized use will keep within the designated road with reasonable use of the shoulder and immediate roadside, allowing for vehicle passage, emergency stopping, or parking, unless otherwise posted.
MA-TM-07	For roads that are designated open, management discretion to limit or close a route may be exercised where necessary through emergency closure to protect Monument objects.
MA-TM-08	Use of non-motorized, wheeled game carriers to retrieve kills is allowed in all areas of the Monument except designated wilderness.
MA-TM-09	Roads designated for motorized/mechanized vehicle use by administrative users only, allow only the minimum motorized or mechanized use necessary for the administration of the area or the exercise of the right or permitted use.
MA-TM-10	On roads within the wilderness boundary setback, visitors can park only on the road shoulder and immediate roadside, allowing for vehicle passage and emergency stopping, unless otherwise posted.
Arizona Strip Field Office RMP	
MA-TM-01	State of Arizona traffic law statutes will continue to apply to all motorized vehicle use on State, County, and BLM routes. Motor vehicle “registration requirement would not apply on lands under BLM jurisdiction to an all-terrain vehicle or an off-road recreational motor vehicle operating on a dirt road that is located in an unincorporated area of this state. For the purposes of this paragraph, “dirt road” means an unpaved or ungraveled road that is not maintained by this state or a city, town, or county of this state” (ARS 28-2153, D).
MA-TM-02	Motorized, mechanized, or non-motorized/non-mechanized use of routes that are designated as “limited” will be restricted to the specific users, seasons, or vehicle types as identified on a route-by-route evaluation and

	designation.
MA-TM-03	Motorized or mechanized use of administrative routes will be subject to the terms of an appropriate authorization instrument, such as ROW, permit, lease, maintenance agreement, or transportation plan that specifies the authorized administrative user, routes, destinations, potential frequencies, and acceptable intensities maintenance.
MA-TM-04	Motorized or mechanized use of administrative routes in “closed” areas are the minimum necessary for the administration of the area or the exercise of the right or permitted use (see Glossary for definition of “administrative routes”).
MA-TM-05	All cross-country (off-transportation system) motorized or mechanized travel will be prohibited, with the following exceptions: <ul style="list-style-type: none"> • Any designated open OHV areas. • Minimum necessary for administration of the area. • For emergency purposes. • Minimum necessary for the exercise of a valid existing right or authorized use; • In areas designated as “limited,” motorized-vehicles may be allowed to pull off a designated route 100 feet 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 either side of centerline. In areas designated as ACECs and along national trails, motorized use will keep within the designated route with reasonable use of the shoulder and immediate roadside, allowing for vehicle passage, emergency stopping, or parking, unless otherwise posted
MA-TM-06	Use of non-motorized, wheeled game carriers to retrieve kills is allowed in all areas except designated wilderness.
MA-TM-07	Use of non-motorized, mechanized vehicles (including bicycles) will be prohibited off the transportation system in ACECs designated for cultural or listed species values and in designated wilderness.

3.2 Route Designations

Route designation decisions were made in the RMPs for the TMP area. A designation of Open, Limited to Administrative use (or other specified use limits), or Non-Motorized use has been assigned to each route under BLM jurisdiction within the TMP area. These designations are defined as follows:

Open: Manage as “**Open**” to all users for motorized/mechanized travel: 423 miles. Various special mitigating measures designed to ensure Monument objects or other sensitive or important resources may apply. This designation includes Route Evaluation Report© designations of “**O**” [**Open**] and “**MO**” [**Mitigate Open**]

Administrative use: Manage as open to motorized, “**Administrative use**” only, open to authorized users (typically BLM or a permitted user) or non-motorized public uses: 79 miles. Public mechanized use limits (such as season of use, size of vehicle, or official/authorized users only) may vary by route. This designation includes Route Evaluation Report© designations of “**L**” [**Limit**] and “**ML**” [**Mitigate Limit**].

Non-motorized use: Manage as open to all users for “**Non-motorized**” uses: 6 miles within VCNM. There are zero miles in Ferry Swale. Uses include horseback, foot or mechanized vehicles, although mechanized use limits may vary by route. This designation includes Route Evaluation Report© designations of “**L**” [**Limit**] and “**ML**” [**Mitigate Limit**].

An additional 118 miles of inventoried routes were not designated, so are considered “**closed**” to all motorized and mechanized use. Closed routes have natural (i.e., passive) and/or active rehabilitation as an objective and will not be considered system routes. This designation includes Route Evaluation Report© designations of “**C**” [**Closed**]. It should be noted that closed routes are still available for non-motorized, non-mechanized uses.

Some routes in the travel network cross private or state lands. These route sections were not designated because they are outside of BLM jurisdiction and travel on them typically follows historical use patterns. In places where a continuous route is repeatedly bisected by the boundary of a travel management sub-region, the route’s designation remains the same to allow for continuity and connectivity of the transportation system between different TMP areas. The designated travel network on BLM lands within the TMP area is shown in miles Table 3 and displayed in Map 2.

Table 3. Route Designations

Route Designations (miles)	
Vermilion Cliffs National Monument	
Open to all users for motorized/mechanized travel	374
Closed to all motorized and mechanized vehicle use	116
Limited to administrative use only	74
Limited to non-motorized use (trails)	6
Ferry Swale Designations	
Open to all users for motorized/mechanized travel	49
Closed to all motorized and mechanized vehicle use	2
Limited to administrative use only	5
Limited to non-motorized use	0

3.3 Transportation Asset Types

“Asset” is a term used to describe roads, primitive roads, and trails that comprise the transportation system. It is the general term used to categorize all BLM constructed “assets” contained within the Facility Asset Management System (FAMS) which are maintained through the maintenance program. The three categories of transportation assets are:

Road: 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.

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

Trail: A linear route managed for human-powered, stock or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles. There are no designated motorized trails within the planning area.

Travel and transportation management encompasses more than the management of motorized vehicles. People are able to walk or ride horses anywhere on public lands unless an area is closed for safety or specific resource protection (for example, a cultural site). Therefore, routes that are limited to administrative use of motorized vehicles are typically open to hikers, bicyclists, and horseback riders.

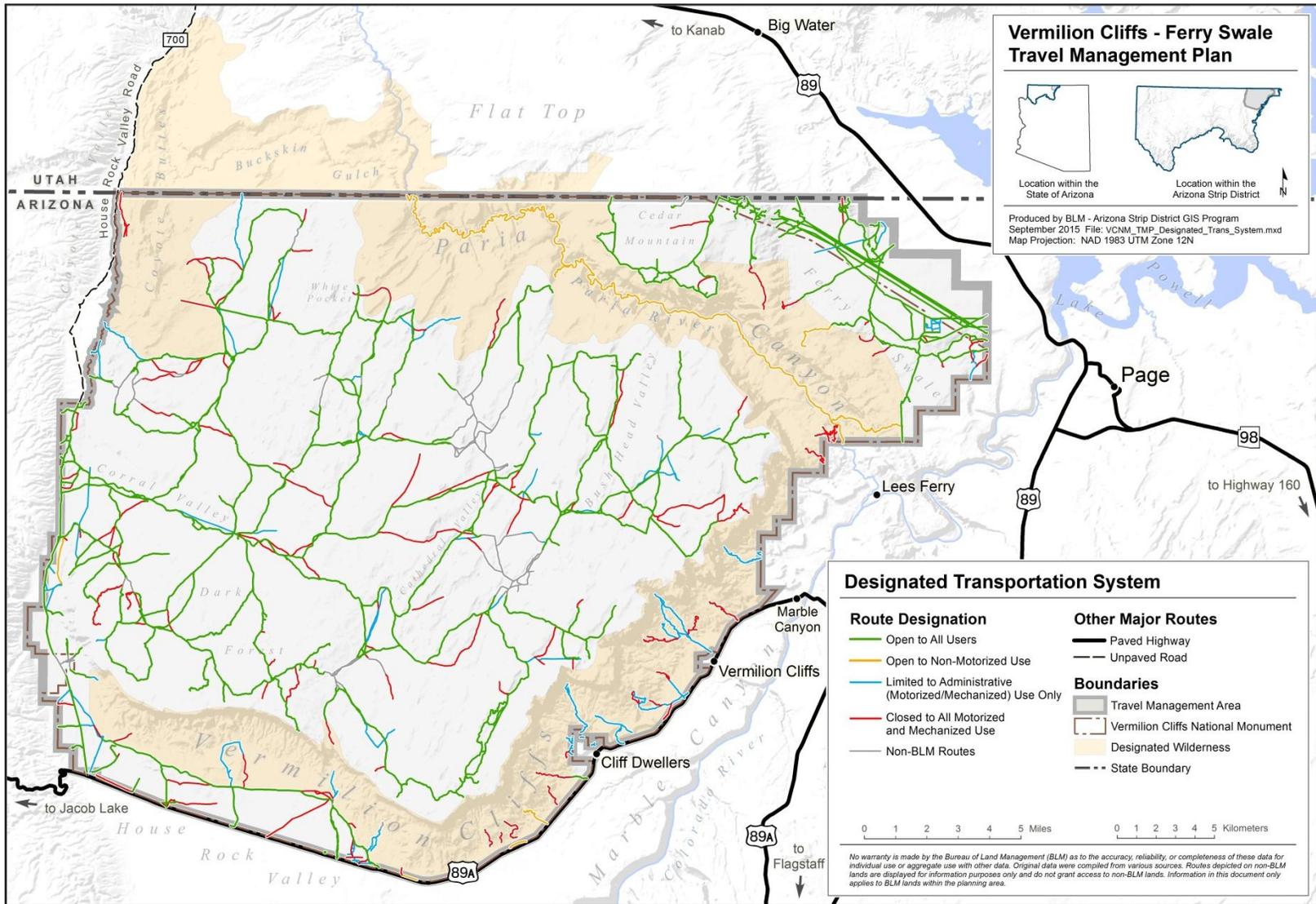
Cross-country motorized vehicle and bicycle travel is not allowed. However, in accordance with both RMPs, the cross-country use of non-motorized, wheeled game carriers to retrieve game is allowed, except in designated wilderness where mechanized and motorized modes of transportation are prohibited. Mountain biking within the TMP area is limited to the designated routes in the network unless specified otherwise.

Map 3 shows the transportation asset types present within the planning area. Table 4 summarizes the route designations for the TMP area in relation to their transportation asset type (roads, primitive roads, trails).

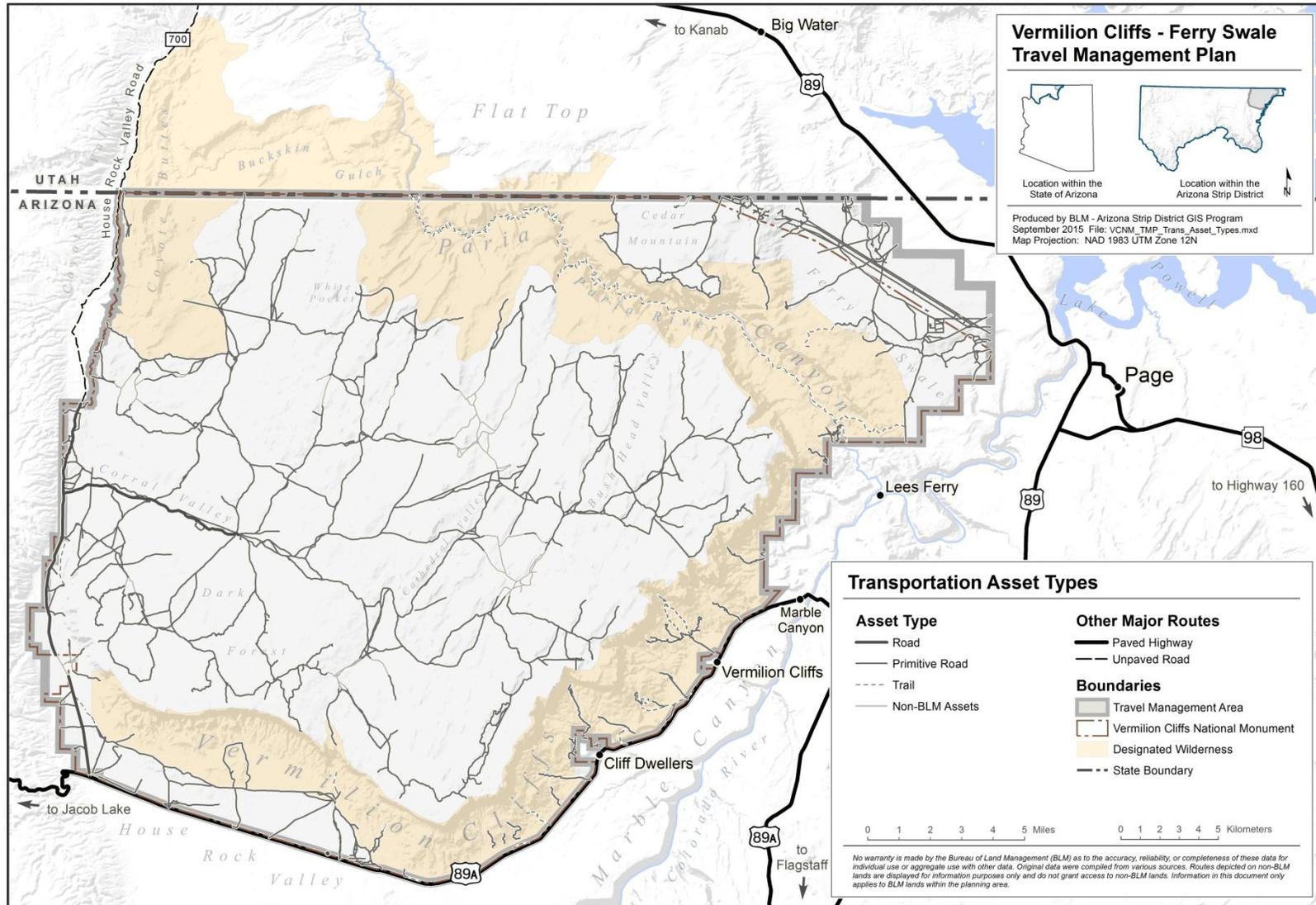
Table 4. Route Designation by Transportation Asset Type

Route Designation by Transportation Asset Type (miles)					
	<i>Open to All Users</i>	<i>Limited Uses Only: Non-Motorized and Motorized Administrative Use</i>	<i>Closed to All Motorized and Mechanized Use</i>	<i>Open to Non-Motorized Use</i>	Total # of Miles*
Roads	17.8	---	---	---	17.8
Primitive Roads	374	64	110.5	---	548.5
Trails	---	9.8	---	36.8	46.6
Total Miles	391.8	73.8	110.5	36.8	612.9

* Note: Mileage calculations are based on GIS analysis of BLM corporate transportation data and may vary from route designation mileages listed in the RMPs due to how route designation categories were combined for calculation purposes.



Map 2. Designated Transportation System



Map 3. Transportation Asset Types

3.4 Public Land Access

Access to and across public lands within the planning area is influenced by land tenure and various land use authorizations, such as rights-of-way for roads and utilities. Routes in the existing transportation network which cross non-federal land or areas affected by special land use authorizations will continue to see use under current and foreseeable traffic patterns, though their public use is not legally ensured for the long term. These routes will generally be the priorities for pursuing legal access acquisition (or adjudicating existing access rights) across non-federal land to ensure continued access for the public and for the maintenance and operation of authorized uses. Map 4 shows the designated route network in relation to the surface ownership in the TMP area.

3.4.1 LEGAL PUBLIC/PRIVATE LAND ACCESS

Two major access locations to VCNM exist. Public access to VCNM is currently available from the north by unpaved or primitive roads across BLM-administered lands from U.S. Highway 89 in Utah. Roads or primitive roads access VCNM from U.S. Highway 89A in the south, some of which cross private land. Additionally, roads or primitive roads across Arizona state trust and private lands currently exist on the Paria Plateau. However, unless the BLM acquires legal access³ across these lands, access to VCNM from State Highway 89A and across parts of the Paria Plateau is not ensured for the long term.

3.4.2 ARIZONA STATE TRUST LANDS

Public lands are intermixed with lands administered by the Arizona State Land Department within the TMP area. To ensure long term access across Arizona state trust lands, access permits and/or easements would be pursued. A special land use permit from the State of Arizona grants temporary access and conveys no rights, but would remove a requirement for the public to possess a state trust land recreation permit to use the connecting primitive roads on trust land. When a public visitor map is created, state lands will be consulted with regard to the display of any routes on trust land property.

3.4.3 PRIVATE LANDS

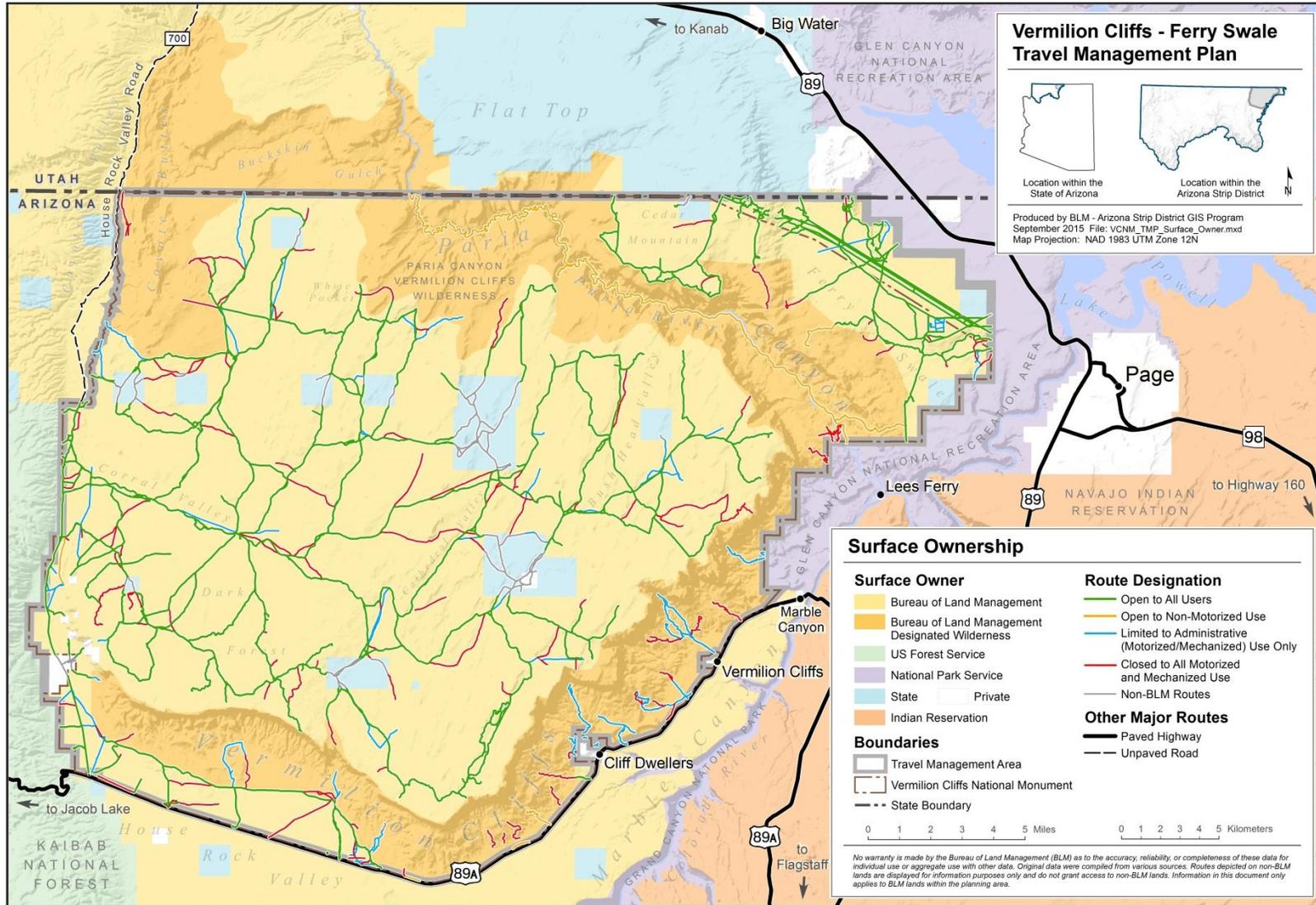
Private lands are located within the TMP area, both in House Rock Valley on the southern and eastern perimeters of VCNM, and on the Paria Plateau. Many of the routes identified in this TMP cross private parcels, although designations do not apply to private property. Access across private lands in the TMP

³ Legal access denotes a formal written agreement between the BLM and another landowner that authorizes use on specified routes across non-BLM land for agency use and/or public use. Unless other agreements are in place, most legal access across private land only exists if a road being used is a state or federal highway, or county road. A public road is any road which is under the jurisdiction of the Arizona Department of Transportation (ADOT), county and municipal government, or one of the public land management agencies.

Physical access is more common. Physical access exists when a road is physically open to travel, but there is no formal written agreement in place allowing such access.

area is a concern for the public and for the BLM in management of adjacent public lands. The BLM will work to acquire easements from willing land owners to secure access across these lands.

Private property within the TMP area does not have legal access to it (i.e., no authorization granted to the BLM). The BLM will encourage use of existing roads in all rights-of-way issued to access private land in order to avoid new ground disturbance, and therefore impacts to Monument resources, within VCNM.



Map 4. Land Status within the Planning Area

4.0 IMPLEMENTATION

4.1 Implementation Decisions Made in the RMPs

As stated previously, the VCNM and ASFO RMPs (BLM 2008a and BLM 2008b) contain many implementation-level decisions related to travel management (see Table 2.14. of the RMPs for specific decisions), including identifying specific routes to keep open, close or limit use on as part of a planned transportation network (route designations). Transportation asset types (roads, primitive roads or trails) were identified for the TMP area following approval of the RMPs, in accordance with the BLM 1626 Travel and Transportation Manual (2011).

Besides designating routes, the RMPs also made implementation decisions, as listed in Table 5 (below).

Table 5. Other Implementation Decisions in the VCNM and ASFO RMPs

Other Implementation Decisions in the VCNM and ASFO RMPs	
Route Designation	
IMPL-TM-01	Prior to the full implementation of route designations, bureau policy will be followed regarding compliance with the requirements of Section 106 of the NHPA.
Trail Systems Designation	
IMPL-TM-03	<ul style="list-style-type: none"> • State Trails System: Paria Canyon Trail will continue to be managed as an Arizona State Trail System component. • State Trails System: Old Arizona Road/Honeymoon Trail and Old Spanish Trail will continue to be managed as Arizona State Trail System components. • State Trails System: Temple Trail (lower section) will continue to be managed as an Arizona State Trail System component. • State Trails System: Virgin River Interpretive Trail, Little Black Mountain Trail, Mokaac Trail (main segment and upper loop), Arizona Trail (Segment 34), and Paiute Wilderness Trails will continue to be managed as Arizona State Trail System components.
IMPL-TM-04	National Historic Trails [NHT]: Old Spanish Trail will continue to be managed as a NHT.
IMPL-TM-05	Millennium Trails: Arizona Trail (Millennium Legacy Trail) and Great Western Trail (National Millennium Trail) will continue to be managed as Millennium Trails.
IMPL-TM-06	Other: Vermilion Cliffs Highways will continue to be managed as a multi-partner interpretation and education transportation initiative. Establishment of new trail/road systems (motorized, mechanized, or non-motorized) such as the High Desert Trail, Arizona section; Hurricane ATV Trails; and Kanab-Fredonia Trails System may be considered where appropriate for targeted market strategies in SRMAs and/or where public safety, user conflict, or resource protection issues can be resolved by establishing trails in the ERMAs.

The primary objective of this TMP is to implement the designation of the travel network as defined in the RMPs and create a management framework that allows for both current and future user needs in the planning area, while ensuring the protection of resources. This TMP also intends to reduce conflict among users of the area. It includes strategies for plan implementation, including: interpretation,

signing, management of a transportation geodatabase, monitoring and evaluation, closure methods for designated closed motorized routes, and any future changes to the assets and facilities of the transportation system.

4.2 Implementation Strategy and Priorities

The implementation strategy for this TMP was established through goals derived from the desired outcomes established in the RMPs (Section 3.1.1 of this TMP). Implementation of the actions specified in this TMP is necessary to protect monument objects and serve the needs of the public. The implementation priorities are based on the ability to make noticeable change in Monument conditions and affect visitor behavior to achieve desired conditions. Actions described below may be done concurrently, combined or conducted in the order in which they are funded. The BLM will attempt to complete implementation in the order shown, with heightened priority acknowledged for special emphasis areas, such as special designations, areas with sensitive resources, and areas of intensive use.

