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Implementation Guide
for the
Canyon Rims Travel Management Plan
Administrative Draft 2
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ABBREVIATIONS AND ACRONYMS

BLM   Bureau of Land Management
BMP   Best management practice
CFR   Code of Federal Regulations
CTTM   Comprehensive travel and transportation management
DOT   Department of Transportation
DR   Decision record
EA   Environmental assessment
ERMA   Extensive recreation management area
ESA   Endangered Species Act
FAMS   Facility Asset Management System
FHWA   Federal Highway Administration
FLAP   Federal Lands Access Program
FLPMA   Federal Land Policy and Management Act
FLTP   Federal Lands Transportation Program
GIS   Geographic information system
GPO   U.S. Government Publishing Office
GPS   Global positioning system
GTLF   Ground Transportation Linear Features Data Standard
LAC   Limit(s) of acceptable change
LUP   Land use plan
LWC   Land with wilderness characteristics
MUTCD   Manual on Uniform Traffic Control Devices
MWC   Land managed for wilderness characteristics
NCA   National Conservation Area
NEPA   National Environmental Policy Act
NHPA   National Historic Preservation Act
NRHP   National Register of Historic Places
OHV   Off-highway vehicle
ORV   Off-road vehicle
RMIS   Recreation Management Information System
RMP   Resource management plan
RMZ   Recreation management zone
ROW   Right-of-way
RSC   Recreation setting characteristic
SHPO   State historical preservation office
SRMA   Special recreation management area
SRP   Special recreation permit
TMA   Travel management area
TMP   Travel management plan
TTM   Comprehensive travel and transportation management
UTM   Universal Transverse Mercator
VRM   Visual resource management

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1.   INTRODUCTION

Creating a Travel Management Plan (TMP) route network and analyzing the potential resource or resource use effects in an Environmental Assessment (EA) is a key component of travel management, but other important related actions take place before and after the TMP and its EA are approved. Active management of the routes in the travel management area (TMA) requires consistent monitoring, maintenance, interface with other resource programs, documentation, etc. This TMP Implementation Guide serves as a tool to assist BLM with those actions. Statewide, off highway vehicle (OHV) recreation continues to increase, and the trend is expected to continue in the Canyon Rims TMA as well.

1.1   Document Overview

This document, the TMP Implementation Guide, is the implementation component of the Canyon Rims Travel Management Plan (TMP), located on lands administered by the BLM Moab Field Office (MFO). The TMP Implementation Guide's primary purposes are to implement the designations in the adopted Canyon Rims TMP and to create a management framework that allows for current and future user needs while ensuring the protection of resources and reducing or preventing user conflicts. It provides operation and management guidance for the Canyon Rims TMA OHV route network as analyzed in the Canyon Rims TMP EA and adopted and designated in the Decision Record (DR). The EA provides environmental analysis and other data related to development of the Canyon Rims TMP.

This TMP Implementation Guide is intended to serve as a standalone guide for operating and maintaining the TMA's designated travel route network in accordance with the DR. This implementation guide helps fulfill the purpose and need requirements for this NEPA process, because it meets public access and resource management needs, supports the 2008 MFO Record of Decision and Approved Resource Management Plan (2008 RMP) management decisions, and complies with federal regulations.

As part of ongoing travel management associated with the adopted Canyon Rims TMP, new route designations may be added or changed in the future to respond to growing public demand for access, Title V ROW considerations, or concerns of damage to resources. Any new or changed designations will be subject to site-specific review as appropriate under applicable laws.

Primary operation and management actions discussed in this TMP Implementation Guide include maintenance and resource protection, public education and outreach, visitor services, working with partners, regulations enforcement, directional signing, reclamation, monitoring, and other guidance.

Monitoring efforts will help the BLM determine the effectiveness of route management and inform the BLM on issues that may need to be addressed with new management decisions or implementation planning. The Canyon Rims TMP EA identified a number of important resource issues at the heart of the BLM's commitment to provide for multiple land uses while protecting sensitive cultural and natural resources.

The following issues are of particular importance to the Canyon Rims TMA:

- Impacts of OHV travel on known cultural resource sites
- Soil erosion, and its resulting impacts on vegetation
- OHV-related disturbances of sensitive species plants habitat
- OHV-related disturbances on sensitive species wildlife habitat
- Impacts from OHV travel on the defining characteristics of lands with wilderness characteristics and other special management area designations
- Route proliferation within the TMA

In addition, route evaluations identified monitoring activities specific to individual routes. General monitoring schedules are included in the Appendix C "Strategies and Schedules" section of this guide.

Note: The BLM intends to fully implement the Canyon Rims TMP according to this TMP Implementation Guide. However, the operation and management actions discussed in this document are subject to available funding and resources. Availability of staff and funding is a significant factor in TMP implementation. Grants, new appropriations, partnerships, and volunteers may be used to supplement budgets and workforce when possible.

Additionally, mileages, percentages, and other numbers used in this guide are approximate projections for comparison and analytical purposes only. They do not reflect exact measurements or precise calculations. Table mileages and percentages may not sum properly due to rounding.