Implementation actions (the order in this list refers to the priority of the task):

- 1) Continue public education and outreach efforts. Distribute public access maps and informational brochures of the designated route network in print and electronic (web-based) formats.
- 2) Sign the open route network to make open routes more apparent and attractive than the closed routes. Pursue funding for materials and staff needed to implement route and transportation facility signing efforts.
- 3) Install informational kiosks and signs. Maintain and upgrade existing kiosk boards as necessary.
- 4) Establish or maintain partnerships with existing local groups and clubs. Recruit and train volunteers to establish monitoring patrols and place route markers as needed.
- 5) Establish route closures and assess restoration needs based on inventory and monitoring. Pursue funding for route closure and rehabilitation if necessary, then begin rehabilitation of closed routes.
- 6) Monitor compliance with plan and travel network, including the route network markers.
- 7) Conduct maintenance as appropriate on the designated transportation system. Observe a route maintenance schedule and/or identify maintenance triggers to meet the route management objectives and desired route conditions.
- 8) Make changes to route network and adjust management strategy, as necessary.

Monitoring, adaptive management and budget limitations can all change the BLM's implementation priorities and timeline of completion. When considering specific sites for travel management implementation, priorities will be assigned to tasks by using the five factors/questions listed below. The highest priority for implementation will be given to routes/areas for which all five factors apply:

1. Would implementing the action maintain and enhance public safety?
2. Would the action be implemented in an area of high resource value (natural, cultural, historic, biological, scientific, scenic, or recreational)?
3. Does the action location include habitat for special status species?
4. Does the action location have above-average surface disturbance?

5. Does the action resolve significant community or administrative interface issues?

4.2.1 FUNDING STRATEGY

Adequate funding sources will be secured to manage and maintain the TMP. Significant funding will be needed for labor and supplies to provide law enforcement, recreation visitor services, outreach programs, the restoration and decommissioning of closed routes, as well as maintenance and operational costs (supplies, materials, tools, equipment, vehicles, communications etc.). Operational funding for cultural surveys, wildlife surveys, transportation system maintenance, and related costs will be determined on an ongoing project basis, and planned annually. The BLM will strive to lower costs through the use of partnerships, in-house labor, volunteers, and other strategies, as prudent.

Funds for labor, supplies and equipment will be pursued through the BLM budget process, and will be subject to appropriation by Congress. Additional funding sources may include *BLM Damaged Lands* accounts, State OHV gas tax funds, and grant monies available to non-profit groups. Such grants have already been awarded for Arizona Strip travel management implementation through the Arizona State Parks Statewide OHV Program. Funding will be pursued through Challenge Cost Share projects, an agency program that matches other funding sources. Assistance agreements and partnerships will be sought to leverage external contributions. Grants from other sources will be pursued, including state, federal, and private funding sources.

4.3 Education Component

Public education and outreach are important priorities following the designation of routes in the TMP area. Successful implementation of this TMP requires that the BLM provide the public with information about route designations, laws and regulations, land use ethics, safety notices and resource values that may be affected by travel and transportation on public lands. Interpretive media will be disseminated by a variety of means, including news releases, traditional brochures and guides, travel maps, informational signage, and electronic media from BLM websites. Educational efforts will be coordinated with adjacent land managers to minimize user confusion and present a seamless message to the public across different land jurisdictions and media outlets.

4.3.1 OBJECTIVES

The main education objective for the TMP area is to attain voluntary compliance with route designations and closures and reduce conflicts among public land users. Ensuring voluntary compliance with route designations will promote the safety of public land users, facilitate resource protection by discouraging the proliferation of unauthorized routes, and help achieve identified objectives.

The outreach initiative will promote respect for both public and private land by providing information on access to public lands, encouraging users to obtain permission from private landowners if traveling across private lands and specifying where to get additional information and maps.

Several target messages or themes for this educational effort include:

- Public lands provide diverse recreational opportunities enjoyed by various users.

- Restricting travel to designated transportation system protects resources and public access.
- Tread Lightly! (www.treadlightly.org/)/ Leave No Trace (<https://lnt.org/>) outdoor ethics
- Respect other users of public land and the rights of private land owners
- Wildland fire prevention
- OHV ethics and safety

4.3.2 OUTREACH STRATEGIES

Effective communication with the public requires delivery of information in a clear, concise message. This can be accomplished in a variety of ways through direct and indirect public contact, physical and virtual means. Though not exhaustive, the following list outlines targeted methods of communication for this TMP area:

- Kiosks and interpretive signage
- Visitor center displays
- In-person public presentations (at visitor center and/or separately with user groups)
- Paper & electronic format maps available to public
 - General visitor map of designated route network
 - Special area maps
- Website / Electronic media
 - Georeferenced PDF maps for viewing on a portable electronic device
 - ArcGIS Online online map server
 - Google Earth files
 - Universal GPS files for use with a GPS unit
 - Routes and basemap data loaded on GPS memory cards for sale in visitor center

Signs are one of the most visible mediums used to convey information about the BLM, and are often the only formal contact the public has with the BLM. Therefore, it is critical that the design and maintenance of signs conforms to national standards to help promote a positive image of the BLM. Appropriate, consistent signing will help to ensure a safe and enjoyable visit to the public lands. For more specifics on interpretive signage, see the Appendix N – Sign Component.

Maps and other information relating to the travel and transportation network will be available to the public in paper and electronic form for free

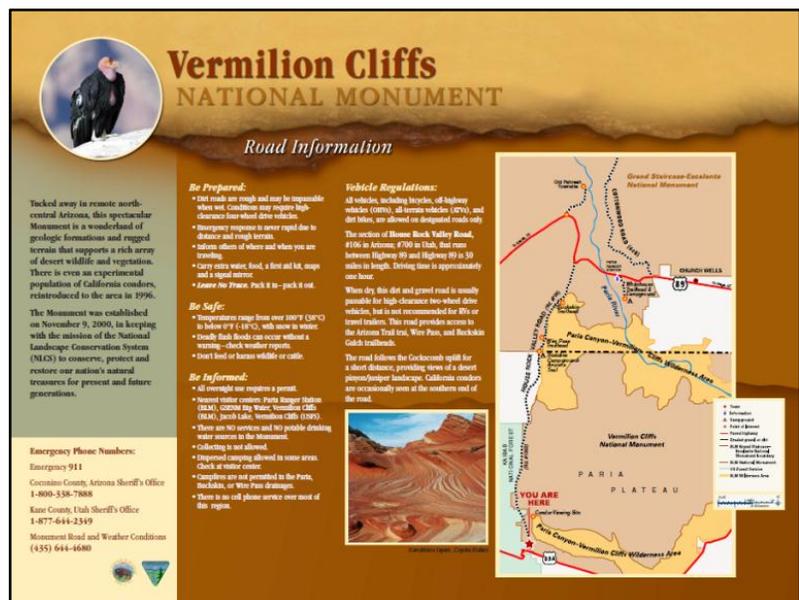


Figure 2. Example of interpretive sign encouraging compliance with travel management regulations.

(or a nominal fee) at visitor centers, on BLM websites and displayed on informational kiosks throughout the TMP area.

The BLM will expand and improve educational efforts to foster responsible land-use ethics among different user groups by leveraging interpretive resources from recognized national organizations, such as Tread Lightly! Inc., and Leave No Trace, both of which have signed National Memoranda of Understanding with the Bureau. Educational materials will also include information on impacts to resources/Monument objects from inappropriate behavior.

The BLM may incorporate information about public land values and user ethics into the terms and conditions of permits and land use authorizations to reach a wider audience. Additionally, the BLM Arizona Strip District could provide OHV management and land use ethics education for managers, staff, partners, and volunteers.

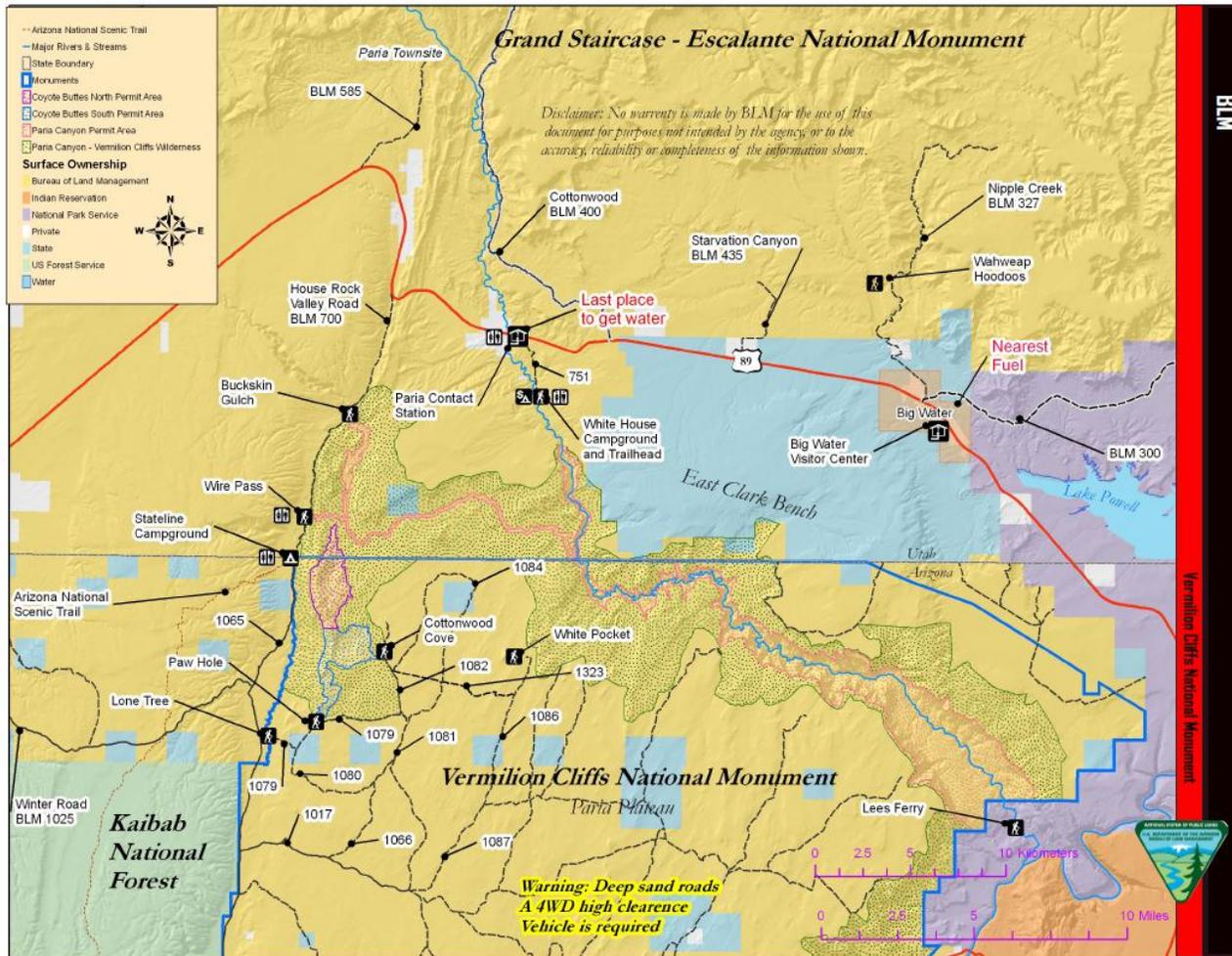


Figure 3 Public Map of Designated Transportation System

This example of a public map shows main routes of the designated transportation network within the planning area. This map is currently distributed in visitor centers that service the TMP area. A public map showing the designated transportation network throughout the entire planning area is under development.

4.3.3 PARTNERSHIPS

In order to achieve travel management implementation objectives, the BLM will develop and maintain partnerships with a broad range of local, county, state, tribal, and Federal agencies, as well as service-oriented volunteers, schools and non-governmental organizations such as:

American Indian tribes	
Arizona Department of Transportation	Outdoor ethics educational organizations such as Tread Lightly! and Leave No Trace
Arizona Game and Fish Department (AGFD)	Special interest groups for recreation, such as hiking and equestrian clubs, OHV user groups, hunters and shooting sports enthusiasts (e.g., AZ OHV Ambassador Program, AZ Off-Highway Vehicle Coalition)
Arizona State Historical Preservation Office	
Arizona State Parks	
Coconino County	
Gateway Communities (Page and Fredonia, AZ and Kanab and Big Water, UT)	Utilities and private businesses implementing authorized uses within or next to the TMP area (e.g., commercial SRP holders, right-of-way (ROW) holders)
Local businesses such as OHV dealerships and equestrian suppliers	
Media organizations	
Advocacy groups (e.g., Friends of the Cliffs; Canyon Trust)	

Official partnerships will be established through agreements including Memoranda of Understanding, Cooperative Agreements, Assistance Agreements, Challenge Cost Share Agreements, land owner agreements, letters of agreement and other types of documents for contributed goods and services.

These partnerships will enhance opportunities for community involvement in travel management implementation through activities such as patrolling, education and monitoring. Commercial SRP holders could be valuable in aiding the BLM in distributing additional educational material on local recreational opportunities and regulations. Local permit holders may also contribute labor, equipment, and time toward route maintenance.

The BLM plans to work with OHV clubs and organizations to promote the responsible use of OHVs on public lands. These efforts could include on-the-ground project work, monitoring, and supplying sales outlets with responsible OHV use ethic materials for public distribution.

The BLM will also establish cooperative and volunteer agreements to leverage volunteer labor through cost-share travel management projects and will continue to seek OHV grant funding available through initiatives like the Arizona State Parks Recreation Trails Program.

4.4 Signing the Travel Network

As stated in the BLM Sign Guidebook (BLM 2004), “a sign plan provides for the systematic and uniform development and maintenance of a sign system for a given area.” Signing is a key element in implementing comprehensive travel and transportation plans on-the-ground, and the sign component of this TMP will serve as the primary guidance for BLM signing efforts within the TMP area. The sign

component in [Appendix N](#) addresses the elements and objectives of the VCNM signing program, including sign types, design, placement and the monitoring and maintenance of signs.

The sign component of this TMP is intentionally broad in scope. Rather than addressing specific sign needs, requirements or locations, it will establish sign standards and guidelines for implementation and management of the TMP objectives. This is not a static plan, but will be modified as new signing needs are identified. Due to the diversity of the TMP area, the BLM will use discretion and professional judgment to select the best signing methods for each situation using the guidance set forth in [Appendix N](#) and may develop more detailed, area-specific plans as needed.

4.5 Maintenance and Engineering of Travel Network

4.5.1 MAINTENANCE

Prior maintenance on BLM routes and trails in the TMP area has been relatively minimal. As done in the past, maintenance efforts will continue to focus on sustaining navigability for designated routes in the travel network without substantially changing the recreational experience that individual routes provide.

In addition to the BLM, authorized users, such as miners, grazing permittees, and utility maintenance crews have performed intermittent maintenance on roads in the past. Various agreements exist between the BLM and these authorized users to allow them to perform emergency spot maintenance on a case-by-case basis to restore access and administer their permitted activities.

No matter who performs the work, the top priorities for route maintenance are public safety, protection and/or enhancement of resources, achieving route standards and ensuring consistency with route designation decisions.

Maintenance on routes will be based on monitoring and individual route management objectives and will reflect the route's purpose based on asset type:

- The purpose of a *Road* is to provide access to BLM facilities for all types of vehicles including those pulling trailers. Roads would be maintained for two wheel drive vehicles, have a firm surface available year round with exception of extreme weather and have a surface that is relatively smooth with no rocks bigger than 2" as a general rule. Periodic grading, adding of gravel overlay and dust suppression is likely.
- The purpose of a *Primitive Road* is to provide high clearance four wheel drive access. Surface type is likely to be native material where complete grading is unlikely, although spot maintenance to correct drainage and maintain driver safety may occur. Passage may be seasonally limited due to changing conditions. Rocks 4-6" diameter and occasionally larger are acceptable conditions. Tread width typically ranges from 60" to 16' wide.
- The purpose of a *Trail* is to provide recreation access for hiking, biking, equestrian and motorcycle uses. Trails are specialized for an identified, managed use. Tread will range from

sand to 18” diameter rocks with steep slopes. Passage may be seasonally limited due to changing conditions. Tread width is typically 6-24”.

Standards for design, construction, and maintenance of roads and trails within the network are found in the following Manuals and Handbooks:

MS 9113- Roads (2011)

H-9113-1 Road Design (2011)

H 9113-2 Roads National Inventory and Condition Assessment Guidance & Instructions (2011)

H-9115-1 Primitive Roads Design (2012)

H-9115-2 Primitive Roads Inventory and Condition Assessment Guidance & Instructions (2012)

See Appendix I. Construction and Maintenance Standards by TMA and Appendix Q. Engineering for a more comprehensive discussion of maintenance within the TMP area.

4.5.1.1 Maintenance Intensities

Maintenance intensities provide guidance for the minimum standards of care for the annual maintenance of BLM routes based on identified management objectives (e.g., natural, cultural, recreation setting, and visual). Each maintenance intensity category provides operational guidance to field personnel on the appropriate intensity, frequency, and type of maintenance activities that should be undertaken to keep the route in acceptable condition. They do not describe route geometry, route type, types of use, or other physical or managerial characteristics of the route.

The aim of BLM route maintenance in the TMP area is to sustain navigability for network roads, primitive roads and trails without substantially changing the recreational experience the individual routes provide. The top priorities are to protect visitors, reduce hazards, and prevent the deterioration of resources.

Based on resource management needs and the functional classifications, each route in the planning area will be assigned a maintenance intensity level which will provide the basis for route maintenance in the BLM Facility and Access Management System (FAMS) database (see Table 6).

Table 6. Maintenance Intensity

Maintenance Intensity		
Maintenance Intensity	Descriptions	Miles
Level 0	Existing routes that will no longer be maintained or declared as routes. These routes are identified for removal from the transportation system entirely.	110.9
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. Many primitive roads and/or trails fall into this category.	484.8
Level 3	Routes requiring moderate maintenance due to low volume use (e.g., seasonal or year-round use for commercial, recreational, or administrative access). Maintenance Intensities may not provide year-round access, but are intended to provide resources appropriate for keeping the route in use for most of the year. Roads.	6.2
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.	11.5

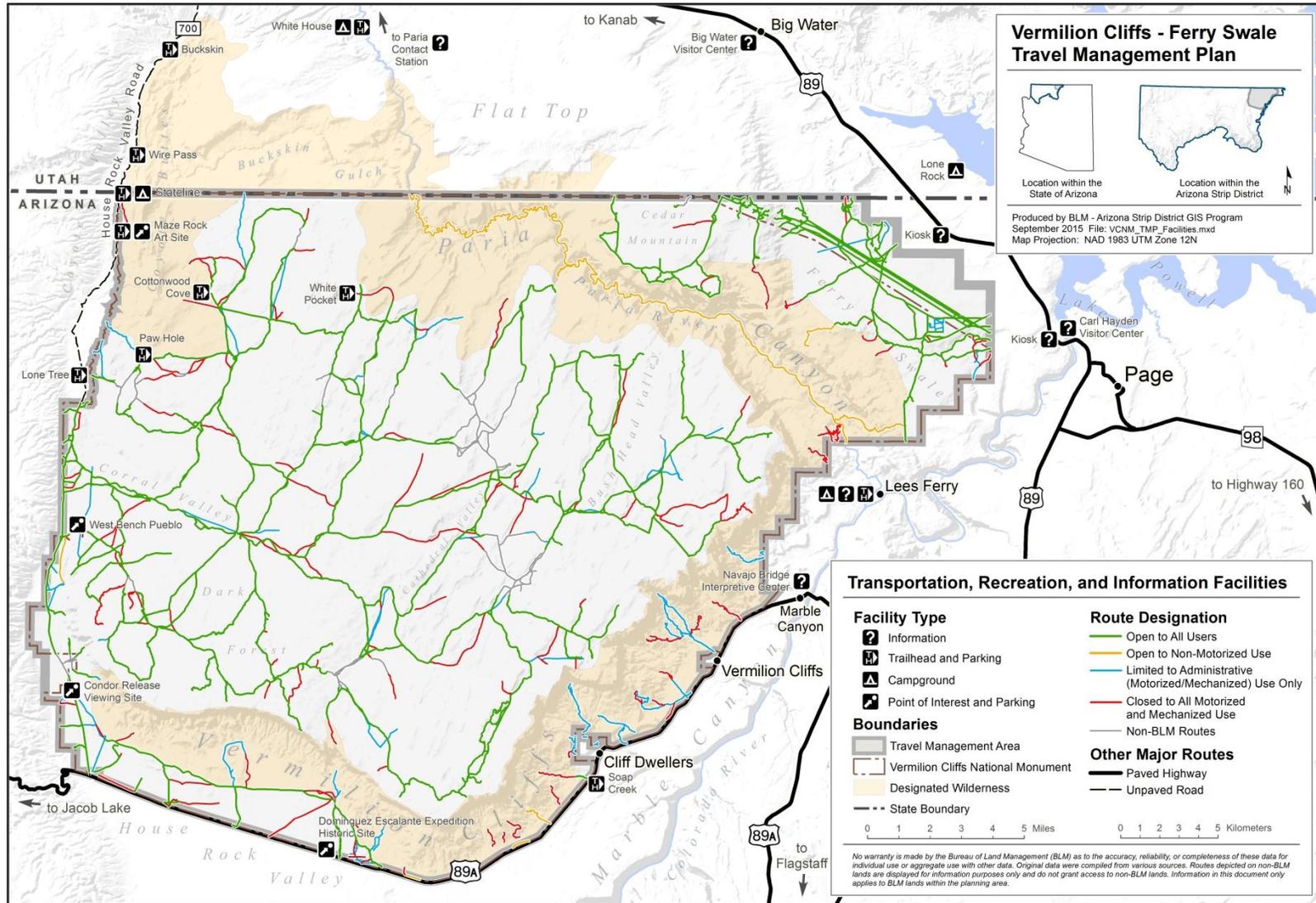
A proposed maintenance intensity class is included for each route in the TMP. These classes will provide the basis for performing maintenance and updating the BLM FAMS database for the project area.

Appendix I. Route Construction and Maintenance Standards by TMA offers a more comprehensive discussion on route maintenance in the TMP area, while Appendix J. Maintenance Level to Maintenance Intensity Crosswalk is a bridge document used by engineering staff to crosswalk between the categories of maintenance level to maintenance intensity.

4.5.2 TRANSPORTATION FACILITIES

This TMP does not identify specific transportation facilities that may need improvement or development, although they may be considered as future needs arise. Table 7 (in Section 5.3 of this TMP) lists management action decisions from the VCNM and ASFO RMPs that relate to transportation facilities within the TMP area.

Any future agency actions involving facilities will be addressed in area-specific activity-level plans, which will include travel-related decisions. Examples of such facilities may include campsites, staging areas, protective fencing, barriers, information kiosks, administrative gates, trailheads and non-motorized trails. These site-specific projects will be subject to environmental review and will be developed to avoid or mitigate impacts to natural and cultural resources. After development, these sites may be incorporated into this TMP and considered part of the travel network.



Map 5. Transportation, Recreation and Information Facilities

4.6 Enforcement Component

The public land regulations described in 43 CFR 8340 and 43 CFR 8360, and 43 CFR 9268.3 will be enforced to implement travel management and route designations within the TMP area. These regulations will be enforced by BLM law enforcement officers to protect public safety, and resources (including Monument objects). They will be supplemented as deemed necessary by Supplementary Rules which will be established pursuant 43 CFR 8360 under a separate action to implement use restrictions identified in the RMP decisions. Arizona State motor vehicle laws and regulations, including OHV regulations, apply on BLM-administered lands, and will continue to be enforced.

In addition to responding to complaints and emergency situations, BLM law enforcement officers and BLM field staff will patrol high-use routes regularly to detect and deter current and future illegal activity, check compliance with route designations and educate visitors about BLM, State and Federal laws and regulations. Continual, highly visible patrols by BLM staff will maintain an authoritative presence in the field.

Personnel from partner agencies, such as AGFD, County Sheriffs, Glen Canyon National Recreation Area, and the Arizona Highway Patrol may also assist BLM staff in their law enforcement duties on BLM-administered lands within the TMP area, particularly in Ferry Swale. For example, coordinated interagency efforts may be undertaken to provide an official presence during times of peak use, or to supplement ongoing resource protection-related operations.

Typical law enforcement concerns related to public use in the planning area include: dumping, vandalism, theft of government property, littering, interfering with livestock operations, hiking without a permit, medical emergencies, search and rescue operations, illegal removal of natural resources, cross-country motorized vehicle use, trespass into wilderness, and route proliferation.

The following measures are important for successful law enforcement within the TMP area:

- Increase the presence of BLM and partner agency law enforcement;
- Improve and expand interagency cooperation;
- Increase public education efforts to promote awareness of and voluntary compliance with use restrictions and regulations through information posted on handouts, kiosks, and websites, etc.;
- Concentrate law enforcement efforts during high-use periods such as weekends and holidays;
- Focus targeted enforcement in the most high-use areas (e.g., North Coyote Buttes, House Rock Valley Road corridor); and
- Support volunteer efforts to educate the public on rules and proper land use etiquette (e.g., Arizona OHV Ambassador Program).

As with education, law enforcement efforts can be enhanced through the efforts of cooperating partner organizations. Volunteer groups, such as the Arizona OHV Ambassador Program, may assist with monitoring, public education, and special events, which can help boost the efficacy of formal law enforcement efforts. If the public is properly educated, they are more likely to comply with the BLM's regulations and route designations.

4.7 Supplementary Rules

Supplementary Rules can be established where current regulations do not provide adequate public safety or resource protection. See 43 CFR 8365.1-6 for the supplementary rulemaking process. Speed limits would be an example of supplementary rules within the TMP area.

5.0 MONITORING AND EVALUATION

As required in 43 CFR 8342.3 (Designation changes): "The authorized officer shall monitor effects of the use of off-road vehicles. On the basis of information so obtained, and whenever the authorized officer deems it necessary to carry out the objectives of this part, designations may be amended, revised, revoked, or other actions taken pursuant to the regulations in this part."

In the broadest sense, monitoring helps to determine if adequate progress is being made toward management objectives. Among other things, this means that the monitoring program can be used for the following:

- To determine if resource and resource use objectives are being met;
- To determine visitor satisfaction;
- To determine use patterns and volumes;
- To determine the condition of roads and trails, the condition of public use areas, and compliance with route designations and use restrictions; and
- To determine efficacy of cross-jurisdictional enforcement.

If management objectives are not being met, management actions may be revised. This allows for the continual refinement and improvement of management prescriptions and practices.

A detailed monitoring strategy for this TMP is located in Appendix R: Monitoring Strategies and Schedule. This work will be accomplished by BLM staff and volunteers, AGFD personnel, commercial SRP holders, grazing permittees, and other partners, as determined by the BLM. An effective monitoring program is dependent on establishing a network of monitoring personnel who work with the BLM to report issues or concerns that they encounter while performing their normal daily activities.

5.1 Types of Monitoring

There are three types of monitoring that relate to this TMP: implementation, effectiveness, and resource monitoring. Implementation and effectiveness monitoring can identify variables causing impacts to a resource and eliminate potential causes of change from consideration. Resource monitoring documents how various indicators of natural and cultural resources change over time.

5.1.1 IMPLEMENTATION MONITORING

Implementation monitoring is the most basic type of monitoring and simply determines whether planned activities in the TMP have been implemented, documenting the BLM's progress toward full implementation of the land use plan decisions. There are no specific thresholds or indicators required for this type of monitoring, but progress towards plan implementation will be evaluated and reported at a five-year interval from the date of approval of the RMPs.

5.1.2 EFFECTIVENESS MONITORING

Effectiveness monitoring is used to determine if the implementation of activities has achieved the desired future conditions (i.e., goals and objectives) set forth in the RMPs. Effectiveness monitoring asks the following question: "Was the specified activity successful in achieving the objective?"

Answering these questions requires knowledge of the objectives established in the RMPs as well as indicators that can be measured. Indicators are established by technical specialists to address specific questions and avoid collection of unnecessary data. Success is measured against the benchmark of achieving the goals and objectives (i.e., desired future conditions) established by the RMPs, which may include regulated standards for resources such as endangered species, air, and water.

Effectiveness monitoring also determines how effective the management actions implemented in the TMP were in achieving the objectives of the RMPs. The results of effectiveness monitoring will be used to evaluate implementation progress, the effectiveness of the TMP in achieving desired outcomes and conditions, and identifying adaptive management measures as adverse impacts are discovered. Effectiveness monitoring will also evaluate road conditions, public safety issues, and changes in visitor use patterns/preferences. Effectiveness monitoring also quantifies OHV user compliance, which will be evaluated and reported regularly. Monitoring of the travel and transportation network will be accomplished by staff, volunteers, users, and partners and may include the following elements:

- Use organized user groups and clubs to help monitor and to promote acceptable practices;
- Visually document implementation or establishment of closure practices (signs, gates, berms, rocks, etc.) or road decommissioning practices and monitor effectiveness of closure;
- Determine the level of OHV use across the landscape using trail counters and aerial photos over time;
- Identify route proliferation, unauthorized route creation, route condition, recreation conflicts, and resource damage;
- Monitor litter/trash;
- Monitor success of rehabilitation projects;
- Initiate and maintain collaborative partnerships among government agencies, local governments, business communities, volunteers, user groups, stakeholders, educational institutions, individuals, and the private sector to achieve recreation management objectives through BLM-developed monitoring techniques;
- Quantify OHV user compliance and evaluate route conditions, public safety and changes in visitor preferences and use patterns. It may also help identify adaptive measures as adverse impacts are discovered; and
- Administer a survey on recreation demand, preferences, uses, satisfaction, and information needs in the VCNM TMA within one year of the installation of signing and map publication, and once every two years thereafter in the TMA. Work with partners such as universities and user groups to conduct the surveys. Base specific schedule of surveys on TMA conditions and available resources.

Though the interval between monitoring efforts will vary by resource and the expected rate of change, effectiveness monitoring progress will generally be reported to the Monument Manager and Arizona Strip Field Manager on an annual basis. These reports will include trends and conclusions and be incorporated into the five-year evaluation reports.

If effectiveness monitoring shows that land use plan actions or best management practices are not effective on the ground, the BLM may modify or adjust management without amending or revising the RMPs, as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed. Where the BLM considers taking or approving actions that will alter or not conform to overall direction of the RMPs, the BLM must prepare a plan amendment or revision and environmental analysis of appropriate scope.

5.1.3 RESOURCE OR VALIDATION MONITORING

Resource monitoring documents how implementation of the TMP influences natural and cultural resources over time. Validating the effect management actions have on natural and cultural resources is more difficult than determining the result of compliance or effectiveness monitoring. Monitoring, as well as management, will be adaptive. Monitoring protocols or techniques will be adjusted as new methods are developed or upon the discovery that current monitoring is not meeting management needs. Monitoring will be accomplished through protocols included in the RMPs. See the table in Appendix R for more specific information on resource monitoring strategies and Appendix L for examples of recreation monitoring forms.

5.2 TMP Revision and Amendment

Modifications to this TMP would be considered if monitoring indicates that management objectives are not being met. When necessary, adaptive management thresholds will trigger a review of this TMP and management actions may be adjusted accordingly.

5.2.1 ADAPTIVE MANAGEMENT

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

This management strategy involves synthesizing existing knowledge, exploring alternative actions, and making explicit forecasts about their results. Management actions and monitoring programs are carefully designed to generate reliable feedback and clarify the reasons underlying results. Actions and objectives are then adjusted based on this feedback and improved understanding to continue to try to achieve the desired future conditions. In addition, decisions, actions, and results are carefully

documented and communicated to others, so that knowledge gained through experience is passed on rather than lost when individuals move or leave the organization.

Arizona Strip management and staff will involve interested stakeholders in implementing the decisions in the RMPs and commit to an adaptive management process that will work toward achieving the identified management objectives. Results from ongoing monitoring and assessment will be used to adjust and improve management decisions over time.

5.2.2 LIMITS OF ACCEPTABLE CHANGE FRAMEWORK (LAC)

The Limits of Acceptable Change (LAC) management framework was developed by the U.S. Forest Service in the 1980s in response to growing recognition that attempts to define and implement recreational carrying capacities for national park and wilderness protected areas were both excessively reductionistic and failing (typically ineffective/unrealistic). The carrying capacity concept itself, while useful in a generic way to encourage discussion about visitor impacts, was based on biological models of the capability of resources to sustain a given number of animals over a period of time on a particular range or pasture. Such models did not transfer well into ecosystems being managed for human benefits based primarily on recreational experiences that were not themselves well understood.

LAC was based on the recognition that (1) specific objectives were needed to identify what it was that management was to protect, (2) change is always present in nature-dominated systems, (3) any recreational use leads to some change, (4) management is therefore confronted with the question of how much change is acceptable, and (5) monitoring of the outcomes of management is needed to determine if actions were effective. LAC was first implemented in designated wilderness managed by the Forest Service. Since that time, additional work has been conducted in other areas, such as national parks using a derivative system termed the *visitor experience* and *resource protection* planning process. It has also been tested as a system for management of tourism development.

The BLM will use a management framework similar to LAC when monitoring results show effects that exceed the limits of acceptable change, and adaptive management strategies will be implemented to address resource and recreational concerns, if necessary. Each resource program will develop their own LAC indicators in conjunction with their monitoring protocols.

Examples of LAC indicators, or triggers, requiring adjustments to this management plan are as follows:

- Desired recreation experiences over a five year period are not being met as determined by surveys, visitor sign-in logs, or other data-gathering processes conducted in the planning area;
- Unauthorized routes, whether created by motor vehicle or non-motorized means, cannot be rehabilitated at the same rate as their creation with available funding or personnel;
- Priority or special status species habitat conditions are in a downward trend over a five year period, and it is determined to be a result of recreation or travel impacts;
- Riparian condition trend is not improving over a five-year period, and it is determined to be a result of recreation or travel impacts; and

- Visitor safety and assumed risk is determined by the BLM to be unacceptable as determined by data collection and surveys conducted in the planning area.

5.3 Management of the Transportation Network

The purpose of travel and transportation planning is to provide a variety of motorized, mechanized, and non-motorized travel opportunities to meet public and administrative needs, while protecting sensitive resources, promoting dispersed recreation, and minimizing user conflicts. While route designations were made in the RMPs, monitoring may indicate that resource protection or administrative concerns require the closure or relocation of routes, or a different designation may be more appropriate. In addition, users might request a new trail or routes may have been inadvertently missed during route inventory. Route designations may also be changed in response to growing public demand for recreational access, while ensuring protection of Monument objects and other sensitive resources.

Modifications to OHV area designations (open, closed or limited) require an amendment to the RMP (as they are RMP-level decisions), and are therefore not addressed in this TMP. Changes to the transportation network (e.g., new routes, re-routes, designation changes or closures) will be made through activity-level planning with appropriate site-specific NEPA analysis. Project proposals for all resource programs that require changes to the travel and transportation network will also include proposed modifications to the associated TMP. Changes to the route system and the TMP can also be considered concurrent with the five-year evaluation process for the RMPs. This evaluation determines if the RMPs are being properly implemented, analyzes the RMPs' effectiveness, and determines if any changes are needed to either RMP. Linking the evaluation cycle of the TMP to that of the RMPs will be informative in determining success for key aspects of TMP implementation and desired management outcomes. Moreover, the evaluation process will afford citizens, organizations, and agencies opportunities to propose changes to the TMP and the travel management system.

Table 7 lists management actions from the VCNM and ASFO RMPs as they relate to management of the travel network.

Table 7. Management Of Transportation Facilities

Management Of Transportation Facilities	
Vermilion Cliffs National Monument RMP	
MA-TM-11	Installations/structures (e.g., unobtrusive barriers, gates, signs) on or along routes will be allowed when they are the minimum necessary to control unauthorized use and when consistent with TMA objectives.
MA-TM-12	Routes causing resource damage or with safety concerns can be rerouted and/or reclaimed. Minor rerouting of roads into areas where wilderness characteristics are maintained can be considered when it is determined that: 1) it resolves the concerns previously mentioned; 2) the road is an important travel link for public and administrative uses; 3) topography and engineering capabilities require consideration of such a reroute; and 4) public motorized and mechanized travel will remain on the road through the area. Rehabilitation of closed routes will only occur after completion of NEPA review and compliance with requirements of Section 106 of NHPA.
MA-TM-13	Newly constructed temporary routes (i.e. routes intended to serve a short-term purpose only,) will be reclaimed after termination of the specific need.
MA-TM-14	No new roads are allowed in the Paria Canyon-Vermilion Cliffs Wilderness (265,598 acres).
MA-TM-15	Routes where motorized/mechanized vehicle use is authorized for administrative use only may be designated as trails for non-motorized public use.
MA-TM-16	Trail construction (non-motorized and non-mechanized only) will occur to support protection and/or enhancement of Monument objects, RMZ objectives or to resolve issues of public safety, user conflicts, or resource protection.
MA-TM-18	Route maintenance will occur within standard widths based on route type. Widening, passing lanes, realignments, or travel surface upgrades can occur if: <ul style="list-style-type: none"> • Protection and/or enhancement of Monument objects is ensured. • They are needed to achieve route standards. • They are consistent with Appendix K: Appropriate Route Construction and Maintenance Standards by TMA. • They are needed for public safety.
MA-TM-19	New permanent motorized road construction will be the minimum necessary to achieve Approved Plan provisions and to enhance recreation opportunities and benefits, if protection and/or enhancement of Monument objects is ensured.
MA-TM-21	<ul style="list-style-type: none"> • Routes created by unauthorized use will be immediately obscured and rehabilitated. • Implementation plans will include outreach efforts to actively recruit service-oriented volunteers, organizations, and schools to assist with accomplishing appropriate implementation projects.
MA-TM-22	New roads, once authorized and constructed, will become part of the designated transportation system; closed routes will be removed from the transportation system and plan.
Arizona Strip Field Office RMP	
MA-TM-08	Installations/structures (e.g., unobtrusive barriers, gates, signs) on or along routes will be allowed when they are the minimum necessary to control unauthorized use and when consistent with TMA objectives.
MA-TM-09	Routes causing resource damage or with safety concerns can be rerouted and/or reclaimed. Minor rerouting of roads into areas where wilderness characteristics are maintained can be considered when it is determined that: 1) it resolves the concerns previously mentioned; 2) the road is an important travel link for public and administrative uses; 3) topography and engineering capabilities require consideration of such a reroute; and 4) public motorized and mechanized travel will remain on the road through the area. Rehabilitation of closed routes will only occur after completion of NEPA review and compliance with requirements of Section 106 of NHPA.
MA-TM-10	Newly constructed temporary routes (i.e. routes intended to serve a short-term purpose only,) will be reclaimed after termination of the specific need.

MA-TM-11	No new roads are allowed in designated wilderness.
MA-TM-12	Routes where motorized/mechanized vehicle use is authorized for administrative use only may be designated as trails for non-motorized public use.
MA-TM-13	Trail construction (non-motorized) can occur to support RMZ objectives or to resolve issues of public safety, user conflicts, or resource protection in ERMA's.
MA-TM-14	Route maintenance will occur within standard widths based on route type. Widening, passing lanes, realignments, or travel surface upgrades can occur if needed to achieve route standards consistent with Appendix O, TMAs, Appropriate Route Construction, and Maintenance Standards by TMA or for public safety.
MA-TM-15	New permanent motorized route construction will be the minimum necessary to achieve RMP provisions and to produce targeted recreation opportunities and benefits in RMZs. However, new permanent roads will not be constructed in areas managed to maintain wilderness characteristics.
MA-TM-18	<ul style="list-style-type: none"> • Routes created by unauthorized use will be immediately obscured and rehabilitated. • Implementation plans will include outreach efforts to actively recruit service-oriented volunteers, organizations, and schools to assist with accomplishing appropriate implementation projects.
MA-TM-19	New routes and any associated ROWs, once authorized, will become part of the designated transportation system; closed routes will be removed from the transportation plan.

BLM-driven route changes and other transportation-related projects required for public health and safety, to maintain or acquire public access as prescribed by the TMP, or to address new issues, rules, regulations or laws, will be conducted on an “as needed” basis.

5.3.1 NEW ROUTES

New route development should be rare, but may be prudent, depending on the situation. Route changes will be considered for resource protection, to address changed conditions, public safety concerns, or to honor a public request when no other options meet the management need. If such development is required, routes and management strategies will be planned, designated, and developed with community and user input. LAC indicators and standards will be adopted and resource use conflicts minimized to the extent possible.

Environmental review, which would include an evaluation to determine the appropriate designation of the proposed new route, would occur prior to implementation or construction of a new route. Upgrading a road’s surface, width, and/or permanently raising the maintenance intensity level on a specific route are considered, like a new route, to be changes to the network, and therefore trigger the need to undergo the same evaluation process. All new roads, primitive roads, and trails will meet the standards for design, construction, and maintenance found in BLM manuals and handbooks. All changes to the travel network must be included in the travel network geodatabase, and need to be posted on the BLM Arizona Strip website as part of the public outreach program.

New routes and any associated rights-of-way, once authorized, will become part of the designated transportation system; closed routes will be removed from the transportation plan.

The process of adding new routes to the designated route network, motorized or non-motorized, will entail a structured analysis. All proposed route changes will be processed as follows:

- Route locations will, at a minimum, be mapped or located using accepted global positioning system devices and presented to the BLM (if proposed by a third party) for consideration. Locations of route proposals off of designated motorized routes must be located and mapped using non-motorized methods.
- The BLM may open an administrative route to public use.
- Route proposals submitted to the BLM will include a description of the route (including its proposed width), its proposed use(s) (including expected traffic and design vehicle), and rationale for its need.
- The proposed location will be staked and flagged, or otherwise identified for on-the-ground review by resource specialists.
- The route location will be analyzed for potential conflicts such as (but not limited to): wildlife habitat and movement, cultural resources, visual resources, other recreation uses, mining claims or leases, grazing facilities, rights-of-way, public safety, and proximity to other jurisdictions (such as private land). A structured process will be used to evaluate and document the potential route conditions.
- The conflict assessment may lead to development of mitigation actions or alternative locations or design.
- An environmental analysis will be conducted to determine the environmental effects of the proposed route, any reasonable alternatives, and recommended mitigation.
- A decision will be issued by the field manager based on RMP conformance, resource objectives, and environmental impacts.
- If the decision is to approve the addition of the route, the TMP will be updated, accordingly.
- The BLM may require that a licensed surveyor provide cadastral survey (to be reviewed by a BLM cadastral surveyor) of a route prior to issuance of a right-of-way authorization.

5.3.2 RELOCATION AND REALIGNMENT OF ROUTES

Route maintenance will occur within standard widths based on route type. Widening, realignments, or travel surface upgrades can occur if:

- Protection and/or enhancement of resources (including Monument objects) is ensured.
- Needed to achieve route standards or management objectives.
- Consistent with Appendix I: Route Construction and Maintenance Standards by TMA.
- Needed for public safety.

5.3.3 DESIGNATION CHANGES

Any person, organization, or governmental body may propose that any current route designation be changed to another designation. This means from “open”, “closed”, or “limited” to another designation of “open,” “closed” or “limited.” Requests to change route designations must be submitted in writing to the Arizona Strip Field Office Manager and will be processed as follows:

- Upon receipt of a route change proposal, it will be reviewed by the field manager. Since the designation of routes is a discretionary action, the field manager may determine whether or not the proposal has merit. If the request is rejected, a letter will be sent to the requester indicating the reasons for rejection. If accepted, the request will be forwarded to the appropriate BLM staff and reviewed for recommendation as to the appropriateness of the proposal and level of NEPA review and analysis. The request would be processed as time (due to other workload) and funding allow.
- The BLM may require that a licensed surveyor provide cadastral survey (to be reviewed by a BLM cadastral surveyor) of a route prior to issuance of a right-of-way or other authorization.
- Modifications of the road network during implementation of the TMP would likely require site-specific NEPA review. Minor realignments of routes that have previously been analyzed may not require additional NEPA review.
- Modifications and minor realignments, including alignment changes made through implementation actions (e.g., moving a route alignment around a newly identified cultural resource) shall be documented in the official record and kept on file in the Arizona Strip Field Office and will be considered an amendment to this TMP.

5.3.4 ROUTE REHABILITATION

This TMP addresses the decommissioning and rehabilitation/reclamation of closed or unauthorized routes and identifies the types of route closure methods to be used within the TMP area.

Effective reclamation of closed routes is important for meeting a variety of management objectives, including:

- Attainment and maintenance of physical and social settings that support prescribed recreation opportunities and outcomes in special recreation management areas (SRMAs);
- Reduced visitor confusion resulting from unmarked non-system routes;
- Increased visitor safety through reclamation or rerouting of unsafe non-system routes;
- Reduced sign installation and maintenance costs associated with un-rehabilitated closed routes;
- Restored natural appearance of the landscape following the closure of a route; and
- Protection of natural and cultural resources.

5.3.4.1 Rehabilitation Priorities

Certain route closures will have a higher implementation priority than others. In general, initial rehabilitation efforts will focus on the following types of closed routes first, in order of importance:

1. Routes that pose a public safety hazard.
2. Routes leading into a designated wilderness area.
3. Routes causing resource damage, or routes in areas with a high risk for potential impacts to resources such as special status species or their habitat, cultural resources, or any other resources requiring special management or protection.

The BLM will prioritize rehabilitation in special management areas (e.g., SRMAs), special designation areas (designated wilderness and wild and scenic rivers), and other sensitive areas.

5.3.4.2 General Rehabilitation Strategy

In an attempt to minimize impacts from route closures to the extent possible, the BLM will implement the least intrusive, minimal impact closure methods first, whenever practicable. Initially, the majority of the closed routes will be allowed to naturally reclaim. By implementing passive, manual rehabilitation techniques preferentially, all surface disturbances will be kept to the minimum necessary to close most routes effectively and fulfill management objectives.

Each closed route will be evaluated on a case-by-case basis and the most appropriate method of reclamation will be conducted based on local factors such as geography, topography, soils, hydrology, and vegetation, as well as management objectives, reclamation costs, modes and conditions of travel, and recreational setting characteristics.

Unless determined as necessary at the beginning of the implementation process, surface-disturbing reclamation actions will only take place after less intrusive closure methods have failed. For example, continued vehicular use on a closed route would indicate that natural reclamation has been ineffective on that route.

Post-rehabilitation monitoring of route closures is essential to maintaining successful closures. If monitoring indicates the need for additional reclamation efforts after less intrusive closure methods have failed, the BLM will consider other closure options through the adaptive management process. More intrusive route closure methods will be evaluated on a case-by-case basis by BLM staff that will establish a project-specific plan and determine whether additional environmental analysis is needed for proposed actions related to additional reclamation efforts.

If it is determined that surface-disturbing reclamation techniques are necessary to effectively close a route, additional site-specific NEPA review would be required, including compliance with the requirements of all applicable laws and regulations. For example, the agency must comply with the

Endangered Species Act and Section 106 of the National Historic Preservation Act by accessing impacts to threatened or endangered species and/or cultural resources in the project area.

5.3.4.3 Other Reclamation Considerations

In general, route closures for recreation are most effective when the designated route system provides the desired recreational opportunities and closed routes are completely naturalized to eliminate the visual remnants of the former route. Therefore, route closures will be most effective when any new routes, route redesigns or reroutes within the transportation system are completed prior to implementation of route rehabilitation efforts.

A first step in reclamation will be to obliterate obvious tracks and other evidence of use on closed routes. Reclamation actions will typically be limited to the portion of an unauthorized route that is within line of sight from an open route. 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 routes and reducing the need for signage. Because surface-disturbing reclamation actions may draw public attention to reclamation sites, the BLM may choose to provide informative signs near the site that explain the need for and value of resource protection.

Where practicable, reclamation actions may include leaving the first 100 feet of a closed route (from the centerline of an open route) exposed. This will provide pullout areas or dispersed camping opportunities and is likely to discourage or prevent new surface disturbances elsewhere.

Any linear features or unauthorized routes identified through the closure monitoring process that have not been identified as part of the designated travel network are to be added to a route rehabilitation database. Ideally, routes created by unauthorized use will be immediately obscured and rehabilitated.

5.3.4.4 Rehabilitation Techniques Toolbox and Rationale for Selection and Reclamation Standards

A full suite of rehabilitation techniques will be employed throughout the TMP area, depending on the appropriateness of the method for each route. While most routes will be reclaimed naturally, some may require more intrusive, surface-disturbing restoration methods. The full suite of closure rehabilitation techniques considered for use within the TMP area is described in the Rehabilitation Techniques Toolbox (Table 8) on the following pages. These closure methods may be used in any combination for each route, as deemed appropriate by BLM management.

Specific rehabilitation methods for each closed route are prescribed in Appendix S: Proposed Reclamation Prescriptions by Route Number. These recommendations will be used as guidance during implementation, but may vary based on the most appropriate method necessary at the time of implementation.