1.2 Travel Management Area Overview

The 91,000-acre Canyon Rims TMA is in San Juan County and falls under the jurisdiction of the BLM MFO. For more details, see the attached maps and Section 1.4 of the EA. Within the TMA, the following are specially designated areas (i.e., areas designated by Congress or through an RMP process):

- Highway 279/Shafer Basin/Long Canyon Area of Critical Environmental Concern (ACEC)
- Suitable Wild and Scenic portion of Colorado River
- Canyon Rims Special Recreation Management Area (SRMA)
- Colorado Riverway SRMA

There are also areas characterized as lands with wilderness characteristics (LWC) that are not specially designated but are managed for undeveloped character and to provide opportunities for primitive recreation as appropriate. See Appendix E in this guide for details on BLM travel management-related requirements for Wild and Scenic Rivers and LWCs. Motorized and mechanized travel is limited to designated routes in the ACEC—as it is throughout the TMA— per the 2008 RMP. Pages 85 to 86 and Appendix M of the 2008 RMP provide management guidance for the Canyon Rims Special Recreation Management Area (SRMA) (BLM 2008b).

1.3 Background on BLM Travel and Transportation Management (TTM)

In the 1980s, in response to Presidential Executive Orders 11644 (FedCenter 1977) and 11989 (National Archives 1972), 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 off-highway vehicle (OHV) use in accordance with the designation criteria in the Code of Federal Regulations (CFR), under 43 CFR 8342.1.

National BLM policy requires state and field offices to develop TTM plans using a comprehensive, interdisciplinary approach. The BLM requires this approach to integrate TTM with land use planning and resource management programs in a comprehensive process. Because travel and transportation issues affect many of the BLM's resource management programs, TTM must be conducted using a comprehensive, interdisciplinary approach. Using a collaborative approach can resolve or prevent resource conflicts and issues associated with travel on BLM lands. The Canyon Rims TMP was developed using the TTM process. (This TMP addresses OHV use of routes in the Canyon Rims TMA. Non-motorized uses will be addressed in a separate planning process.) See the BLM's travel management handbook (BLM 2012a) and manual[1] (BLM 2016c) for more information on the TTM process.

The BLM's TTM process ensures proactive management of public access and resources in compliance with travel-related regulations and best management practices (BMPs). The process moves from broad-scale land use plan (LUP) decisions achieved in RMPs or equivalent documents to more site-specific project level decisions and actions (e.g., those included in the EA and this document). TTM project-level decisions address specific implementation, operation, and maintenance actions for routes and access and recreation-related needs. TTM goals are to:
- Provide and improve sustainable access for public needs and experiences
- Protect natural resources and settings
- Protect cultural resources in compliance with Section 106 of the NHPA
- Promote the safety of public land users
- Minimize conflicts among various public land users

2.   TRAVEL MANAGEMENT DECISIONS

2.1   2008 RMP Decisions and Current Management Settings

2.1.1   Previous Individual Route Designations and General Travel Management Guidance
The 2020 Canyon Rims TMP route network designations supersede the individual route designations assigned in the TMA by the 2008 RMP. For more details on these designation efforts, see pages 18-20 and 36-37 of the 2008 RMP (BLM 2008b). In some cases, individual route designations developed in the 2020 Canyon Rims TMP modify route-specific designations developed in 2008. In addition to assigning project-level route designations, the 2008 RMP also provided overarching travel management-related goals, objectives, and management decisions (see Appendix B of this guide and pages 126-130 as well as Appendix N of the 2008 RMP) to guide future travel management planning efforts such as the 2020 Canyon Rims TMP.

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[1] The BLM travel management manual was last updated in 2016 and should be used instead of the more outdated handbook when manual topics overlap with handbook topics.

2.1.2 Area Designations

An area designation is a land use planning (i.e., RMP-level) decision that permits, establishes conditions for, or prohibits OHV activities on specific areas of public lands. The BLM is required to designate all public lands under their jurisdiction as open, limited, or closed to OHVs. OHV area designations are different than individual route designations, which are more comprehensive and specific. After OHV area designations are assigned in RMPs, individual routes may be designated in areas designated as "open," and individual routes must be designated in areas designated as "limited." Typically, individual route designations of open, limited, or closed are identified during a route evaluation process and analyzed in an EA accompanying a proposed TMP. This was the case for the Canyon Rims TMP/EA project.