Table 8. Rehabilitation Techniques Toolbox

Rehabilitation Techniques Toolbox	
Manual Techniques	
Passive/Natural Reclamation	Allow the route to naturally reclaim without any signing, surface disturbance, or replanting of vegetation. This method is proposed in lightly used areas and on routes where restoration is already occurring. The goal is to avoid attracting attention by not signing or fencing these lightly used routes. This is the least obvious method of closure, least costly to the BLM, and provides a high degree of naturalness when successfully implemented.
Fence and sign/fence only/gate	This method applies to upland routes, dry wash routes and routes limited to authorized users for administrative use. This type of closure has little surface disturbance and is used in areas where fence cutting would be expected to be minimal. Generally, the fence type would be T-post and four strand smooth wire; however, the fence type could be increased to pipe rail/steel rail as needed, while still maintaining a small footprint at the beginning or end of the route. Fencing and signs can later be removed to complete the rehabilitation process. A locked gate could be used to control unauthorized use on routes limited to authorized users, such as grazing permittees and BLM staff.
Sign only	This method applies mainly to upland routes in lightly used areas and is proposed on routes in lightly used areas and/or in areas where compliance with signage is expected to be good. The signage can later be removed to complete the rehabilitation process.
Rake out tracks only	This applies mainly to sandy washes where erasing the evidence of use in lightly used areas may be enough to prevent attracting future use. This is very light on the land and provides a high degree of naturalness when done. The goal is to avoid attracting attention to the lightly used route, and thus its use. Monitoring and raking is required to ensure effectiveness and may be required for up to one year.
Rake out tracks and sign	This method applies mainly to sandy washes in lightly used areas. A sign reinforces the closure by placing physical notice for visitors and to assist law enforcement. This method is low cost to the BLM and provides a moderate degree of naturalness when complete. A downside to this method is the potentially high number of closed signs that can accumulate in a given area and the public perception that many routes are being closed, leading to vandalism. Monitoring is required to ensure effectiveness. Signage can be removed to complete the rehabilitation.
Vertical mulch with berm/fence and sign	This method works in upland areas where occasional use of the route in lightly used areas prevents natural restoration. A sign provides physical notice and assistance to law enforcement. A T-post and four strand smooth wire fence works best when the fence is placed in an area where bypassing it is difficult. Combined with a sign and/or fencing, actively placing cuttings of cactus, transplanted bushes, and scattering dead vegetation in the wheel tracks may be enough to prevent use. Placement of plants in the closed route to the visible horizon minimizes cost and surface disturbance. Seed mixtures may also be applied to enhance the effectiveness of rehabilitation.

Rehabilitation Techniques Toolbox	
Barriers (fences, brush, plants, and boulders)	Physical blockades constructed to prevent the passage of vehicles. To the greatest extent practicable, the BLM will utilize native, natural materials, such as rocks, vegetative debris and wood to minimize further visual impacts to the landscape. For example, wooden split rail fencing may be preferable to metal fencing.
Mechanical Techniques	
Berm with signs	This method would be applied in upland areas where a berm cannot be bypassed. This type of closure has less surface disturbance since soil is only moved to create a berm at the beginning or end of the closed route. Signage provides physical notice to visitors and assistance to law enforcement. The berm stands as an indicator of closure if the sign is removed, providing additional notice to visitors. After the route has restored, berms can be removed or flattened to complete the rehabilitation process.
Rip/harrow	A more expensive, but effective way to eliminate route use and expedite vegetation regrowth. These techniques are necessary in high use areas where use is likely to continue on a route if not made completely obvious that the route is being restored. One hundred percent of the closed route surface is disturbed by this method. A tractor-towed disc harrow or a finger-type winged ripper mounted on a tractor or bulldozer would be the typical equipment used. Benefits include reduced soil compaction and improved seed germination and establishment. Drawbacks to these methods are: (1) significant plant growth (20% cover) may take up to five years; (2) no regrowth may occur if barriers are bypassed and use continues on the ripped road bed; (3) the complete removal of existing vegetation resulting in a temporarily prominent disturbed area; (4) increased likelihood of invasive weed infestation, and (5) possible disturbance of undiscovered buried cultural resources. Under this method, soils would be ripped or harrowed to a depth of 18 – 24 inches. Preferably compacted soils would be ripped in two passes at perpendicular directions to a minimum depth of 18-24 inches, at a furrow spacing of no more than 2 feet.
Barriers	Physical blockades constructed to prevent the passage of vehicles. Types can be earthen mounds, wire fence, pipe rail fence, post and cable fence, concrete wall sections (also referred to as Jersey or K-rail barriers), or free standing steel structures commonly referred to as Normandy barriers.
Engineering/Grading	If a closed route begins at a route that is regularly maintained with heavy equipment (Maintenance Intensity Level 5), the main route may be maintained in such a way that there is a formidable ditch and berm on the sides of the route, deterring illegal motorized travel on the closed route.
Fence/Barrier with Signs and Parking Area	Where an open route dead-ends at a closed route or limited use route, BLM may develop a simple trailhead at the end of the open, motorized route, with parking space and signage indicating the shift in authorized uses. This would clearly demarcate the boundary between the terminus of an open route and the beginning of a closed or limited use route. By making it evident that a closed route is still open to other forms of use (typically non-motorized and/or non-mechanized uses), this closure method eases the transition from one use to another. Thus, this method of closure may lessen public opposition to route closures and increase public compliance with route designations.

5.3.4.5 Reclamation Standards

The following reclamation standards will be followed:

- a. Routes identified for closure will not alter natural hydrologic function and condition of the affected watershed (e.g. closed routes will not divert runoff from natural drainage patterns).
- b. Disturbed areas will be fully re-contoured and re-vegetated with BLM-preferred seed mixtures.
- c. Seeding will be done where necessary to aid rehabilitation of closed routes. Appropriate seed mixtures will be selected for each site based on site conditions. Reclamation techniques include ripping the surface with a tractor to break up compacted soil and allow rain retention. Broadcast seeding will be done prior to winter. Some areas will be fenced to prevent disturbance and allow for grazing rest during the first two growing seasons. This technique is typically used near main roads where camping or parking may occur.
- d. BLM will utilize native material such as rock and large woody debris to the greatest extent practicable in combination with manufactured stormwater structures (e.g. silt fence, straw waddles, etc.), and mechanical erosion control techniques (e.g. ripping, pocking) to minimize erosion and facilitate site stability.
- e. Reclamation techniques for routes in designated wilderness and lands with wilderness characteristics will attempt to return the area to its original condition in the shortest amount of time.
- f. Weed and vegetation treatment control measures will be implemented as needed to promote re-vegetation with native plants, prevent any new weed establishment, and control existing weed sources.

The following actions are from both RMPs and must be considered/incorporated into all reclamation/rehabilitation activities.

Air, Water, and Soils (Watershed)

- MA-WS-06** (both RMPs)
- Surface disturbance and reclamation activities will proceed consistent with current permits and subject to the following:
 - Arizona Standards for Rangeland Health will be followed to maintain or improve soil conditions.
 - Activities will be the minimum necessary to accomplish the task.
 - Reclamation will be required for road realignments.
 - Measures to stabilize soils and minimize surface water runoff will be required, both during project activities and following project completion.
 - Reclamation of all surface disturbances will be initiated during or immediately upon completion of the authorized project. Reclamation can include re-contouring the disturbed area to blend with the surrounding terrain, ripping compacted areas, replacement of topsoil, seeding, planting, and/or providing effective ground cover.

- All temporary roads will be closed and reclaimed immediately upon completion of the project. Reclaimed roads can be barricaded or signed until reclamation objectives are achieved.
- Facilities or improvements no longer necessary will be removed and the sites will be reclaimed, provided no historic properties are affected.

MA-WS-07 (both RMPs) Restoration and reclamation actions will be consistent with vegetation management decisions for each Ecological Zone.

Special Status Species

MA-TE-14 (both RMPs) Prior to surface disturbing activity, a special status species review will be conducted by a qualified specialist.

MA-TE-15 (both RMPs) Special status species habitat surveys will be required whenever surface disturbances occur within an area of known or suspected occupancy by special status species.

MA-TE-22 (VCNM RMP) Impacts to special status plants and their habitats from surface disturbing activities will be reduced or eliminated.

and

MA-TE-30 (ASFO RMP)

- Proposed actions will be evaluated to ensure that trampling or crushing of special status plants will be minimized or eliminated. The BLM will continue to coordinate with USFWS to delineate buffer areas around special status plant populations. Use restrictions can be developed to minimize or eliminate trampling and/or crushing of special status plants within buffer areas.
- Conservation measures will be implemented for special status plants for all surface disturbing activities.

MA-TE-38 (ASFO RMP)

Reclamation will be required for activities that result in loss or degradation of special status species habitat. Habitat will be restored or reclaimed to as close a pre-disturbance condition as practicable. Mitigation measures may be included in decision documents to offset the loss of quality or quantity of special status species habitat.

MA-TM-21 (VCNM RMP)
and

MA-TM-18 (ASFO RMP)

- Routes created by unauthorized use will be immediately obscured and rehabilitated.

Vegetation and Fire and Fuels Management

MA-VM-13 (VCNM RMP)
and

MA-VM-11 (ASFO RMP)

Salvage of vegetation that will be destroyed through surface disturbing activities may be authorized where doing so assists in achieving DPCs. Salvage and use will be allowed in the following priority (may require a permit from the State of Arizona):

- Removal and maintenance for replanting during rehabilitation of the site being disturbed.
- Removal and transplanting out of the area to be disturbed, especially to an area needing rehabilitation.
- Removal and salvage by private individuals or to benefit the public (includes schools, churches, non-profit organizations).

Visual Resources

MA-VR-03 (both RMPs)

All new surface disturbing projects or activities, regardless of size or potential impact, will incorporate visual design considerations during project design as a reasonable attempt to meet the VRM class objectives for the area and minimize the visual impacts of the proposal. Visual design considerations will be incorporated by:

- Using the VRM contrast rating process (required for proposed projects in highly sensitive areas, high impact projects, or for other projects where it appears to be the most effective design or assessment tool), or by
- Providing a brief narrative visual assessment for all other projects that require an environmental assessment (EA) or Environmental Impact Statement (EIS).
- Measures to mitigate potential visual impacts could include the use of natural materials, screening, painting, project design, location, or restoration (See Appendix H; BLM Handbook H-843 I-1, Visual Resource Contrast Rating; or online at <http://www.blm.gov/nstc/VRM/843I.html>, for information about the contrast rating process).

Wilderness Characteristics

MA-WC-03 (both RMPs)

Restoration, vegetation treatments, wildlife management projects, and other surface disturbing actions can be authorized in areas managed to maintain wilderness characteristics to achieve DFCs.

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Appendix A. Background of Travel and Transportation Management

Travel and transportation management ensures the proactive management of public access and natural resources in compliance with travel-related regulations and according to the best land use management principles for effective management of all resource programs. The process moves from broad-scale land use plan decisions achieved in an RMP, to more site specific activity level decisions that address specific implementation and maintenance actions for roads, primitive roads, trails, and other access and recreation-related needs.

In addition to the implementation of travel and transportation planning decisions, CTTM consists of route inventory and mapping, signing area and route designations, education and interpretation, law enforcement, easement acquisition, monitoring activities, and other measures necessary for providing access to and across public lands for a wide variety of uses (including recreational, traditional, authorized, commercial, agricultural, educational, and for other travel and transportation purposes), as well as all forms of motorized, non-motorized and mechanized access or use.

Since travel and transportation issues affect many resource management programs, CTTM must be conducted using a comprehensive, interdisciplinary approach to integrate travel and transportation management with land use planning and resource management programs. Using a collaborative approach can resolve or prevent resource conflicts and issues associated with travel to and across public lands, assuring outcome-based management that supports the desired outcomes in the RMP. The travel and transportation decisions and guidance developed in the 2008 RMPs followed the CTTM process and the implementation of actions in this plan will be in accordance with CTTM.

This TMP is needed to implement management of the transportation network that provides access for a variety of commercial, administrative, and public travelers, while ensuring that resources (including Monument objects) are protected and preserved. It is also needed to implement the decisions in the RMPs that established a comprehensive travel network. The collection of baseline monitoring data on route use and land health condition will be necessary to assess progress toward the TMP objectives. Schedules to complete this work are included in the TMP. New designations, if necessary, would primarily be as a result of routes that have been inadvertently missed during the route inventory phase of the RMP designations or to respond to growing public demand for access while minimizing impacts of both motorized and non-motorized use on recreational, cultural and natural resources.

Primary implementation goals include effective public education, visitor services, working with partners, enforcement, and monitoring. Monitoring helps determine whether actions and designations should be revised.

Implementation of this TMP is designed to achieve progress toward the specific travel management goals and objectives in the RMPs. Availability of staff and funding will significantly affect implementation of this plan. Grants, new appropriations, partnerships and volunteers will be used to supplement budgets when possible.

Appendix B. Route Evaluation and Travel Planning Process

The Arizona Strip used the route evaluation process developed by Advanced Resource Solutions to complete the route assessment in the TMP area. This process uses a systematic, route-by-route “Route Evaluation Process” to evaluate a number of criteria, including commercial, private, and administrative access needs; benefits or impacts to various resources; public use, including recreation opportunities and needs; and route redundancy to collect data and evaluate factors affecting each route and its adjacent resources.

In conjunction with the development of the VCNM and ASFO RMPs, an interdisciplinary team of BLM resource specialists and managers, along with staff from AGFD, met with an Advanced Resource Solutions facilitator to systematically discuss and examine factors related to both the overall area and each individual route. Together they created a database of statutory-driven factors and other issues that may affect resources and the use of routes in this TMP area. The route evaluation database incorporates issues discussed by staff, other agencies and the public. Route evaluation criteria fall under three general categories:

- (1) Commercial, administrative, private-property and economic issues;
- (2) Public uses; and
- (3) Special resource concerns.

The evaluation team also considered how the route designations fit within the entire travel network managed by the BLM and other adjacent or nearby transportation systems. The GIS data (inventory and route assessments by alternative) related to the travel network was provided to adjacent agencies for their review prior to the public review of potential route designations.

The team used the Advanced Resource Solutions database to identify a set of alternatives for each route. During route assessment the interdisciplinary team and AGFD staff reviewed 64 layers of GIS data before assigning potential designations of specific routes to different alternatives.

These alternatives emphasized differing levels of access and resource protection according to a theme. Each route designation requires adherence to 43 CFR 8342.1, which stipulates the statutory criteria for designating a route. Detailed designation information for each route by alternative is contained in their individual reports found in the Route Evaluation Reports© CD version that accompanies each RMP or http://www.blm.gov/az/st/en/info/nepa/environmental_library/arizona_resource_management.html). These reports provide a rationale or purpose of and need for each proposed route designation. A sample route designation report can be found in Appendix D.

1.0 ROUTE INVENTORY PROCESS

ASFO initiated the travel management planning process in 2002 and route inventories for VCNM were completed in 2007. Although BLM policy does not require intensive on-the-ground route inventory, every mile of every route on the Arizona Strip District was inventoried with GPS units. The inventory

was conducted by BLM personnel in 4 wheel drive vehicles, on OHVs, bicycles and on foot. This inventory provided the foundation and baseline inventory for the VCNM transportation network. The inventory documented and mapped existing roads and trails (routes), route conditions, facilities, improvements, and public use areas accessed by the routes (range and wildlife improvements, recreation activity areas, gates, fences, trailheads, and other features). The inventory staff took steps to capture every historic linear feature that could be seen on the ground in the planning area. Inventory procedures were designed to collect information necessary for planning and management of the area.

Route Numbering

Generally, the same route number is used throughout the length of a route. The BLM State Office assigned blocks of numbers to each district or field office to ensure that no route numbers are duplicated within the state of Arizona. Numbers are assigned by the district or field office in which the route originates and continues into the neighboring field office jurisdiction if the route crosses a boundary. ASFO, GCPNM and VCNM use numbers 1000 – 2499, while other Arizona BLM field offices use the remainder of the number block.

The BLM State Office originally assigned route numbers to the main routes within the Arizona Strip during the 1980s. These old route numbers were used on the Arizona Strip Visitor Map prior to 2008. For consistency, the original routes numbers identified in 1980 through this process will remain unchanged with the exception of those routes or sections of routes that have been closed to the public through the route designation process. Although route numbers have been assigned to closed or administrative routes, these numbers will be used only for administrative purposes in managing the routes. The public map of the designated transportation system will reflect the transportation numbers assigned to routes designated as open.

Each route in the VCNM TMP area may have several identifying numbers. Designated routes within the area have been assigned BLM agency standard transportation numbers, which may differ from the original numbers assigned during the field inventory phase and those identifying numbers assigned during the route evaluation process described in Appendix 2.T of the Arizona Strip District Proposed Plan/Final EIS. Each route evaluated during this process was assigned a unique route identifier such as "VI017." The first two characters of the route identifier are the code for the sub-region evaluated and are displayed on the 1:24,000 scale maps, available on the Route Evaluation Reports© CD version that accompanies each RMP. The VCNM and Ferry Swale sub-regions are identified using the "VI" route identifier.

A final identification number was assigned upon final route designation in VCNM/Ferry Swale. These numbers will appear on maps in this plan, in published maps for the public, and will mark the designated routes on the ground. All identifying numbers will be maintained in a geodatabase, to allow historical tracking of the route's identifier from inventory and evaluation to signing.

Appendix C. Route Inventory Attribute Definitions

Route Type (Major route classification categories used in route inventory):

- **Primary Road Paved:** A major/minor highway or road. Provides access between major points of interest or population centers. Serves a large geographic area with many roads branching off from it.
- **Secondary Road Paved:** A paved road that would not be considered a highway. Often lacks striping. Usually connects to primary roads and major points on interest.
- **Primary Road Unpaved:** A regularly maintained road wide enough for at least two vehicles. Provides access between major points. Serves a large area with many roads branching from it.
- **Secondary Road Unpaved:** A maintained one-lane dirt road maintained on a semi-regular basis, with other roads of lesser quality branching from it. Connects to primary unpaved roads and major points on interest.
- **Two-Track:** A rough, primitive two-track that may, or may not be usable by a two-wheel drive vehicle. Varies in width from full-size vehicle to 50" ATV. No formal maintenance occurs.
- **Single Track – Motorized:** A singletrack trail created by the passage of off-road motorcycles. Typically up to one meter in width. Only exists in areas where the terrain is too steep/extreme for ATVs.
- **Single Track:** Non-motorized singletrack. Hiking, mountain biking, or equestrian trail. Can be up to one-half meter in width.
- **Primitive Trail:** Generally found in designated wilderness and open to hiking and equestrian use only. Primitive trails are not maintained or marked and are often just popular cross-country routes. Navigational aids like GPS and appropriate maps are recommended.
- **Reclaiming:** A route that is no longer being used. Contains intact woody vegetation that could impede the passage of a vehicle. Erosion may be present to the point where the route is impassable.
- **Other:** A route in the data set that is not classified. Includes most routes that are not on public lands. The exception to this are routes that leave BLM-managed lands and pass through state and/or private lands before returning to BLM. These routes are typically classified by one of the above definitions.

Appendix D. Sample Route Report

Sensitive information (ex: cultural resources) have been removed from reports. All route designation reports can be found on the following website:

http://www.blm.gov/az/st/en/info/nepa/environmental_library/arizona_resource_management/verm_ROD/verm_routes.html.

Other/Common Name:

V1001

Facilitator(s): Les Weeks
Team Members: BLM Staff

Principal Feeder/Trunk Connector UTM N: 4078000
 Other Loop UTM E: 405000
 Spur Length: 19.1 miles

Jurisdictions: BLM USFS State Military Private Other:

Additional Information: Route designation applies only to those portions of the route located on public land. Between US 89, 89a

Citizen Proposal(s):

Proposed By	Proposed Designation	Proposal Comments
Arizona Wilderness Coalition	Open	

Official Right-of-Way or Officially-Recognized County or State Route

Is the route an officially-recognized right-of-way or an officially recognized County or State route? **No**

Other Access / Uses

Does the route provide other commercial or administrative access / uses? **Yes**

Does the route provide commercial, private property, or administrative access (e.g. via prescriptive or vested rights, RS 2477)? **Yes**

Is the route a regional route that serves more than one planning sub-region? **No**

Is the route a principal means of connectivity within a sub-region? **No**

Is the route officially recognized as part of a Federal planning document and is subject to maintenance? **No**

Access / Uses

Uses	Specifically	Primary	Secondary	Tertiary
Commercial Ranching Facility	Reservoir(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Ranching Facility	Fenced; Unfenced	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Ranching Facility	Recording Precip. Gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Ranching Facility	Key Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Ranching Facility	Cattle Guard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Ranching Facility	Fence	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Ranching Facility	Range Development - Pipeline	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mining	Sub-Surface - Non-Federal Mineral Only	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mining	Mineral Material Site - Proximate (within 1/4 mile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mining	Mining Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrative Uses	Historical Vegetation Treatment Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrative Uses	Historical Vegetation Treatment Area - Proximate (within 1/2 mile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorized Uses	ROW - In or Through	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorized Uses	ROW - Proximate (within 1/2 mile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private Property	Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Special Resources				Yes
Might the continued use of this route impact State or Federal special status species or their habitat or cultural or any other specially-protected resources or objects identified by Agency planning documents, plan amendments or any other special area designations (e.g. National Monuments)?				
Resource/Concern	Specifically	Direct	Indirect	
Areas of Critical Environmental Concern (ACEC)	Other Agency / Citizen Proposal for ACEC House Rock Valley ACEC; Kaibab-Paunsagunt Wildlife ACE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Areas of Critical Environmental Concern (ACEC)	Other Agency / Citizen Proposal for ACEC - Proximate (within 1/2 mile) House Rock Valley ACEC; Kaibab-Paunsagunt Wildlife ACE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ecoregion	Colorado Plateau - Great Basin - Buckskin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ecoregion	Colorado Plateau - Great Basin - Paria Plateau	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ecoregion	Colorado Plateau - Plains Grassland - House Rock Valley	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Historic	Trail Dominguez & Escalante Historic Trail; Honeymoon Trail	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Historic Sites / Areas / Trails	Historic Trail - Cross	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Historic Sites / Areas / Trails Monument	Historic Trail - Proximate (within 1/4 mile) In or Through Vermilion Cliffs National Monument	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Other Plants	AGFD Plant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Other Plants	AGFD Plant - Proximate (within 1/2 mile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Paradise Plains Cactus (Paradise pincushion) (SS)	Habitat - Proximate (within 1/2 mile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Recreation Opportunity Spectrum (ROS)	Roaded Natural	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
T&E	Cactus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
T&E	Plant(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
T&E	Plant(s) - Outside Proximate (outside 1/4 mile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
T&E	Plant(s) - Proximate (within 1/4 mile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Avoidance, Minimization or Mitigation of Impacts		Yes
Can the impacts to the above sensitive resources be avoided, minimized or mitigated?		

Public Uses				Yes
Does this route contribute to recreational opportunities, route network connectivity, public safety, or other public multi-use access opportunities enumerated in agency Organic laws?				
Public Use	Primary	Secondary	Tertiary	
4WD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ATV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Campground - Unofficial - Large Group Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Campground - Unofficial - Multiple Party Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Campground - Unofficial - Single Party Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Camping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hiking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hiking / Walking / Running	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hunting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Motorcycle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non-Motorized Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pull Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Scenic Overlook	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Social Gathering	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Staging / Parking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Target Practice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trailhead	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Navajo Trailhead	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Viewing Cultural Sites	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Viewing Wildlife	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wilderness Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wildlife Viewing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Route Redundancy Can the commercial, private-property or public uses of this route be adequately met by another route that minimizes impacts to the sensitive resources identified above or that minimizes cumulative effects on various other resources?	No
Route Redundancy Can the commercial, private-property or public uses of this route be adequately met by another route that minimizes impacts to the sensitive resources identified above or that minimizes cumulative effects on various other resources? Public Uses Other	No No No

Potential Route Designations
 This list represents the potential designations that are available for this route utilizing the Route Evaluation Tree.

Close
08
Mitigate
Limit
06
Limit
08
Mitigate
Open
03
Open
07

B

Close
 Mitigate Limit
 Limit
 Mitigate Open
 Open

Open to All Uses with Mitigation

Mitigation will be achieved by employing adaptive management monitoring of the status and/or integrity of the potentially impacted sensitive resources or resource issues identified above as they relate to various factors (e.g. climatic cycles, exotic species introduction, visitor use levels [type, intensity, season of use]).

Other Mitigation: Mitigate by adaptive management monitoring of status of remote character and sensitive resources as it might relate to visitor use levels.

C

Close
 Mitigate Limit
 Limit
 Mitigate Open
 Open

Open to All Uses with Mitigation

Mitigation will be achieved by employing adaptive management monitoring of the status and/or integrity of the potentially impacted sensitive resources or resource issues identified above as they relate to various factors (e.g. climatic cycles, exotic species introduction, visitor use levels [type, intensity, season of use]).

Other Mitigation: Mitigate by adaptive management monitoring of status/integrity of identified sensitive resources or special status species and/or cultural resources as their condition might relate to intensity and type of public use.

D

Close
 Mitigate Limit
 Limit
 Mitigate Open
 Open

Open to All Uses with Mitigation

Mitigation will be achieved by employing adaptive management monitoring of the status and/or integrity of the potentially impacted sensitive resources or resource issues identified above as they relate to various factors (e.g. climatic cycles, exotic species introduction, visitor use levels [type, intensity, season of use]).

Other Mitigation: Mitigate by adaptive management monitoring of status/integrity of identified sensitive resources or special status species and/or cultural resources as their condition might relate to intensity and type of public use.

E

Close
 Mitigate Limit
 Limit
 Mitigate Open
 Open

Open to All Uses with Mitigation

Mitigation will be achieved by employing adaptive management monitoring of the status and/or integrity of the potentially impacted sensitive resources or resource issues identified above as they relate to various factors (e.g. climatic cycles, exotic species introduction, visitor use levels [type, intensity, season of use]).

Other Mitigation: Mitigate by adaptive management monitoring of status/integrity of identified sensitive resources or special status species and/or cultural resources as their condition might relate to intensity and type of public use.

Appendix F. Best Management Practices & Standard Operating Procedures

1.0 BEST MANAGEMENT PRACTICES (BMPs)

Best Management Practices (BMPs) are land and resource management techniques determined to be the most effective and practical means of maximizing beneficial results and minimizing conflicts and adverse environmental impacts from management actions. BMPs can include structural and nonstructural controls, specific operations, and maintenance procedures. BMPs can be applied before, during, and after activities to reduce or eliminate adverse environmental impacts. BMPs are not one-size-fits-all solutions. BMPs should be selected and adapted through interdisciplinary analysis to determine which management practices are necessary to meet the goals and objectives of the RMP. The best practices and mitigation measures for a particular site are evaluated by considering site-specific conditions, local resource conditions, and a suite of techniques that guide or may be applied to management actions to aid in achieving desired outcomes.

BMPs are often developed in conjunction with land use plans, but they are not considered a land use plan decision unless the land use plan specifies that they are mandatory. They may be updated or modified without a plan amendment if they are not mandatory. Some specific BMPs associated with the management of the TMP area are listed below. This is not a complete list of all BMPs required by law or policy that the BLM will use in administering the resources and uses of the TMP area.

Travel System Planning

- Ensure that road specifications and plans are consistent with good safety practices.
- Design, construction and maintenance of roads, primitive roads and trails will comply with guidelines identified in the BLM 9113 Roads Manual, the BLM 9115 Primitive Roads Manual, BLM 9114 Trails Manual and the Low-Volume Roads Engineering: Best Management Practices Field Guide.
- Emphasize the use of existing roads (through continued use or reconstruction) to minimize new road construction.
- Plan each road to the minimum standards for the intended use. Adapt plans to the soils and terrain to minimize disturbance and damage to soil productivity, vegetation, water quality, and wildlife habitat.
- Implement mitigation techniques when designing and implementing the route system.

Road/Primitive Road Construction

- Construct culverts, cross drains, or other water control devices to prevent erosion.
- Design roads to balance cuts and fills or use full bench construction where stable fill construction is not possible.

Road/Primitive Road Drainage

- Provide adequate drainage from the surface of all roads by using outsloped or crowned roads, drain dips, or insloped roads with ditches and cross-drains or relief culverts.
- Vary road grades to reduce concentrated flow in ditches, and culverts and on fill slopes and road surfaces.
- Size drainage structures appropriately to handle anticipated flow during normal runoff or storms.
- Design relief culverts or roadside ditches to prevent fill erosion or direct discharge of sediment into streams.
- Prevent cross drains, culverts, water bars, dips, and other drainage structures from discharging onto erodible soils or fill slopes without outfall protection.
- Plan natural road cross-drainage by insloping and using relief culverts or outsloping and by grade changes. Plan for effective well-placed dips or water bars.
- Design roads for minimal disruption of drainage patterns.

Road/Primitive Road Maintenance

- Maintain erosion control features through periodic inspection and maintenance, including cleaning dips and cross-drains, repairing ditches, marking culvert inlets to aid in location, and clearing debris from catch basins and culverts.
- Avoid using roads during wet periods if such use would damage the road drainage features.
- Grade road surfaces only as often as necessary to maintain a stable running surface and to retain the original surface drainage.
- Conduct spot maintenance on primitive roads to correct safety, conserve resources or to maintain the desired recreation experience. Grading the full length of primitive roads is not required, nor desired, in most cases.

Non-motorized Trail Construction

- Construction will follow BLM 9114 Trails Manual (2012) or other applicable standards.
- All trails are designed to minimize surface disturbance.
- Linear areas of interest would be marked with fiberglass posts or rock cairns to establish the footpath.
- Alternative types of transportation to link areas of interest should be considered.

2.0 STANDARD OPERATING PROCEDURES (SOPs)

Standard Operating Procedures (SOPs) and administrative actions are day-to-day activities conducted by the BLM based on laws, regulations, executive orders, BLM planning manuals, policies, instruction memoranda, and applicable planning documents, which outline objectives, basic management policy, and program direction and describe the flow of actions as well as identifying roles and responsibilities during the implementation of management decisions. It is the goal of SOPs and administrative actions to maintain operational efficiency and consistency during project implementation.

As administrative actions are not management decisions at either the land use plan level or implementation level, they do not require NEPA analysis or an official written decision in order to be accomplished. Examples of administrative actions include mapping, surveying, inventorying, monitoring,

and collecting needed information through research and similar activities. The following examples of administrative actions specific to CTTM for the planning area are from the RMPs:

Travel Management

- A route inventory database will be maintained using standard collection and information storage methods.
- The planning area will be monitored to detect unauthorized route creation.
- A variety of funding mechanisms and partnerships will be sought for completing the route inventory.
- Standard data collection and storage methods will be used to complete the route inventory.

Travel Management (Transportation Facilities)

- Maps and portal signing will be developed and installed to inform public land users of the preliminary route network.
- The BLM will actively recruit service-oriented volunteers, organizations, and schools to assist with accomplishing appropriate implementation projects.

Some general SOPs and administrative actions associated with travel management within the TMP area are listed below. However, this is not an exhaustive list of all procedures required by law or policy that the BLM will use in administering the resources and uses of the TMP area. More specific BMPs and SOPs are listed in Appendix Q. Also, where appropriate, program-specific SOPs may be addressed in their respective sections throughout this TMP.

General

- Any modifications to route designations will require NEPA compliance, public involvement, interagency coordination, and the preparation of a decision document .
- Appropriate NEPA analysis will be obtained prior to any ground disturbance, and impacts to cultural resources, or other resource values, that may be discovered will be mitigated or avoided.
- Visitor guides and maps will be published and made available to the public. Maps will also be available for download on the internet. All public products may be provided for free or at a low cost based on quality of the product. All other products will be free.
- Signing will be developed and installed to inform public land users of the designated route network.
- The development of standards for monitoring the route system will be directed in compliance with laws, regulations, and travel management plan goals and objectives.
- Partnerships will be developed with volunteers, clubs, organizations and schools to assist with accomplishing appropriate implementation projects, such as maintaining and monitoring motorized routes and non-motorized trails.

- The BLM will seek rights-of-way or reservations for the public lands on which they develop facilities and/or designate major routes. This action protects these amenities from other entities or claims.
- Cross-country vehicle travel may be permitted for administrative and emergency purposes, and only where cross-country travel will not cause undue resource damage. Cross-country travel for administrative purposes will be permitted only with prior approval by the authorized officer, must follow appropriate NEPA analysis, and must be reclaimed as soon as possible.
- Vehicular access (without a designated open primitive road) to sacred areas for American Indian Tribal members will be authorized on a case-by-case basis.
- The BLM maintains the authority to temporarily or permanently, partially or completely suspend any activity based on safety issues and/or adverse resource impacts. Acceptable uses will be allowed only if the use does not degrade the condition and health of the land.

Routes

- Standards and guidelines will be developed and followed per BLM Manuals 9113, 9114 and 9115 for BLM road, trail and primitive road maintenance, new construction or reconstruction. The standards and guidelines for primitive roads will be based on the functional requirements of the various types of recreational motorized users. Maintenance standards for each designated route will be documented and route modifications will be identified and recommended if necessary. Maintenance will be completed only to the identified maintenance intensity level in support of resource protection, delivery of services to the public and public safety.
- Maintenance standards for each designated route will be documented and route modifications will be identified and recommended, if necessary. Maintenance will be completed only to the identified maintenance intensity level in order to support resource and public protection.
- Maintenance of routes may be done to minimize soil erosion and other resource degradation. This maintenance will be done on a case-by-case basis, depending upon annual maintenance funding.
- Maintenance procedures for physical barriers will be developed, once the number and type of barriers is determined.
- Maintenance procedures for physical barriers will be tracked manually or systematically by a system such as FAMS.
- The BLM may open an administrative route where valid rights-of-way or easements of record were not accurately identified in the route designation process.
- Signing will be developed and installed to inform public land users of the designated route network.

- The development of standards for monitoring the route system will be in compliance with laws, regulations, and travel management plan goals and objectives.
- Route closures or mitigation will be enacted where OHV or special vehicle use is determined to be inconsistent with established recreational management objectives, and/or such use is causing harm to natural or cultural resources.
- OHV use and travel activities will be managed in accordance with the Statewide Standards for OHV Operation (see Appendix G) and Arizona BLM Resource Advisory Council Guidelines for OHV Recreation Management (see Appendix H).
- The TMP area will be monitored to detect unauthorized route creation.
- A route inventory database will be maintained using standard collection and information storage methods.
- Design and maintenance guidelines and procedures will be created for managing access points, roads and trails, consistent with the route's purpose.
- The BLM will provide access to a route where a valid permit, notice, right-of-way or easement of record was not accurately identified in the route designation process.
- Proactive route rehabilitation work would be utilized where an initial passive phase has not proven to be successful or where route conditions were clearly beyond the capability of the first phase to address.

Lands Actions

Lands actions may include the following:

- Acquire legal access to public land, where appropriate and necessary.
- Identify needs and request funding for motorized and non-motorized access, exchanges, and acquisitions and incorporate them in the existing ranking system.

Easements, ROWs, and permissive access license agreements may include:

- Acquisition of road or trail easement or issuance of an ROW on an existing or historic physical access will be pursued in areas where those actions will contribute to the protection of natural resources. Acquisition of road or trail easement or issuance of an ROW on an existing or historic physical access may be pursued in the ASFO portion of the TMP area for the enhancement of recreation opportunity.
- Easements may be acquired through donation or purchase following the procedures set forth in BLM Manual 2100 - Acquisition.

Appendix G. Statewide Standards for OHV Operation

Arizona standards and policies have been adopted for resource management and travel management planning on public lands administered by the BLM. They were considered in the travel and transportation management decisions made in the RMP, and are reflected in the actions outlined in this TMP. Those standards and policies are described below.

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.
6. The BLM will not develop, endorse or publish road or trail ratings. The BLM will describe the physical aspects of a road, primitive road or trail (such as those which only accommodate technical vehicles) and/or recreation site as necessary to avoid visitor inconvenience and align visitor expectations with existing conditions.
7. Where pulling 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.⁴

In national monuments and along national trails, motorized use shall keep within the designated route with reasonable use of the shoulder and immediate roadside, allowing for vehicle passage, emergency stopping, or parking unless otherwise posted.⁵

⁴ IM No. AZ-2005-007, State Director Guidelines for Arizona Land Use Planning Efforts.

⁵ IM No. AZ-2005-007, State Director Guidelines for Arizona Land Use Planning Efforts.

Appendix H. Arizona BLM Resource Advisory Council Guidelines for OHV Recreation Management

February 24, 2007

The Arizona Resource Advisory Council (RAC) was established to provide counsel and advice to the BLM concerning planning and management of the public lands administered by the BLM in Arizona. During the 1995 – 1997 timeframe, the Arizona RAC assisted the BLM staff in developing standards for rangeland health and guidelines for grazing administration. These standards and guidelines were approved by the Secretary of the Interior in April, 1997. The RAC fully recognizes that the standards for rangeland health are affected by all uses of public lands, not just livestock grazing. One of those uses, OHV recreation, has become increasingly more popular and prevalent on public lands. This has placed OHV recreation in the forefront of management issues facing the Arizona BLM. In the 2005 RAC Annual Work Plan, the RAC set forth an action item to develop proposed Arizona BLM OHV guidelines. In 2007, the RAC recommended guidelines for OHV recreation management. These guidelines are linked to the Arizona BLM rangeland health standards, incorporate goals of the BLM National OHV Strategy, and consider OHV “best practices” identified in BLM’s approach to this issue in other western states. The RAC guidelines were considered during preparation of this TMP, and will be considered during implementation of the various planned actions.

Introduction

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, ATV, and four wheel drive jeep riders, but also recreationists such as hikers, hunters, and birders who use OHVs such as sport utility vehicles and pickup trucks to access their favorite hiking, hunting, or bird-watching destination. Thus, OHV recreation spans virtually all recreational uses of the public lands. Recognizing the growing significance of OHV use, the BLM’s 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, the 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 RAC similar to the process that resulted in the Standards for Rangeland Health and Guidelines for Grazing Administration (USDI 1997) (copy included at the 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 K-2 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 (BLM 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 I: 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 I:

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:

I-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.

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

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

I-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 may be suitable for natural reclamation (e.g. already reclaiming routes), therefore no re-vegetation 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 head-cuts 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). The 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, consequences 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 BLM 2005: Appendix C, pp. 17-20).

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 (BLM 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 (BLM 2001: pp. 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 (BLM 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 seek 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.

Appendix I. Route Construction and Maintenance Standards by TMA

Table 9. Route Construction and Maintenance Standards by TMA

Route Construction and Maintenance Standards							
Appropriate Route Construction and Maintenance Standards by TMA							
Asset Type ¹ and Access Vehicle Type	Route Type ²	Route Width ³ (ft)	Maintenance Intensity ⁴	Maintenance Frequency	Speed (mph)	Comments	Hiking, Equestrian, and Bicycle Types
Rural TMA							
State, Federal	Primary Paved, Secondary Paved	Varies	High standards		55-75	ADOT responsibility	Native tread surface to nonnative tread for interpretive trails
Road-all vehicle types	Primary Unpaved, Secondary Unpaved	14-28	3, 5	Annually	20-50	Mainly County and BLM routes	
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	10-15	Maintenance is typically as needed, site-specific	
Trail-hiking, biking, motorcycle or equestrian	Single Track	1.6	3	Annually	≤40 M ≤15 NM	Use generally year-round	
Non-system	Closed, Reclaiming, Abandoned	--	0	None	--	Routes to be closed and rehabilitated	
Backways TMA							
Road-all vehicle types	Primary Unpaved, Secondary Unpaved	14-20	3, 5	Annually	40-50	Mainly County and BLM routes	Native tread surface to nonnative tread for interpretive trails
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	5-15	Maintenance is typically as needed, site-specific	
Trail-hiking, biking, motorcycle or	Single Track	1.6	1, 3	As needed	≤40	Use generally year-round	

Route Construction and Maintenance Standards							
Appropriate Route Construction and Maintenance Standards by TMA							
Asset Type ¹ and Access Vehicle Type	Route Type ²	Route Width ³ (ft)	Maintenance Intensity ⁴	Maintenance Frequency	Speed (mph)	Comments	Hiking, Equestrian, and Bicycle Types
equestrian					M ≤15 NM		
Non-system		--	0	None	--	Routes to be closed and rehabilitated	
Specialized TMA							
Road-all vehicle types	Secondary Unpaved	14	3	Annually	20-30	Mainly BLM routes	Native tread surface, widths to be determined
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	5-15	Maintenance is typically as needed and/or site-specific	
Trail-hiking, biking, motorcycle or equestrian	Single Track	1.6	1, 3	As needed	≤40 M ≤15 NM	Use generally year-round	
Non-system	Closed, Reclaiming, Abandoned	--	0	None	--	Routes to be closed and rehabilitated	
Primitive TMA							
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	5-15	Administrative motorized use and open to non-motorized public use. Maintenance is typically as needed, site-specific	Native tread surface, widths to be determined
Trail-hiking or equestrian	Single Track	1.6	1, 3	As needed	≤40 M ≤15	Use generally year-round	

Route Construction and Maintenance Standards

Appropriate Route Construction and Maintenance Standards by TMA

Asset Type ¹ and Access Vehicle Type	Route Type ²	Route Width ³ (ft)	Maintenance Intensity ⁴	Maintenance Frequency	Speed (mph)	Comments	Hiking, Equestrian, and Bicycle Types
					NM		
Non-system	Closed, Reclaiming, Abandoned	--	0	None	--	Routes to be closed and rehabilitated	

1. Asset type: From Instruction Memorandum No. 2006-173, Implementation of Roads and Trails Terminology Report:

Road: 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.

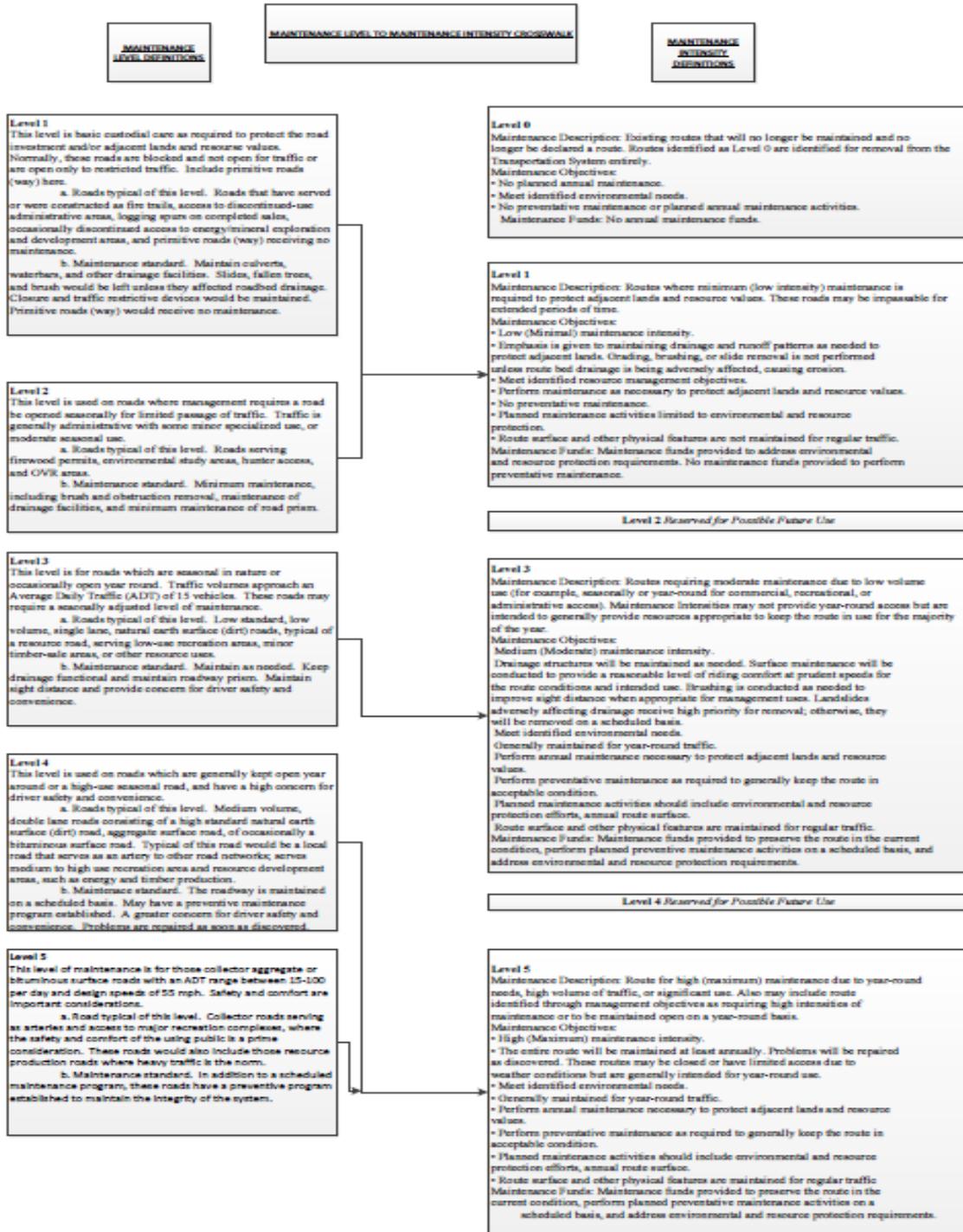
Primitive Road: A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.

Trail: A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

2. Route Type: Derived from formal route inventory, which uses these standard types for inventory on BLM and U.S. Forest Service jurisdictions and for Arizona State Trust Lands.

3. Route Width: Width of travel surface only. Does not include associated ditches, bridges, culverts, route cut and fill areas, etc.

Appendix J. Maintenance Level to Maintenance Intensity Crosswalk



Appendix K. Paria Plateau Sub-region Road Maintenance Schedule

Table 10. Paria Plateau Sub-region Road Maintenance Schedule

Paria Plateau Sub-region Road Maintenance Schedule									
Every Year									
ROAD NAME	ROUTE NUMBER	TOWNSHIP	RANGE	SECTION	CLASS	MAINT. FREQ.	MAINT. LEVEL	LENGTH (mi)	WIDTH (ft)
Winter Road	1025	41. N	01. W	32	Local	1	4	23.70	20
Two Mile Road	1065	39. N	03. E	35	Collector	1	4	20.10	20
Every Third Year									
Pine Tree Pockets	1017	40. N	03. E	15	Resource	3	3	6.3	14

Appendix L. Example Monitoring Form

Recreation Monitoring Report

Observer: _____ Date: _____

Location: GPS/UTM or Township/Range/Section: _____

Topographic /Quad: _____

Describe Specific Location:

What was observed: (Check the appropriate items and described them below)

Please be very specific with your observations.

_____ Off-Road Vehicle Activity (Car, Truck, OHV; Recent/Old)

_____ How many vehicles were observed

_____ Use of Mechanized Equipment off road (What type)

_____ Litter/Dumping (Quantity consisting of what items)

_____ Cutting Wood/Vegetation (What kind and how severe)

_____ Destroyed Property, government, state, and private (What type)

_____ Evidence of Human Waste (including toilet paper).

_____ Boundary Signs (Apparent, Replacement necessary, Need for signing)

_____ Number of people encountered and from what state

_____ Other (describe) _____

Corrective action taken:

Recommended corrective action:

Was anyone contacted? What was said?

Additional comments:

Appendix M. Other Laws, Regulations, Policies & Program Guidance

The following are the applicable laws, regulations, manuals and policies specific to this TMP. A more comprehensive list of general laws governing land management actions can be found in the *Proposed Resource Management Plan/Final EIS for the Arizona Strip Field Office and Vermilion Cliffs National Monument* (BLM 2007), Appendix I.D. Additional guidance is provided through BLM instruction memoranda, manuals and handbooks:

- National Historic Preservation Act of 1966, as amended
- Antiquities Act of 1906, including Monument Proclamations
- Code of Federal Regulation 43 CFR 8340 – Off-Road Vehicles
- Code of Federal Regulation 43 CFR 8342 Designation of Areas and Trails
- Code of Federal Regulation 43 CFR 9268 Law Enforcement – Recreation Programs
- BLM, 2011 Manual 1626, Travel and Transportation
- BLM, 2012 H-8342 Travel and Transportation Handbook
- BLM Instruction Memorandum AZ 2012-067, *Clarification of Cultural Resource Considerations for Off-Highway Vehicle Designations and Travel Management*
- BLM Instruction Memorandum AZ 2009-017, *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.

BLM Administrative Determination on R.S. 2477 Rights-of-Way

The BLM does not have the authority to make binding determinations on the validity of Revised Statute (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.

A travel management plan does not provide evidence bearing on or addressing the validity of any R.S. 2477⁶ assertions.

R.S. 2477 rights are determined through a process that is entirely independent of the BLM's planning process. Consequently, travel management planning should not take into consideration R.S. 2477 assertions or evidence. Travel management planning should be founded on an independently determined purpose and need that is based on resource uses and associated access to public lands and waters. At such time as a decision is made on R.S. 2477 assertions, the BLM will adjust its travel routes accordingly.

BLM, 2011 Manual 1626, Travel and Transportation.

BLM Administrative Determination on Off-Highway Vehicle Use

The following statement is in accordance with 43 CFR 8341.2 (BLM Manual 8342, p. 38)):

Where off-road vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence.

BLM Travel and Transportation Management Handbook 2012

⁶ The Mining Act of 1866 allowed that state or counties could have right-of-way for the construction of highways over public lands." These rights were established by the "construction" of a "highway" on unreserved public lands, without any form of acknowledgement by the Federal government. This section of the act was later codified as Revised Statute 2477. R.S. 2477 was repealed by FLPMA on October 21, 1976, with a grandfathered provision for rights established before the repeal.

Appendix N. Sign Component

1.0 OBJECTIVES

The main objective of this sign component is to identify the designated routes on the ground in a clear and consistent manner, which will discourage off-network travel and other misuse of the TMP area while reducing user conflict and resource impacts. In order to accomplish this, the BLM will create and distribute well-designed signs so that the public has sufficient information to understand the designated travel network and comply with its terms and regulations. Signs in the TMP area will adhere to a consistent theme and will be consistent with all applicable laws, regulations, policies and land use plans.

The specific objectives of this sign component are to:

1. Address signing priorities and areas of special emphasis.
2. Provide an orientation to the types of signs, their design and their uses in the plan area.
3. Address sign placement for current and proposed signs.
4. Outline basic protocols for the monitoring and maintenance of sign system, including future signing needs.

Completed in 2003, the *Interpretive & Information Sign Plan: Grand Staircase-Escalante National Monument/Paria Canyon-Vermilion Cliffs Wilderness/Vermilion Cliffs National Monument* established the first comprehensive interpretive sign component for VCNM and the Paria Canyon-Vermilion Cliffs Wilderness. The document represents a collaborative effort among Grand Staircase-Escalante National Monument, the Kanab Field Office, and Vermilion Cliffs National Monument, who jointly administer this area and its associated access points. After publication of that plan, interpretive signs were installed at public use sites throughout the TMP area in order to meet the plan's goals and objectives.

This VCNM TMP sign component aims to incorporate elements from these previous signing efforts, while addressing the current travel and transportation management goals of the TMP area. It establishes basic guidelines and standards for the development and maintenance of the signing program, recognizing the importance of signing consistency throughout the TMP area.

General objectives for the BLM's use of signs are as follows:

1. To identify public lands.
2. To promote the health and safety of visitors to the public lands.
3. To meet visitor needs for information and direction.
4. To use sign communication to:
 - (a) inform the visitor of the natural, cultural, historical, and management features of the public lands and waters;
 - (b) enhance the visitor's experience; and

- (c) reduce or mitigate user and management issues.
5. To uniformly promote public awareness of the BLM's multiple use mandate and stewardship responsibilities in managing the Nation's public lands and waters through consistent messages and signage.
6. To provide uniformity in the shapes, materials, messages, and appearance of BLM signs.

Signing Guidebook Principles

The following principles were used in formulating the BLM Sign Guidebook (2004) and will be used in administering the sign program for the TMP area:

1. Signs must deliver understandable messages to visitors. Each sign should address a single topic and not include jargon or technical terms. Messages should not be mixed.
2. The established BLM logo must be used, where appropriate.
3. Signs must comply with the Uniform Federal Accessibility Standards and the Americans with Disabilities Act Accessibility Guidelines. Sections 4.1 and 4.30 from both standards provide specific guidance for signs (see Appendix I). Persons with disabilities must be consulted when designing informational signs and interpretive materials.
4. Signing situations related to vehicular and pedestrian traffic should follow the specifications established in the Manual on Uniform Traffic Control Devices, published by the Federal Highway Administration.
5. BLM-approved international symbols and established signing industry standards must be used for sign design, fabrication, installation, and maintenance.
6. Signs must comply with pertinent Federal, State, and local laws, as appropriate.
7. The standards and guidelines in this National Sign Guidebook must be applied consistently to ensure that areas are safe and to enhance visitors' experiences on the BLM's public lands and waters.
8. Whenever possible, signs should be used in conjunction with other media, such as maps, brochures, interpretive materials, etc.

2.0 SIGN INVENTORY

A thorough inventory of current markers and signs within the TMP area was conducted in the summer of 2014. A sign inventory geodatabase was created to facilitate the tracking of sign locations and maintenance. This geodatabase will be maintained and updated with as much of the following information as possible:

- GPS Location
- Sign Type (Boundary, Road, Trail, etc.)
- Sign Use (Marker, Informational, Portal, Regulatory, etc.)
- Date monitored
- Sign Text

- Sides (one-sided vs. two-sided)
- Sign Material (Decal, Aluminum, Wood)
- Post Material (Concrete, Wood, Metal, Fiberglass, etc.)
- Base Material (soil, rocky soil, sand)
- Condition of Sign and Post (New, Good, Fair; Needs Repair or Needs Replacement)
- Geotagged Sign Photo
- Notes (poor location, accessibility issues, vegetation blocking view of sign, or anything else that should be addressed in the monitoring/maintenance process)

The review of existing and proposed signs is essential to assess the need for and usefulness of each sign. Field staff involved with sign placement should have input during this review, helping to determine which signs are worthwhile, which signs should be eliminated, and/or which signs should be specifically clarified. Field staff may also be able to identify locations where signs are needed to resolve use problems, to improve stewardship ethics, and/or to accommodate public health and safety issues. Ideally, each sign should be planned and reviewed with the following questions in mind:

1. Is the sign consistent with existing planning documentation (resource management, activity, or project plans, etc.)?
2. Is this sign needed? Does it serve a purpose? Is it one of several in an area? Have things changed in this location so that the sign is no longer necessary?
3. Is the sign effective? Is the message inappropriate or confusing? Is lettering too small to be read from a high-speed vehicle?
4. Is the location of the sign appropriate?
5. Are sign and post materials appropriate for year-round conditions, protection from vandalism, etc.?
6. Does the sign complement the rest of the signs in the area? Are there too many signs/messages in one area?
7. What is the condition of the sign? Even if the message is appropriate and the location is a good one, is the sign faded? Is it time to replace it?
8. Is each sign meeting required rules and regulations, such as Manual on Uniform Traffic Control Devices, Uniform Federal Accessibility Standards or the Americans with Disabilities Act Accessibility Guidelines, etc.?
9. Are the signs appropriate for year-round conditions, protection from vandalism, etc.?

3.0 SIGN TYPES AND DESIGN

Signs are intended to guide, inform, and protect visitors. This section groups and defines the types of signs used on the BLM public lands and waters. Each of these categories has its own requirements and functions. Ideally, messages should not be mixed on a single sign or in a grouping of signs to avoid sign clutter. The following categories of signs are adapted from the *BLM Sign Guidebook* (BLM 2004):

- **Identification Signs**
 - Administrative Signs (portal signs)
 - Feature Signs
 - Area Signs
- **Guide Signs (Navigation)**
 - Use of arrows and distance indicators
 - Route Markers
- **Informational Signs**
 - Bulletin Board
 - Instructional
 - Information/Interpretive
 - Accessibility
- **Traffic Control Devices**
- **Regulatory/Warning/ Safety Signs**
- **Miscellaneous Signs**
 - Temporary
 - Concessionaire
 - Snowmobile Use
 - Special Event
 - National/Programmatic Initiatives

Many types of signs are already in use within the TMP area, though signing may be added or updated as future needs are assessed and/or new signing standards are released. Figures 4 through 8 below provide illustrations of some existing types of signs in use in the TMP area.

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 land-use etiquette.



Figure 4. Example of an area identification sign.

Figure 4. Identification signs are usually large, wooden or metal signs on two posts or a stone base at major access points to specific areas. These can also be simple small metal signs on posts that indicate entering or leaving public lands or areas. This is a standard BLM “portal” sign posted at the boundary of the VCNM along House Rock Valley Road, a major access route to the TMP area.

Figure 5. Information signs such as bulletin boards or kiosks are placed at parking or pullout areas to provide maps and other area information. This kiosk display in Ferry Swale provides a map of the area for orientation, local interpretive information, emergency contact information, and safety tips as well as recreation etiquette and travel rules and regulations.



Figure 5. Example of an informational/interpretive sign.



Figure 6. Guide or Navigation signs (commonly referred to as “route markers”) make up the majority of signs within the planning area. Most of these signs are brown, fiberglass markers showing the route number, managing agency and any other applicable symbols.

Figure 6. Example layouts for route markers (guide signs) present in VCNM.

Figure 7. Regulatory/Warning /Safety 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. This regulatory sign informs visitors of regulations within VCNM, including the message that vehicular travel is restricted to designated routes.



Figure 7. Example of a regulatory sign in VCNM.



Figure 8. This regulatory warning sign alerts visitors to an abandoned mine hazard near Sun Valley Mine in VCNM.

Figure 8. Example of a regulatory warning sign.

Design

From large, informational portal signs to small, individual route markers, clear, accurate signing is crucial to provide all users of the travel network with the information they need to voluntarily comply with the route designations and meet the goals and objectives of this TMP.

New signage will incorporate elements from previous sign plans (*Interpretive and Information Sign Plan: Grand Staircase-Escalante National Monument/Paria Canyon-Vermilion Cliffs Wilderness/Vermilion Cliffs National Monument*), and meet the design standards outlined in the most current version of the *BLM Sign Guidebook* in addition to design specifications from the BLM sign shop. Any deviations from these standards must be approved by the BLM National Sign Coordinator.

In accordance with the VCNM RMP, “Sign material and design will be unobtrusive in order to blend with local landscape settings and retain the natural and/or historic integrity of the site” (Decision No. MA-RR-06).

4.0 ROUTE MARKERS AND NUMBERING STANDARDS

The majority of signs within the TMP area will be guide signs in the form of route markers. Most primitive roads and trails will be identified by their number with flexible, brown fiberglass markers, generally referred as fiberglass posts. *Figure 5* provides four examples of layouts for route markers, most with white lettering on a brown background.

All numbers and/or decals should be placed within the top portion of the post. At a minimum, these signs will convey the managing agency and the numeric route identifier, along with any other important symbols or graphics, such as those denoting what type of use is authorized. Special graphic decals are currently present on route markers along the main travel corridors to denote primary access routes to popular areas such as White Pocket and the Cottonwood/Pawhole access point for South Coyote Buttes.

Each route identification number will come from a pre-assigned block of numbers specific to the Arizona Strip Field Office and VCNM, which utilize numbers between 1000 and 2499. If any route is already numbered outside this block, it will need to be re-numbered. 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 two international symbols are needed to convey a restriction or allowable use, the BLM may develop special decals which clearly state the message or trail name.

Where there is potential for a route to be traveled by motorized vehicles past its designated terminus, “Motorized Route Ends” signs or decals may be used. Routes that are open to administrative use only will be marked prominently with standard “closed” route signs (usually at the beginning of the route), and may be used in conjunction with route markers that display a standard “administrative use only” message.

As a general rule, a route is closed if not posted open. Closed routes will not be signed unless there is a perceived need. Where designated motorized routes intersect with closed routes, “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.

Implementation of signing will be completed in accordance with current BLM policy and guidance per the most current BLM Sign Guidebook. Specifics for sign design, use and location are also determined by the BLM manuals for Roads (9113), Trails (9114) and Primitive Roads (9115), the Sign Manual (9130) and the Travel Management Handbook (8342).

Placement

Priorities for the placement of signing are listed below in order of importance:

1. Public health and safety.
2. Entrances to and boundaries of areas of national significance (e.g., national monuments, designated wilderness areas, etc.).
3. Special management areas (e.g., concentrated recreation sites like Coyote Buttes SRMA, watchable wildlife sites, trails, back country byways, etc.).
4. Travel corridors receiving intensive use.
5. Enhancement of visitor experience and convenience.
6. Concentrations of major thoroughfares crossing large blocks of BLM-managed public lands.

Decision No. MA-RR-05 from both RMPs provides some additional guidance on sign placement:

- Within SRMAs, the levels and types of signing and recreation facility development will be guided by the individual Recreation Management Zone (RMZ) objectives and the administrative and physical recreation settings components prescribed for each RMZ.

- Where Extensive Recreation Management Areas (ERMAs) are allocated, the main emphasis areas for any signing and/or recreation facility placement will be in the Rural and Backways TMAs.
- Generally, signing and recreation facility development in the ERMAs will be the minimum necessary to provide for public safety, reduce user conflicts, and protect resources.

Priority will be given to the installation and maintenance of route markers (e.g., guide or navigation signs). An effective strategy is to make the network of open and limited routes more obvious and attractive than the closed routes. Though signing will not be placed on every route in the travel network, most routes designated as “open” or “limited” to motorized/mechanized travel will be marked with their navigation number or route ID at their beginnings and at major intersections. Route markers may be placed periodically to confirm the identity of the route being traveled, serving as reassurance markers. At the intersection of two major connector routes, larger guide signs with destinations and mileages may be used.

Other signs, such as identification signs, kiosks and regulatory signs will be placed within the TMP area as needed, according to the priorities of BLM management. Signing will be especially limited within the Paria Canyon-Vermilion Cliffs Wilderness in order to maintain a primitive recreational experience, and to maintain the naturalness of the wilderness.

5.0 MONITORING AND MAINTENANCE OF SIGNS

A sign inventory and geodatabase will facilitate the tracking, monitoring and maintenance of signs within the TMP area to continuously improve signing effectiveness. Maintaining effective visitor communication requires sufficient staff and funding. Funding is needed to plan, design, fabricate, install, inventory, maintain, and replace signs. The Arizona Strip District includes funding allocations into both short- and long-term budget planning.

All signed public messages should be evaluated frequently to ensure that they are adequately meeting user needs and are consistent with BLM goals and policies. As kiosks typically require more maintenance than other signs, they would be monitored more frequently for evidence of damage and other problems.

The BLM will strive to monitor and maintain approximately 20% of all signs each year, so that each sign within the TMP area will be monitored to address problems at least once every five years. Signs should be updated, repaired or replaced as soon as possible; signs that are found to be unnecessary will be removed. General sign maintenance will be conducted according to Chapter 5 of the *BLM Sign Guidebook* (BLM 2004).

Public land users should be encouraged to report missing or damaged signs and volunteer efforts may be developed to help monitor and replace signs.

Future Signing

A portion of the existing signage within VCNM was installed when the Paria Canyon-Vermillion Cliffs Wilderness was designated in 1984; others were installed shortly after the monument was established in 2000. These original signs are generally deteriorated and may be inaccurate, obsolete, and/or inadequate to meet the information needs of today's visiting public; these signs will be removed and/or replaced with new signs as staffing, funding and resources allow. For consistency, all future signing will conform to the design standards set forth in this TMP.

Appendix O. VCNM Sign Inventory and Signing Needs

This sign inventory and needs assessment is in compliance with the latest National Conservation Lands Visual System Guidelines for signs and other communications products associated with the National Conservation Lands. Application of these guidelines ensures a consistent identity and look and feel across the BLM's National Conservation Lands and raises public awareness of the values and benefits of the National Conservation Lands.

Listed below is the sign inventory and signing needs for the TMP area.

Cost Summary

<u>Item</u>	<u>Number</u>	<u>Cost</u>
Primary Portals	3	\$3,540
Secondary Portals	3	\$5,040
Recreation Sites	3	\$2,953
Trailheads	2	\$850
Interpretive Panels	20	\$44,300
Carsonite (post & sticker)	300	\$5,500
Subtotal	331	<u>\$62,183</u>
Materials		\$2,325
Shipping		\$9,300
Labor		\$12,400
Total		\$86,208

VERMILION CLIFFS NATIONAL MONUMENT

Primary Portal



Existing Sign Style

Locations: The VCNM Primary Portal Signs are located near the VCNM boundary along the House Rock Valley Road that provide access to the Monument.

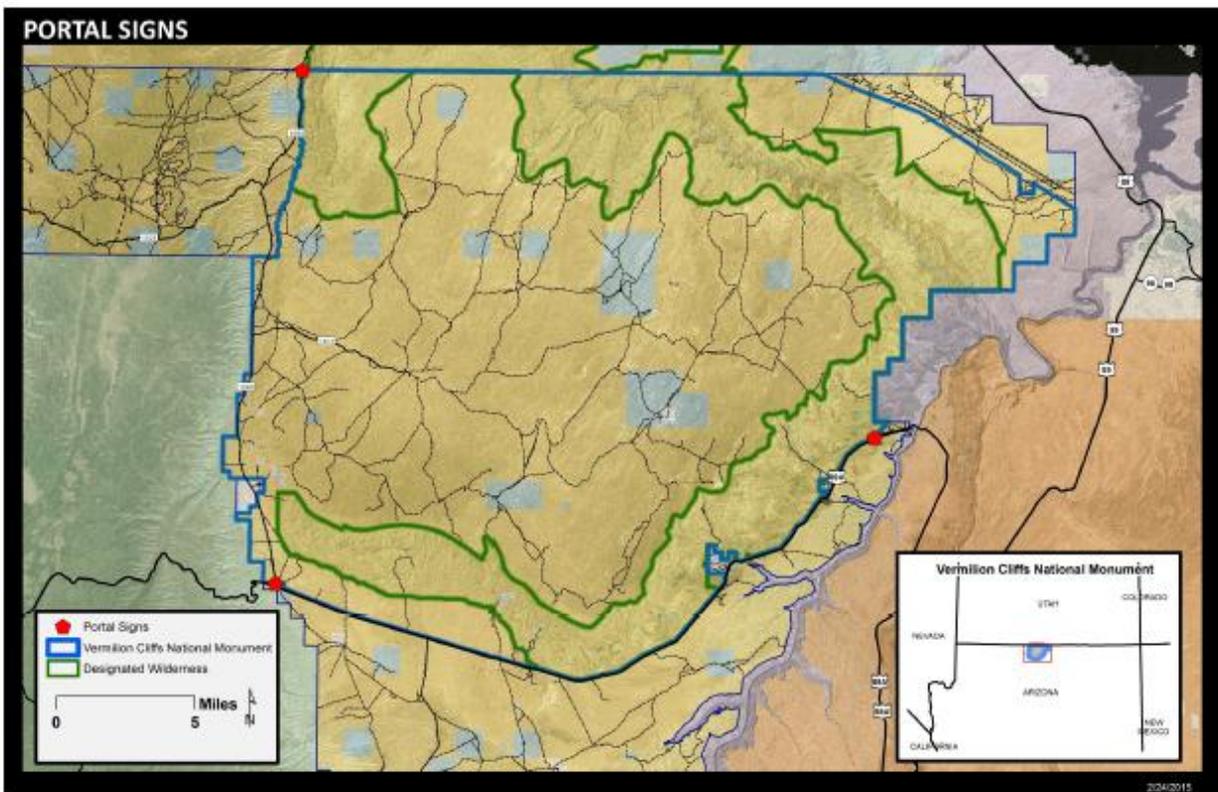
Message: Vermilion Cliffs National Monument

Total Signs: 3

Size: 120x60

Substrate: Wood

Base: 4x4 treated posts or rock and mortar



VERMILION CLIFFS NATIONAL MONUMENT

Secondary Portal

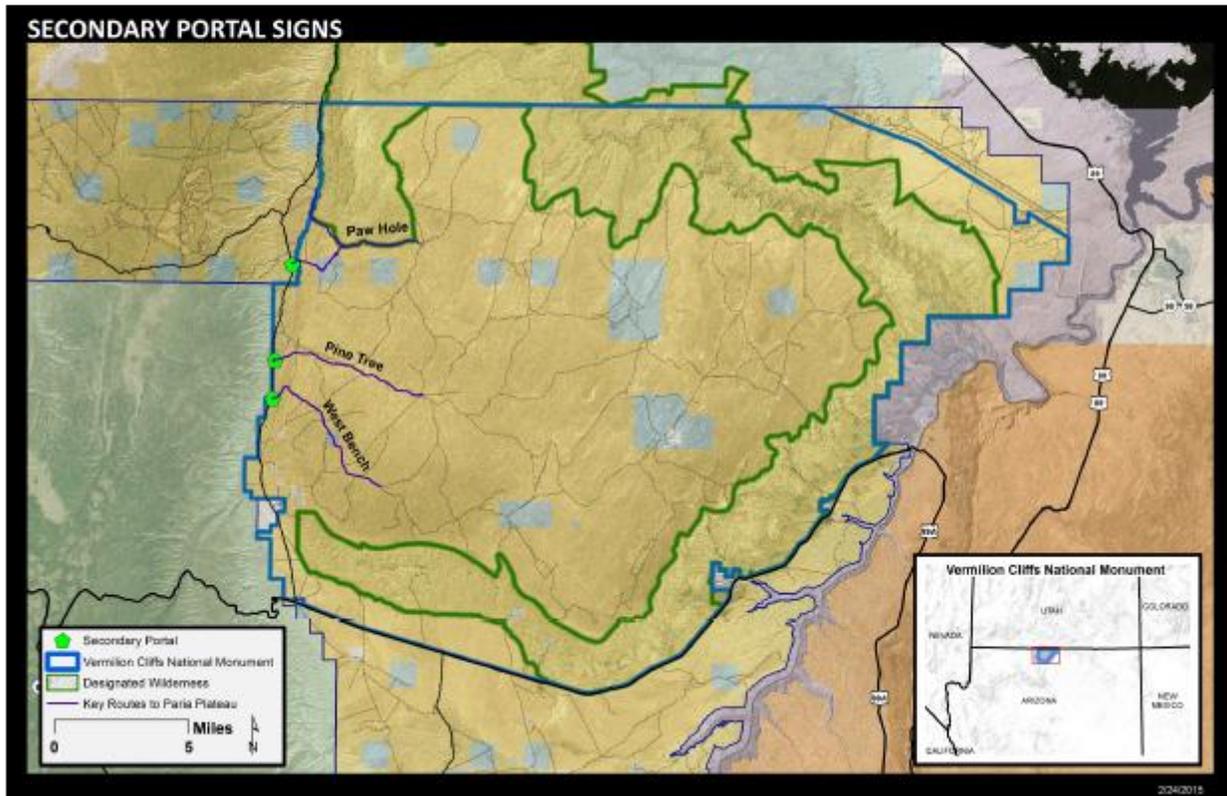


Existing Sign Style

Locations: The VCNM secondary portal signs are located near the three main entrances to the Paria Plateau (Paw Hole, Pine Tree, and West Bench) located in the center of Vermilion Cliffs National Monument.

Total Signs: 3
Size: 96x48
Substrate: Wood
Base: 4x4 treated post

Message: Vermilion Cliffs National Monument



VERMILION CLIFFS NATIONAL MONUMENT

Sites



Existing Sign Style

Locations: Sites

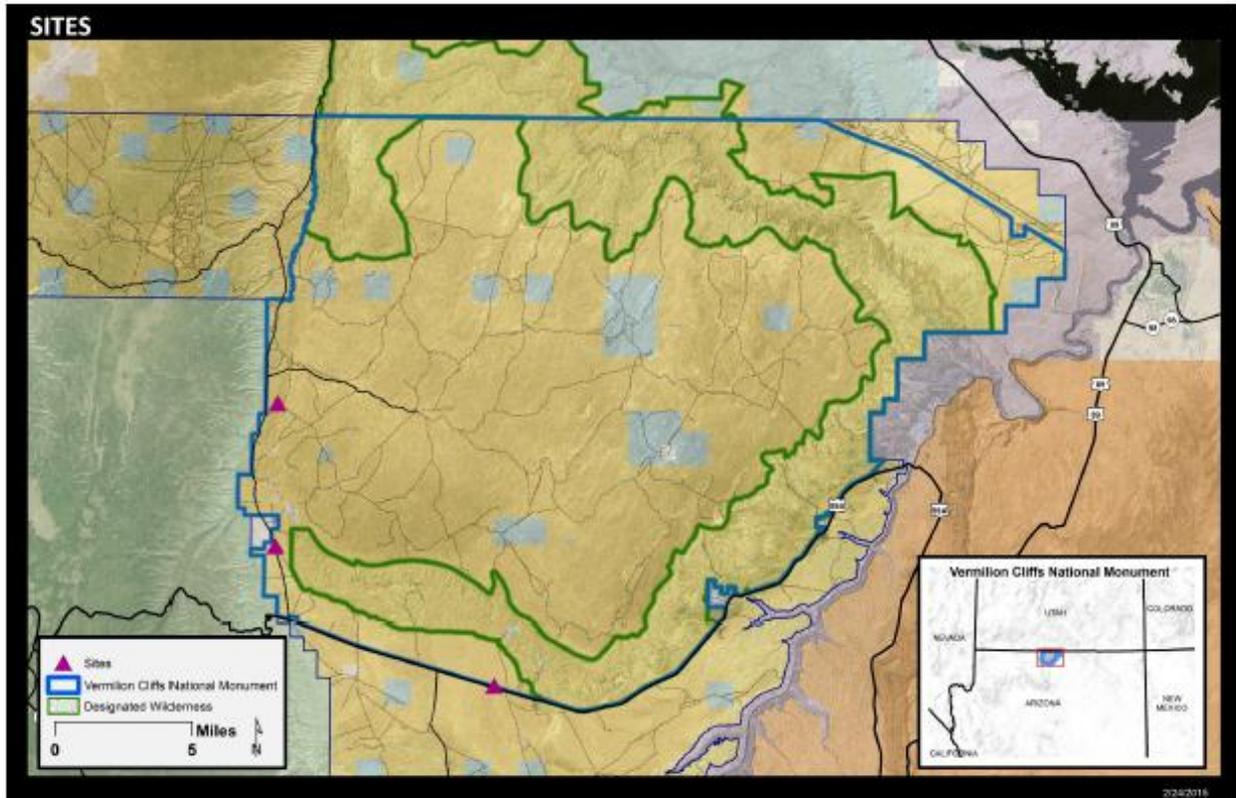
- Message 1: Dominguez- Escalante
- Message 2: Condor Viewing Site
- Message 3: West Bench Pueblo

Total Signs: 3

Size: 96x48

Substrate: Wood

Base: 4x4 treated post



VERMILION CLIFFS NATIONAL MONUMENT

Trailheads



Locations: Developed trailheads

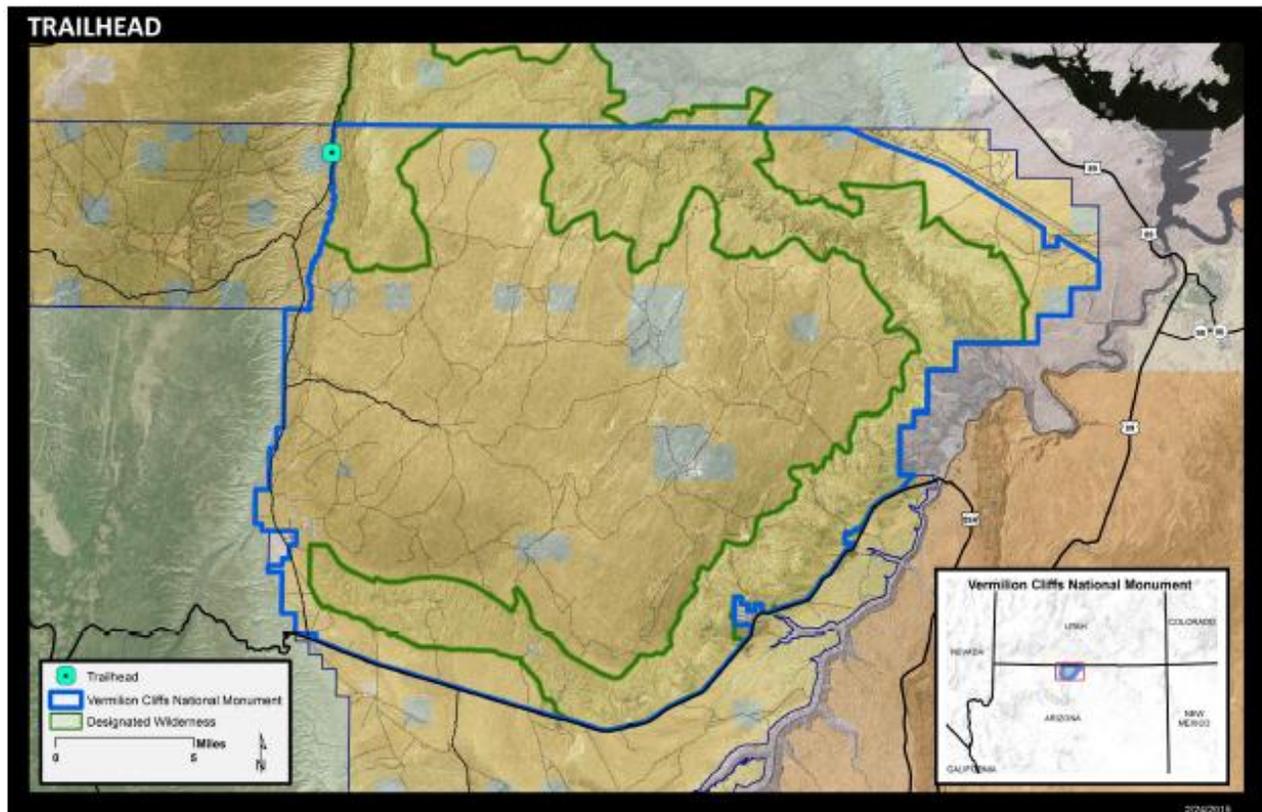
Message: Maze Rock Art Site

Total Signs: 2 (back to back)

Size: 60x30

Substrate: Wood

Base: 4x4 treated post



VERMILION CLIFFS NATIONAL MONUMENT

Panels

Locations: Throughout Vermilion Cliffs National Monument

Local unit will use toolkit templates to populate panels with information, maps, photos, etc. After approval on the local and state level, panels will be sent to National Sign Coordinator for review and approval.

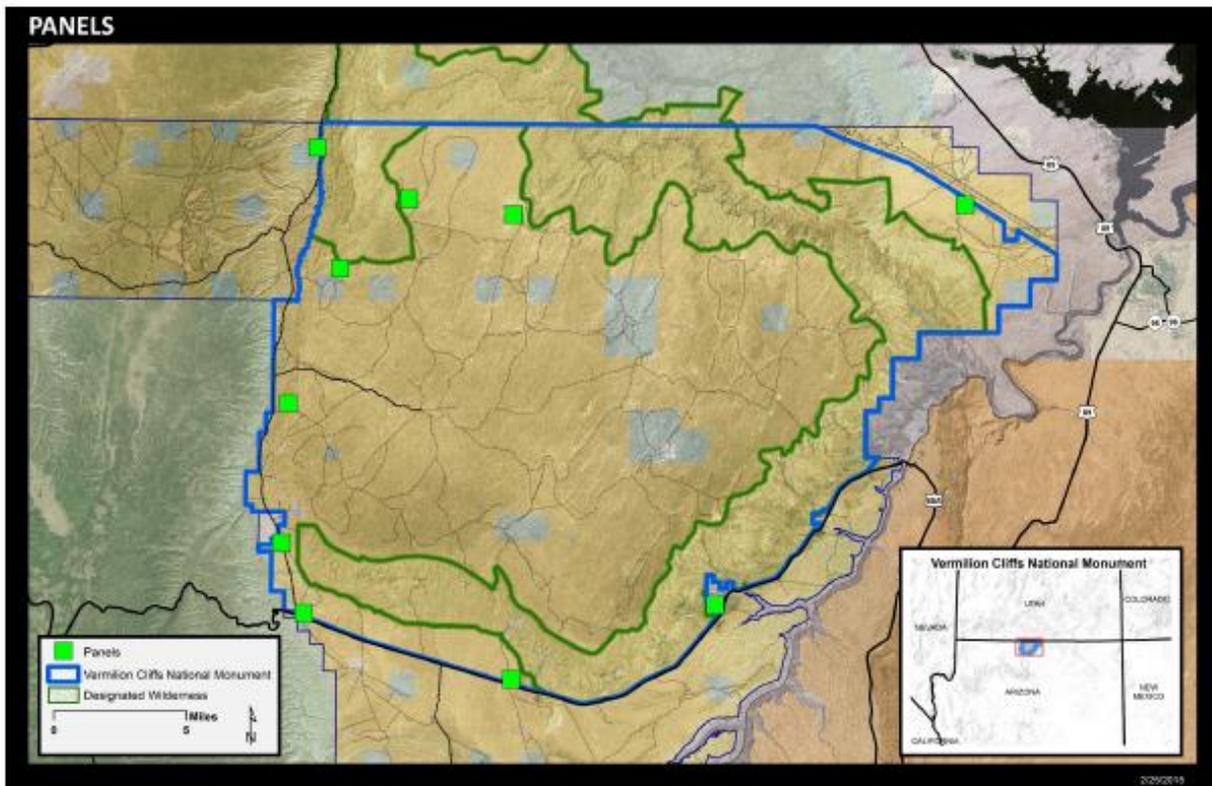
Total Signs: 20

Substrate: Polycarbonate

Base: Flat



Existing Panel Styles



Appendix P. Transportation System Data Management

A ground transportation linear feature (GTLF) database is a geospatial database of motorized and non-motorized transportation linear features as they exist on the ground. Features include all linear features, not just what is within the BLM Transportation System. All designated roads, primitive roads and trails in the TMP area are classified as transportation assets. All designated roads, primitive roads and trails within the travel network addressed in this TMP are classified as transportation assets in FAMS and will be tracked in FAMS as well as the GTLF geospatial database.

The GTLF geodatabase exists to track route conditions and guide future management decisions. Utilized as an adaptive management tool, the geodatabase will be updated regularly to continually collect and update future changes in the transportation system, such as changing use patterns, incorrectly inventoried routes, and route migration.

Tracking such changes will increase the effectiveness of implementation within the TMP area by facilitating management adjustments and informing future management actions. The geodatabase will:

- Identify existing roads, primitive roads, trails, and transportation facilities and structures;
- Address needed improvements in signing, trailheads, and access points;
- Identify maintenance intensities and legal access needs;
- Address all modes of transportation and primary use;
- Address the strategy of informing and educating the users;
- Address methods to physically sign designated routes;
- Address the strategy for rehabilitation of closed routes; and
- Identify future fiscal and staffing needs for specific locations.

Among other things, the transportation system geodatabase will include the following elements:

- Inventory number;
- Route number;
- Route name;
- Route designation (open, closed, limited);
- Transportation asset type (road, primitive road, trail);
- Length;
- Monitoring schedule;
- Maintenance schedule;
- Primary use;
- Signs;
- Interpretation; and
- Route mitigation and rehabilitation.

Appendix Q. Engineering

1.0 FACILITY ASSET MANAGEMENT SYSTEM (FAMS)

FAMS is the BLM's official database for the management of transportation system assets and facilities. As such, it plays a vital role in planning for the management and stewardship of BLM assets. All designated roads, primitive roads and trails within the travel network addressed in this TMP are classified as transportation assets in FAMS and will be tracked in FAMS as well as the GTLF geospatial database.

As of now, FAMS is a tabular engineering database that lacks a spatial component, but its attribute data will eventually be linked spatially to the attribute fields for BLM routes in Arizona Strip corporate GIS data.

2.0 FUNCTIONAL CLASSIFICATIONS

The BLM categorizes its roads into one of three functional classes: collector, local, or resource roads. These classes reflect the area served, type and volume of traffic, and maintenance standards. The functional classifications are determined according to guidance in *BLM Manual 9113 Roads*, and are described as follows:

- **Collector Roads** are the highest standard of BLM road. They provide primary access to large blocks of land and connect with or are extensions of a public road system. Collector roads accommodate mixed traffic and serve many uses. They generally receive the highest volume of traffic within the BLM road system. User cost, safety, comfort, and travel time are primary road management considerations. Collector roads usually require application of the highest standards used by the BLM. As a result, they have the potential for creating substantial environmental impacts and often require complex mitigation procedures.
- **Local Roads** normally serve a smaller area than collector roads and connect to collector roads or public road systems. Local roads receive lower volumes, carry fewer traffic types, and generally serve fewer users. User cost, comfort, and travel time are secondary to construction and maintenance cost considerations. Low volume local roads in mountainous terrain, where operating speed is reduced by effort of terrain, may be single land roads with turnouts.
- **Resource Roads** are usually spur roads that provide point access and connect to local or collector roads. They carry very low volume and accommodate only one or two types of uses. Use restrictions are applied to prevent negative interactions between users needing the road and users attracted to the road. The location and design of these roads are governed by environmental compatibility and minimizing BLM costs, with minimal consideration for user cost, comfort, or travel time.

Most of the BLM-managed routes in the TMP area function as resource roads.

3.0 ENGINEERING BEST MANAGEMENT PRACTICES (BMPs) AND STANDARD OPERATING PROCEDURES (SOPs)

The following engineering-specific BMPs and SOPs will be implemented within the TMP area to meet the identified goals and objectives:

Best Management Practices

Road/Primitive Road Construction

- Construct culverts, cross drains, or other water control devices to prevent erosion.
- Design roads to balance cuts and fills or use full bench construction where stable fill construction is not possible.

Road/Primitive Road Drainage

- Provide adequate drainage from the surface of all roads by using outsloped or crowned roads, drain dips, or insloped roads with ditches and cross-drains or relief culverts.
- Vary road grades to reduce concentrated flow in ditches, and culverts and on fill slopes and road surfaces.
- Size drainage structures appropriately to handle anticipated flow during normal runoff or storms.
- Design relief culverts or roadside ditches to prevent fill erosion or direct discharge of sediment into streams.
- Prevent cross drains, culverts, water bars, dips, and other drainage structures from discharging onto erodible soils or fill slopes without outfall protection.
- Plan natural road cross-drainage by insloping and using relief culverts or outsloping and by grade changes. Plan for effective well-placed dips or water bars.
- Design roads for minimal disruption of drainage patterns.

Road/Primitive Road Maintenance

- Maintain erosion control features through periodic inspection and maintenance, including cleaning dips and cross-drains, repairing ditches, marking culvert inlets to aid in location, and clearing debris from catch basins and culverts.
- Avoid using roads during wet periods if such use would damage the road drainage features.
- Grade road surfaces only as often as necessary to maintain a stable running surface and to retain the original surface drainage.
- Conduct spot maintenance on primitive roads to correct safety, conserve resources or to maintain the desired recreation experience. Grading the full length of primitive roads is not required, nor desired, in most cases.

Non-motorized Trail Construction

- Construction will follow BLM 9114 Trails Manual (2012) or other applicable standards.
- All trails are designed to minimize surface disturbance.

- Linear areas of interest would be marked with fiberglass posts or rock cairns to establish the footpath.
- Alternative types of transportation to link areas of interest should be considered.

Standard Operating Procedures

- Standards and guidelines will be followed per BLM Manuals 9113, 9114 and 9115 for BLM road, trail and primitive road maintenance, new construction or reconstruction. The standards and guidelines for primitive roads will be based on the functional requirements of the various types of recreational motorized users. The BLM will not develop, endorse or publish road or trail ratings. The BLM will describe the physical aspects of a road, primitive road or trail and/or recreation site as necessary to avoid visitor inconvenience and align visitor expectations with existing conditions. Maintenance standards for each designated route will be documented and route modifications will be identified and recommended if necessary. Maintenance will be completed only to the identified maintenance intensity level in support of resource protection, delivery of services to the public and public safety.
- Maintenance standards for each designated route will be documented and route modifications will be identified and recommended if necessary. Maintenance will be completed only to the identified maintenance intensity level to support resource and public protection.
- Maintenance of routes may be done to minimize soil erosion and other resource degradation. This maintenance will be done on a case-by-case basis, depending upon annual maintenance funding.
- Maintenance procedures for physical barriers will be developed and tracked manually or systematically by a system such as FAMS.

Special Designations (National Historic Trails)

- Scheduled site monitoring of significant sites and trail segments will be provided.
- The BLM and local partners will:
 - Provide a supply of existing interpretive and educational materials about the Old Spanish NHT and NHT system.
 - Provide, to the extent feasible, trip planning and other information about the trail to support visitation to trail-related sites.
 - Work with the Old Spanish Trail Association to provide brochures at regional visitor centers and museums to promote education about the trail.

Appendix R. Monitoring Strategies and Schedule

BLM Arizona Strip District staff were consulted during preparation of the monitoring strategies presented in the following table. This table contains monitoring relevant to management of the travel and transportation network, and impacts caused by actions addressed in this TMP. The full monitoring strategies for the TMP area can be found in in the VCNM Approved RMP, with some modifications. Resource staff are responsible for monitoring the resource(s) they manage and were asked to revise these strategies in relation to travel management. These strategies are shown in Table II below:

Table II. Monitoring Strategies

Monitoring Strategies					
Location(s)	Issue/Objective	Indicator (what)	Protocol (how – methods)	Frequency (when)	*Trigger/Action
Soil, Water, and Air					
Monument-wide	Study the effects of continuing erosion that endanger floodplain soils. Map out these areas.	<ul style="list-style-type: none"> Gully, rill, and sheet erosion Vegetative cover Compaction 	<ul style="list-style-type: none"> Monitor erosion Monitor Vegetative cover Monitor impacts and gully progressions Collect and analyze sedimentation and erosion data 	<ul style="list-style-type: none"> On-going 	N/A
Wildfire burns and other select disturbed areas	Assess the effects of disturbance and reclamation	<ul style="list-style-type: none"> Erosion or stabilization Vegetative cover 	<ul style="list-style-type: none"> Visual inspection 	<ul style="list-style-type: none"> As needed 	<ul style="list-style-type: none"> Large wildfire Erosion and flooding
Cultural Resources					
Designated road system	<ul style="list-style-type: none"> Off-road impacts Route proliferation 	Visual site inspections	<ul style="list-style-type: none"> Monitor and report (staff, law enforcement, site stewards, local 	<ul style="list-style-type: none"> Annually for selected sites and 	<ul style="list-style-type: none"> Inventory and record impacts/excavate

Monitoring Strategies					
Location(s)	Issue/Objective	Indicator (what)	Protocol (how – methods)	Frequency (when)	*Trigger/Action
	<ul style="list-style-type: none"> • Vandalism • Surface collection • Potential, or occurring adverse impacts to National Register of Historic Places (NRHP) prehistoric and historic properties 	for: <ul style="list-style-type: none"> • Site integrity • Surface integrity 	rancher, general public) <ul style="list-style-type: none"> • Educate public • Formal monitoring, casual discovery, cultural resource inventory • Class III surveys 	areas (archaeologist and site steward Program), on-going (staff and law enforcement) <ul style="list-style-type: none"> • As needed for new discoveries 	<ul style="list-style-type: none"> • Avoid (reroute, route closure) • Evaluate for NRHP status • Assign use category • Consult under Section 106 with the State Historic Preservation Office and tribes • Mitigate (data recovery – complete recordation, stabilization, restoration, excavation – sample or complete) • Continue monitoring
Standing structures and prehistoric intact features	Vandalism	Visual site inspections for: <ul style="list-style-type: none"> • Site integrity • Structural integrity 	<ul style="list-style-type: none"> • Monitor (staff and Site Stewards) • Formal monitoring, casual discovery, cultural resource inventory 	<ul style="list-style-type: none"> • Annually for selected sites and areas (archaeologist and site steward program), on-going (staff and law enforcement) • As needed for new discoveries 	<ul style="list-style-type: none"> • Destruction of standing features/ stabilization, restoration, allow deterioration • Record sites, assign use category
Caves and Karst Resources					
Monument-	Monitor visitor use	<ul style="list-style-type: none"> • Graffiti 	<ul style="list-style-type: none"> • Monitor unacceptable impacts 	<ul style="list-style-type: none"> • As needed 	<ul style="list-style-type: none"> • Restrict access

Monitoring Strategies

Location(s)	Issue/Objective	Indicator (what)	Protocol (how – methods)	Frequency (when)	*Trigger/Action
wide	impacts; monitor for natural resource degradation	<ul style="list-style-type: none"> • Trash • Trails • Damage to Speleothems • Hazardous materials • Digging in cave • Vandalism in cave 	<ul style="list-style-type: none"> • Visual inspection • Set permanent photo documentation points • Photo document impacted areas • Create visual impact evaluation System for caves, as deemed necessary 	<ul style="list-style-type: none"> • Ongoing • Annually for selected sites and areas 	<ul style="list-style-type: none"> • Clean as necessary
Recreation					
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Realization of targeted benefits for each RMZ.	<ul style="list-style-type: none"> • Visitor surveys • Focus groups 	<ul style="list-style-type: none"> • Every 5 years 	<ul style="list-style-type: none"> • Targeted recreation benefits not realized
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Physical setting conditions, such as remoteness, naturalness, facilities	<ul style="list-style-type: none"> • Monitor “development creep” with regard to authorizing expansion of designated road systems and recreation facilities into settings targeted as more primitive; monitor lack of development in RMZs where development was targeted • Monitor landscape change via VRM 	<ul style="list-style-type: none"> • For every project proposed in SRMAs 	<ul style="list-style-type: none"> • Targeted recreation benefits not realized
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Social setting conditions, such as group size, encounters with other users, and evidence of use	<ul style="list-style-type: none"> • Existing NAU protocols for evidence of use (rapid site inventory, human impact site monitoring) • Actual counts for group size and encounters 	<ul style="list-style-type: none"> • Every 3-5 years for rapid site inventory • Every year - 2 years for human impact site monitoring, encounters and group size 	<ul style="list-style-type: none"> • Targeted recreation benefits not realized

Monitoring Strategies					
Location(s)	Issue/Objective	Indicator (what)	Protocol (how – methods)	Frequency (when)	*Trigger/Action
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Administrative setting conditions, such as visitor services, management controls, mechanized use	<ul style="list-style-type: none"> • Monitor level of effort to provide visitor information and assistance appropriate to targeted settings • Monitor level of regulation, signing, and permitting applied as appropriate to targeted settings 	<ul style="list-style-type: none"> • Project-by-project 	<ul style="list-style-type: none"> • Targeted recreation benefits not realized
SRMAs, ERMA	National RMiS requirements	Number of visits, visitor days, etc.	<ul style="list-style-type: none"> • Traffic counters, visitor registers, Coyote Buttes/Paria Canyon database, information center counter, SRP post-use reports, direct counts 	<ul style="list-style-type: none"> • Monthly for traffic and Information Center counters • Bi-monthly for visitor registers • Monthly for Coyote Buttes/Paria Canyon • Annually for SRPs 	<ul style="list-style-type: none"> • Ongoing
Wilderness					
Statutory wildernesses	Preservation of wilderness character	Number of wilderness boundary vehicle violations	<ul style="list-style-type: none"> • Actual counts 	<ul style="list-style-type: none"> • Ongoing 	N/A
Travel Management					
Designated road/trail system	Management of designated system	Number of roads/trails meeting targeted maintenance intensities	<ul style="list-style-type: none"> • Road/trail condition assessments 	<ul style="list-style-type: none"> • Annually on rotating basis 	N/A
Designated road/trail system	Management of designated system	Placement and retention of all signing	<ul style="list-style-type: none"> • Road/trail condition assessments 	<ul style="list-style-type: none"> • Annually on rotating basis 	N/A
Designated	Management of	Average daily traffic	<ul style="list-style-type: none"> • Traffic counters on key roads/trails 	<ul style="list-style-type: none"> • Monthly 	N/A

Monitoring Strategies					
Location(s)	Issue/Objective	Indicator (what)	Protocol (how – methods)	Frequency (when)	*Trigger/Action
road/trail system	designated system				
Designated road/trail system	Management of designated system	Number of illegal, off-system vehicle incursions	<ul style="list-style-type: none"> • Visual inspections • NAU protocols 	<ul style="list-style-type: none"> • Ongoing • Annually for selected rotating areas 	N/A
National Scenic & Historic Trails					
Old Spanish NHT	Protection of significant sites/segments and retention of landscape character	Number of miles protected	<ul style="list-style-type: none"> • Visual inspection • VRM contrast rating 	<ul style="list-style-type: none"> • Annually for inspections • Project-by-project for VRM 	N/A
* Trigger/Action – What would trigger an action/What the BLM would do if monitoring shows an undesirable direction or action.					

Appendix S. Proposed Rehabilitation Prescriptions by Route Evaluation Number

While passive reclamation/naturalization of closed routes is generally preferred and most routes within the TMP area will be allowed to reclaim naturally, the full suite of route closure rehabilitation options will be considered throughout the area. Specific rehabilitation methods for each closed route are prescribed in Table 12. Developed by the Outdoor Recreation Planner, these recommendations will be used as guidance during implementation, but may vary based on the most appropriate method at the time of implementation. These recommendations identified several routes for more intensive, surface-disturbing reclamation techniques; these would only be implemented after completion of site-specific environmental review.

Table 12. Proposed Rehabilitation Prescriptions by Route Evaluation Number

Proposed Rehabilitation Prescriptions by Route Evaluation Number				
Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
V1024F	1111	Black Valley	Place dead vegetation in the closed route and seed the disturbed area to reclaim	Closed fiberglass marker sign 20-123
V1105F	1128	Cedar Mountain East	Barely visible?, signing needed, naturally reclaim	Fiberglass marker-Route Closed
V1030	1129	Coyote Buttes North		Fiberglass marker-Route Closed
V1121B	1130	Water Pocket Track	Monitor and repair wilderness boundary vegetation barriers as needed, naturally reclaim	Fiberglass marker-Route Closed, wilderness boundary
V1117A & B	1131	Ferry Swale Tank Track	Repair wilderness boundary signs, repair cable barriers at road closure as needed, replace Closed Area Sign-metal, naturally reclaim	Fiberglass marker, Route Closed, wilderness boundary
V1115B	1132	Willow Tank Track #1	Rake out tracks, fiberglass marker signing, short cable barrier or wooden rails if needed to maintain barrier, naturally reclaim	Fiberglass marker, Route Closed
V1114 & A	1133	Willow Tank Track #2	Monitor and repair cable barriers and sign placement, naturally reclaim	Closed Area (2) and fiberglass marker wilderness boundary
V1116/A	1134	Question	Monitor and repair cable barriers and sign placement	Closed Area (1) and fiberglass marker wilderness boundary
V1029C	1135	Coyote Track	Monitor and repair cable barriers and sign placement, naturally reclaim	Closed Area (2) in wash, fiberglass marker wilderness boundary (2)
V1108C	1136	Ferry Swale Track	Rake out tracks, fiberglass marker signing, short cable barrier or wooden rails if needed to maintain barrier,	Fiberglass marker-Route Closed

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
			naturally reclaim	
V1124A/C	1137	Hackberry Track	Rake out tracks, fiberglass marker signing, short cable barrier or wooden rails if needed to maintain barrier	Fiberglass marker-Route Closed
V1109A	1139	Willow Tank Track #4	Rake out tracks, fiberglass marker signing, short cable barrier or wooden rails if needed to maintain barrier, naturally reclaim	Fiberglass marker-Route Closed-dependent on terrain, archeological protection sign
V1112A	1140	Willow Tank Track #5	Rake out tracks, fiberglass marker signing, short cable barrier or wooden rails if needed to maintain barrier, naturally reclaim	Fiberglass marker-Route Closed
V1113	1141	Willow Tank Track #6	Rake out tracks, fiberglass marker signing, short cable barrier or wooden rails if needed to maintain barrier, naturally reclaim	Fiberglass marker-Route Closed, Glen Canyon boundary sign
V1119B	1142	Stud Horse Point Track	Rake out tracks, fiberglass marker signing, vegetative barrier, naturally reclaim	Fiberglass marker-Route closed if route is visible
V1104	1143	Wilson Tracks	Possible mining shaft rehab if it exists? Review for trail development, naturally reclaim	No need to sign at this point; roads closed approximately 3 miles SW of these roads
V1103	1144	Sand	Possible mining shaft rehab if it exists? Review for trail development, naturally reclaim	No need to sign at this point; roads closed approximately 3 miles SW of these roads
V1101B	1145	Cathedral	Possible mining shaft rehab if it exists? Review for trail development, naturally reclaim	No need to sign at this point; roads closed approximately 3 miles SW of these roads
V1100	1146	Sevenmile	Monitor and repair walk-through and signs, already rehab, possible trail development project	wilderness boundaries, future trailhead sign
V1097AX	1147	Badger #1	Rake out tracks, fiberglass marker signing, short cable barrier or wooden rails if needed to maintain barrier, naturally reclaim	Fiberglass marker-Route Closed
V1099 & A	1148	Badger #2	Need to review site conditions, naturally reclaim	Sign not needed at this time
V1097 & B	1149	Badger #3 closed section needs to be admin 1097A	Need to review site conditions, naturally reclaim	Sign not needed at this time
V1096A	1150	Soap Creek Track #1	Place signs at entry point, naturally reclaim	Sign not needed at this time

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
VI095A	1151	Soap Creek Track #2	Need to review site conditions, naturally reclaim	Fiberglass marker-Route Closed if needed, endangered plants
VI095B	1152	Soap Creek Track #3	Need to review site conditions, naturally reclaim	Fiberglass marker-Route Closed if needed, endangered plants
VI095C	1153	Soap Creek Track #4	Need to review site conditions, naturally reclaim	Fiberglass marker-Route Closed if needed, endangered plants
VI089	1154	Cliff Dwellers Track	Need to review site conditions, naturally reclaim	Fiberglass marker-Route Closed
VI088A	1155	Cliff Boundary Track	Need to review site conditions, naturally reclaim	Wilderness boundaries, Area Closed
VI087	1156	Hanging Track #1	Need to review site conditions, naturally reclaim	No need to sign at this point; no road connects this road to main road
VI085	1157	Hanging Track #2	Need to review site conditions, naturally reclaim	No need to sign at this point; no road connects this road to main road
VI084	1158	Hanging Track #3	Need to review site conditions, naturally reclaim	No need to sign at this point; no road connects this road to main road
VI083	1159	Hanging Track #4	Need to review site conditions, naturally reclaim	No need to sign at this point; no road connects this road to main road
VI082	1160	Paria Point	Monitor and add wilderness boundary vegetation barriers as needed, naturally reclaim	Sign gate-wilderness, "No Motor Vehicles"
VI081	1161	Emmett Track #1	Rake out, and place signs, naturally reclaim	Fiberglass marker-route closed at gate?
VI079 & VI080	1162	Emmett Track #2	Rake out, and place signs, naturally reclaim	Fiberglass marker-route closed for resource protection. Fence line?
VI078	1163	Emmett Track #3	Rake out, and place signs, naturally reclaim	Fiberglass marker-route closed
VI164	1164	Emmett Track #4	Rake out, and place signs, naturally reclaim	Fiberglass marker-route closed
VI070	1165	Jacobs Pool Track #1	Rake out, and place signs, naturally reclaim, check for truthing-is it there visually?	Fiberglass marker-route closed
VI070A&B	1166	Jacobs Pool Track #2	Rake out, and place signs, naturally reclaim, check for truthing-is it there visually?	Fiberglass marker-route closed

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
VI069	1167	Jacobs Pool Track #3-	Naturally reclaim	Fiberglass marker-route closed
VI073A	1168	Banelli spring Track #1-	Naturally reclaim	Fiberglass marker-wilderness sign, check gate structures
VI066	1169	House Rock track #1	Naturally reclaim	Fiberglass marker-route closed
VI065A	1170	House Rock track #2	Naturally reclaim	Fiberglass marker-route closed
VI074	1171	House Rock track #3	Naturally reclaim	Fiberglass marker-route closed
VI062A	1172	House Rock Track #4	Naturally reclaim	Fiberglass marker-route closed
VI063	1173	House Rock Track #5	Naturally reclaim	Fiberglass marker - route closed
VI059B	1174	House Rock Track #6	Naturally reclaim	Fiberglass marker - route closed and wilderness sign at boundary
VI056A	1175	House Rock Track #7	Naturally reclaim	Fiberglass marker - route closed, check for visible route, may not need signs
None	1176	West Bench Campground	Rake out, place sign, naturally reclaim, may need reseeding	Fiberglass marker - route closed
VI129G	1177	Kitchen Track #1	Heavy equipment, signs and mitigation	Fiberglass marker - route closed, road work needed
VI129C	1178	Kitchen Track #2	Heavy equipment, signs and mitigation	Fiberglass marker - route closed, road work needed
VI135	1179	Coyote Wash Loop	Naturally reclaim	Fiberglass marker - route closed, if necessary
VI030	1180	Coyote Buttes	Naturally reclamation is occurring	Fiberglass marker & metal closed area sign
VI018A	1181	Closed Paw	Rake out, place sign, naturally reclaim	Fiberglass marker route closed for resource protection
Advanced Resource Solutions	1182	Closed Top-Sand	Naturally reclaim	
Advanced Resource Solutions	1183	Poverty East	Naturally reclaim	
VI027B	1184	Ladder Reservoir	Rake out, place sign, naturally reclaim	Fiberglass marker route closed for

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
				resource protection
VI020C	1185	Short Cut	Naturally reclaim	Fiberglass marker route closed, check for ground truth
VI017A	1186	West Poverty	Rake out, barriers, signs, naturally reclaim	Fiberglass marker, barriers and remove route from recreation map
VI026B	1187	Fence	Fence never a road	Fence never a road
VI026A	1188	Hill track	Naturally reclamation in progress	Fiberglass marker - route closed
Advanced Resource Solutions	1189	Closed Sand	No visible road	No road on ground
VI019B/1025A	1190	Cotton Spring	Naturally reclaim	Maintain current "Closed Area"
Advanced Resource Solutions	1191	Steam #1	No visible road	
VI025D	1192	Steamboat Track #1	Naturally reclaim	Fiberglass marker - route closed for resources
VI025E	1193	Steamboat State	Naturally reclaim	Fiberglass marker - route closed for resources
VI025G	1194	Steamboat Track #3	Naturally reclaim	Fiberglass marker - route closed for resources
VI025I	1195	La Ve	Naturally reclaim	Fiberglass marker - route closed for resources, ground truth
VI031A	1196	White Pocket track	Naturally reclaim	Fiberglass marker at wilderness boundary, maintain fencing
VI034C	1197	Hole in Rock #1	Naturally reclaim	Fiberglass marker - route closed for resources
VI003A	1198	East Big Sink	Naturally reclaim	Fiberglass marker - route closed for resources
VI003B	1199	Phantom Track	No visible road	No road on ground
VI031B	1200	Big Pin	No visible road	No road on ground
VI007F	1201	West Knolls Track	Naturally reclaim	Fiberglass marker - route closed for resources

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
V1007E	1202	Middle Knoll Track	Naturally reclaim	Fiberglass marker - route closed for resources
V1008B	1203	North Cathedral Track	No visible road	No road on ground
V1008BX	1204	NE Cathedral Track	No visible road	No road on ground
V1036E/X	1205	Middle Reservoir E	No visible road	No road on ground
None	1206		No visible road	No road on ground
V1003L/I	1207	Top Kid	None identified	Unknown
None	1208	Kid Pen Track #1	None identified	
V1038B	State Land	V1038B	None identified	
V1007A	1209	Kid Pen Track #2	Naturally reclaim	May not be visible on ground, if so, no signs
V1007G/I	1210	Mexican Sink Track	Naturally reclaim	No road on east side need closure signs on west side
V1008A	1211	Round Valley Track	Naturally reclaim	May not be visible on ground, if so, no signs
V1011B	1212	South Bush Head Track	Naturally reclaim	May not be identifiable from spider web of routes
V1022E	1213	Adams Pasture East	Naturally reclaim	No signs posted, route is visible, fiberglass marker - route closed and wilderness boundary signs
V1038	1214	East Bush Head	Naturally reclaim	Fiberglass marker - route closed
V1040A	1215	North Fischer	Naturally reclaim	Fiberglass marker - route closed and wilderness sign at boundary
V1011A	1216	North Powell	Naturally reclaim, may need barriers	Fiberglass marker - route closed and wilderness sign at boundary
V1042	1217	West Powell	Naturally reclaim, may need barriers	Fiberglass marker - route closed, may not be visible
V1042A	1218	South Powell	Naturally reclaim	Fiberglass marker - route closed, may not be visible
V1023C	1219	Horse Track	Naturally reclaim	Fiberglass marker - route closed

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
VI024H	1220	Butte Arch site	Naturally reclaim, may need barriers	Fiberglass marker - route closed
VI024G	1221	Soap fence	Naturally reclaim - fence line not road	Fiberglass marker - route closed
VI024F	1111	Black Valley	Naturally reclaim, may need barriers	Fiberglass marker - route closed
VI024E	1222	South Black Valley	Naturally reclaim	Fiberglass marker - route closed
VI016I/IX	1223	White Knolls Spur	No visible road	Not visible, no signs necessary
VI005E	1224	Sand Hill	Naturally reclaim	May not be visible, fiberglass marker-route closed
VI016H	1225	Crack	Naturally reclaim	Fiberglass marker - route closed
VI015B	1226	Sand Crack Track	Naturally reclaim	Fiberglass marker maintained at wilderness boundary
VI140	1227	Pinnacle State	No visible road	No road on ground
VI010C	1228	Pin Short	No visible road	No road on ground
VI010B	1229	Pin Middle	No visible road	No road on ground
VI132	1230	Pinnacle 1	Naturally reclaim, may need barriers	Fiberglass marker - route closed both ends
VI138	1231	Pinnacle 2	Naturally reclaim, may need barriers	Fiberglass marker - route closed both ends
VI133	1232	Pinnacle 3	Naturally reclaim, may need barriers	Fiberglass marker - route closed both ends
VI137	1233	Pinnacle 4	Naturally reclaim, may need barriers	Fiberglass marker - route closed both ends
VI134	1234	Pinnacle 5	Naturally reclaim, may need barriers	Fiberglass marker - route closed both ends
VI015H	1235	One Toe North	Naturally reclaim	Fiberglass marker - route closed
VI015F	1236	One Toe	Naturally reclaim, may need barriers	Fiberglass marker - route closed
VI013A	1237	One Toe West	Naturally reclaim	No road on ground, route closed sign may be necessary
VI142	1238	Zero-1	Naturally reclaim	Fiberglass marker – route closed
VI143	1239	Zero2	Naturally reclaim	Fiberglass marker - route closed

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
VI014G	1240	Closed Corral	Naturally reclaim	Reclaiming, sign may not be needed
VI014J	1241	North Condor 1	Naturally reclaim	Reclaiming, sign may not be needed
VI014M	1242	North Condor 2	Naturally reclaim	Fiberglass marker - route closed
VI014N	1243	North Condor 3	Naturally reclaim	Fiberglass marker - route closed
VI014R	1244	North Condor 4	Naturally reclaim	Fiberglass marker - route closed
VI014S	1245	North Condor 5	No visible road	No road on ground
VI043	1246	North Condor 5	Naturally reclaim	Fiberglass marker - route closed both ends
VI045B	1247	Corral South	Naturally reclaim	Fiberglass marker - route closed both ends
VI046A	1248	Corral SW	Naturally reclaim	Fiberglass marker - route closed both ends
VI046A	1249	Corral	Naturally reclaim	Fiberglass marker - route closed both ends
VI048	1250	West Bench track	Naturally reclaim	Boulders placed during West Bench re-route
Advanced Resource Solutions	1251	Left Poverty	None determined	
Advanced Resource Solutions	1252	Right Poverty	None determined	
Advanced Resource Solutions	1253	Pillar Rock	None determined	
Advanced Resource Solutions	1254	White Pocket Trail	None determined	
Advanced Resource Solutions	1255	White Pirate	None determined	

Proposed Rehabilitation Prescriptions by Route Evaluation Number

Route Evaluation #	Road Number	Road Name	Proposed Rehabilitation Technique	Sign/Repair & Comments
VI106B, VI018A, portion of VI018B and portion of I018C (now one road BLM #1181)		Not found	Naturally reclaim	

7.0 ABBREVIATIONS AND ACRONYMS

ACEC	Area of Critical Environmental Concern
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
ARS	Arizona Revised Statute
ASFO	Arizona Strip Field Office
ATV	All-terrain vehicle
BLM	Bureau of Land Management
BMP	Best management practice
CD	Compact disc
CFR	United States Code of Federal Regulations
CTTM	Comprehensive travel and transportation management
DFC	Desired future condition
EA	Environmental assessment
EIS	Environmental impact statement
ERMA	Extensive recreation management area
FAMS	Facility and Asset Management System
FLPMA	Federal Land Policy and Management Act
GCPNM	Grand Canyon-Parashant National Monument
GPS	Geographical positioning system
GTLF	Ground transportation linear feature
LAC	Limits of acceptable change
NEPA	National Environmental Policy Act

NHPA	National Historic Preservation Act
NHT	National Historic Trail
NRA	National Recreation Area
NRHP	National Register of Historic Places
OHV	Off-highway vehicle
ORV	Off-road vehicle
RMP	Resource management plan
RMZ	Recreation management zone
ROD	Record of decision
ROW	Right-of-way
SRMA	Special recreation management area
SRP	Special recreation permit
TMA	Travel management area
TMP	Travel management plan
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
VCNM	Vermilion Cliffs National Monument
VRM	Visual resource management

8.0 REFERENCES

General References for Travel and Transportation Management

1. BLM Manual 1626 – Travel and Transportation
2. BLM Manual 9100 – Facilities Planning, Design, Construction, and Maintenance.
3. BLM Manual 9113 – Roads
4. BLM Manual 9114 – Trails
5. BLM Manual 9130 – Sign Manual
6. BLM Handbook H-1601-1 – Land Use Planning Handbook
7. BLM Handbook H-1790-1 – NEPA Handbook
8. *Travel and Transportation -8270-1 – General Procedural Guidance For Paleontological Resource Management*
9. BLM Handbook H-8342 – Travel and Transportation Handbook
10. BLM Handbook H-9113-1 – Road Design Handbook
11. BLM Handbook H-9114-1 – Trails
12. BLM Handbook H-9115-1 Primitive Roads Design
13. Executive Orders 11644 and 11989 – Off-Road Vehicle Management Policies
14. 43 CFR 8340 – Off-Road Vehicles
15. 43 CFR 8342 – Off-Road Vehicles: Designation Procedures

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9.0 GLOSSARY

Access: The opportunity to approach, enter, or make use of public lands.

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.

Administrative Use: Official use related to management and resources of the public lands by Federal, State or local governments or non-official use sanctioned by an appropriate authorization instrument, such as right-of-way, permit, lease, or maintenance agreement.

Administrative Route: routes that are limited to administrative (official or authorized) users only.

Administrative Purposes: administrative use functions involving regular maintenance or operation of facilities or programs.

Allotment: An area of land where one or more livestock operators graze their livestock. Allotments generally consist of BLM lands but may also include other federal managed and private lands. An allotment may include one or more separated pastures. Livestock numbers and periods of use are specified for each allotment.

All-Terrain Vehicle: 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.

Back country: A recreation setting classification which is characterized by a naturally appearing landscape with human modifications not readily noticeable.

Code of Federal Regulations: The Code of Federal Regulations is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.

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.

Commercial Use: Recreational use of the public lands and related waters for business or financial gain. Financial gain includes gratuities, donations, gifts, bartering, etc.

When any person, group, or organization makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation for recreational activities occurring on public lands, the use is considered commercial. Non-profit status of any group or organization does not, in itself, determine whether an event or activity arranged by such a group or organization is noncommercial. Profit-making organizations are automatically classified as commercial, even if that part of their activity covered by the permit is not profit making. (BLM H-2930-1)

Competitive Use: Competitive use means any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and either of the following elements applies: 1. Participants register, enter, or complete an application for the event; or 2. a predetermined course or area is designated. One or more individuals contesting an established record such as speed or endurance is also considered to be a competitive use. Examples of competitive events include off-highway vehicle races, horse endurance rides, mountain bike races, rodeos, poker runs, orienteering, land speed records, and Eco-Challenge events. **Note:** Competitive events may also be commercial (BLM H-2930-1).

Cross-Country Travel: Travel not on a road, primitive road, or trail.

Dispersed Recreation: 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.

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

Environmental Assessment: An environmental assessment is a tool for determining the “significance” of environmental impacts; it provides a basis for rational decision making.

Evaluation Criteria: These are factors that managers and interdisciplinary teams develop to form judgments about decision making, analysis, and data collection during planning. Evaluation 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.

Evaluation Number: Identification number for routes assigned during evaluation process. The evaluation number could be a continuation of the inventory number, or changed to completely new number to clarify the proposed network of routes. See also **Inventory Number** or **Navigation Number**.

Executive Order: A presidential policy directive that implements or interprets a federal statute, a constitutional provision, or a treaty. To have the effect of law, executive orders must appear in the Federal Register, the daily publication of federal rules and regulations. The president's power to issue

executive orders comes from Congress and the U.S. Constitution. Executive orders differ from presidential proclamations, which are used largely for ceremonial and honorary purposes

Facility Asset Management System: The BLM’s official database for the management of transportation system assets.

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.

Federal Land Policy and Management Act of 1976: Passed by congress for the purposes of establishing a unified, comprehensive, and systematic approach to managing and preserving public lands.

Field Office: The administrative subdivision whose manager has primary responsibility for day-today resource management activities and resource use allocations and is, in most instances, the area for which resource management plans are prepared and maintained.

Four-Wheel Drive Vehicle: A passenger vehicle or light truck having power available to all wheels.

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.

Geographic Information System: A system of computer hardware, software, data, people and applications that capture, store, edit, analyze, and graphically display a potentially wide array of geospatial information.

Ground Transportation Linear Feature database: A geospatial database of motorized and non-motorized transportation linear features as they exist on the ground. Features include all linear features; not just what is within the BLM Transportation System. All designated roads, primitive roads and trails in the planning area are classified as transportation assets within Facilities Asset Management System and are tracked in the GTLF geospatial database..

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.

Indian Tribe: See “Tribe.”

Instruction Memorandum: A temporary directive that supplements the Bureau Manual Sections. IMs contain new policy or procedures that must reach BLM employees quickly, interpret existing policies, or provide one-time instructions.

Inventory numbers: Identification number for linear features assigned in the field or during the inventory process. See also **Evaluation Number** or **Navigation Number**.

Land Use Allocation - 43 Code of Federal Regulations Parts 8340 and 8342 require that BLM allocate “open,” “closed” and “limited” areas for Off Highway Vehicle use. These are land use allocations and together will cover the entire acreage of the planning area. The “limited” allocation is further subdivided to the categories of existing, designated, seasonal, type of vehicle, numbers of vehicles, permitted (or administrative). Other categories of “limited” designations are authorized under 43 CFR Parts 8340 and 8342.

Land Use Plan: 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.

Limited OHV Designations: The *limited* designation is an area allocation made in the Resource Management Plan and 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: The work required to keep a facility in such a condition that it may be continuously utilized at its original or designed capacity and efficiency, and for its intended purpose.

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.

Mitigation: Measures or procedures which could reduce or avoid adverse impacts and have not been incorporated into the proposed project or an alternative. Mitigation can be applied to reduce or avoid adverse effects to biological, physical, or socioeconomic resources.

Monitoring: Collecting and assessing data to evaluate the effectiveness of planning decisions

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 ATVs, sport utility vehicles, 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: 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.

Native American Tribe: See “Tribe.”

Navigation Number: Final identification number assigned to designated road, primitive road, or trail to be used on public maps and route signs or markers. This number is assigned to meet a statewide numbering standard for open routes. See also **Inventory Number** or **Evaluation Number**.

Non-motorized travel: Moving by foot, stock or pack animal, boat, or mechanized vehicle such as a bicycle.

Off-Highway Vehicle: Off-highway vehicle (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.

OHV Area Designations: Used by federal agencies in the management of OHVs on public lands. This 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 (UTVs 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.

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 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

Recreation Management Zones: Subunits within a Special Recreation Management Area managed for distinctly different recreation opportunities, the natural resource and community settings within which they occur.

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: The BLM considers Resource Management Plans (RMPs) 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 travel way 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 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.

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.

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. These may include ROW roads granted by the BLM to other entities.

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).

Roadside: A general term denoting the area adjoining the outer edge of the road.

Route: Any motorized, non-motorized, or mechanized transportation corridor. Corridor may either be terrestrial or waterway. “Roads” and “Trails” are considered 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.”

Route Designation: Specific route designations should be determined concurrently with the Plan development. Route designations may be deferred for up to five years (see Instruction Memorandum No. 2004-005) following completion of the Plan Record of Decision, with State Director concurrence. National Landscape Conservation System unit route designations are completed concurrently with the Land Use Plan development.

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.

Sensitive species: Includes proposed species or candidate species under the Endangered Species Act; state-listed species; and BLM State Director-designated sensitive species (see BLM Manual 6840, Special Status Species Policy).

Shoulder: The portion of the roadway contiguous to the travelway for accommodation of stopped vehicles.

Single Track: Trails wide enough for just one vehicle at a time, usually 18 inches wide.

Special Recreation Management Area: A public lands unit identified in land use plans that provides specific, structured recreation opportunities (i.e., activity, experience, and benefit opportunities).

Special Recreation Permit: 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.

Special Status Species: Includes proposed species, listed species, and candidate species under the Endangered Species Act; state-listed species; and BLM State Director-designated sensitive species (see BLM Manual 6840, Special Status Species Policy). Definition from BLM 2005.

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.

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.

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

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.

Travel Network: The network of roads, primitive roads, and trails (motorized and non-motorized) 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.

Tribe: Any Indian group in the conterminous United States that the Secretary of the Interior recognizes as possessing Tribal status.

Utility Type (or Terrain) Vehicle: 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 husbandry.