The 2008 RMP designated all of the TMA as "Limited to Designated Routes." For a depiction of OHV area designations in the Project Area, see Map 30 in the 2008 RMP (BLM 2008b). Though there are exceptions for emergencies and other instances, motorized and mechanized vehicle use is limited to designated routes in the TMA. According to the BLM's travel management manual, "As an implementation-level decision, any limitation applied in an OHV limited area may change through . . . subsequent implementation level decisions allowing management to adapt based on resource concerns, changes in resource uses, and new information" (BLM 2016b). The BLM's travel management manual provides definitions for the OHV area designations that apply in the TMA:

> OHV Limited Areas
> An OHV limited area is governed by one or more defined limitations. A limitation is a restriction at certain times, in certain areas, and/or to certain vehicular uses or users. These restrictions may be of any type but generally fall within the following categories or combination of categories: numbers of vehicles, types of vehicles, time or season of vehicle use, permitted or licensed use only, use on existing roads and trails, or use on designated roads and trails. While the designation of an area to the OHV limited allocation is a land use planning decision, the specific [individual travel route] limitations applicable to the area are considered implementation-level decisions.
>
> The standard limitation will be "limited to designated routes" (i.e., [travel] restricted by implementation-level decisions to the use of specific roads, primitive roads, trails, and other identified routes). If no route-specific decisions exist at the time the RMP decisions are made, the designation of an "OHV Limited Area" will limit all OHV use to the same manner and degree occurring at the time of the designation in the RMP. The "OHV Limited Area" designation will prohibit any new surface disturbance, such as cross-country travel, unless subsequently authorized through another implementation-level decision. After the RMP decision has been issued, the field office will need to determine the specific type of limitations that will apply to the areas with OHV 'limited' area designations. This is done, in most cases, through the development of a travel management plan (TMP) which results in an implementation-level decision for travel on each travel route within a given planning area (see Chapter 4 [of the travel management manual]). For additional information on the implementation of OHV limited area limitations see section 4.2 [of the travel management manual] (BLM 2016b).

OHV use is prohibited in a closed area. Areas should be designated closed when limitations on OHV use will not suffice to protect resources, promote visitor safety, or reduce use conflicts. Access in these areas by means other than OHVs, including those motorized vehicles and users excluded from the definition of an OHV (43 CFR 8340.0 5(a)), mechanized vehicles, and non-mechanized use is still permitted. Closure to non OHVs requires management outside of the 43 CFR 8340 regulation and may require creation of supplementary rules (see 43 CFR 8365.1-6), establishment of closures or restrictions (4 CFR 8364.1), or the addition of stipulations to new authorizations to govern the authorized use of vehicles.

Except as otherwise provided by law or regulation, congressionally designated Wilderness, certain other congressional designations, and some areas established by Presidential proclamation are statutorily closed to motorized and mechanized use. Refer to the appropriate law, regulation, proclamation, or policy for guidance on how to address any exceptions to closures (BLM 2016b).

2.2   Route Designations

One of the purposes of the Canyon Rims TMP process was to make route-specific designations for each evaluated route in the TMA. For more details on route designation definitions and how they were determined, see Section 2.1 of the EA. For more details on each route designation, see the route reports discussed in Appendix H of the EA. Table 2.1 (below) shows the miles of routes for each EA alternative that fall under broader designation categories. Individual designations can be more detailed and customized.

Table 2.1: Alternative Mileages by Major Designation

Designation	Alt. A		Alt. B		Alt. C		Alt. D	
	Miles	% of Network	Miles	% of Network	Miles	% of Network	Miles	% of Network
OHV-Open	272.5	100%	197.5	72.5%	230.1	84.4%	246.0	90.3%
OHV-Closed	0	0%	75.0	27.5%	42.4	15.6%	26.4	9.7%

2.3   Transportation Asset Types and the FAMS

"Transportation 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 "transportation assets" contained within the Facility Asset Management System (FAMS). The BLM travel management manual states, "The inclusion of a transportation linear feature in FAMS is not a decision—inclusion in FAMS is a management tool to aid in the implementation of route-related decisions such as administration, maintenance, emergency repair, etc." (BLM 2016c). If the data are available, the BLM records FAMS numbers during evaluation for routes that are already in the FAMS.

Closed routes, reclaiming routes, and routes in wilderness areas are not to be included in the FAMS. Below are BLM travel management manual definitions for the three FAMS asset types:

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. (BLM 2016c)

Table 2.2 below shows the mileage of FAMS asset types for the Canyon Rims TMP adopted in the DR. **Note: This table will be populated following determination of the final route network.**

Table 2.2: Miles of Routes by Asset Type and Designation

Designation	Primitive Road	Road	Trail
OHV-Open - Open year-round to all motorized vehicle travel			
OHV-Limited – Public motorized vehicle use limited to specified vehicle type, width, etc.			
OHV-Closed – Route not available for public motorized vehicle use			
Allowable Use: Authorized users only			
Totals			

2.4   Non-Motorized Route Use

TTM encompasses more than the management of OHVs. People can engage in non-motorized uses anywhere on public lands, including those within the TMA, unless an area or route is closed for safety or specific resource protection. Therefore, routes that limit motorized vehicle use to official or administrative purposes or otherwise are designated OHV-closed are often open to non-motorized uses, including but not limited to hiking and horseback riding.

2.5   Cross-Country Motorized Travel

The 2008 RMP addresses how its OHV-limited area designation prohibits cross-country travel:
The limited designation in the Approved RMP replaces the large amount of area currently available for cross country travel within the planning area. As a result, the Approved RMP provides a substantial amount of protection to natural (vegetation, soils, scenery, riparian, and wildlife) and cultural resources by eliminating cross-country travel which can be detrimental to these resources. The Approved RMP allows for motorized access

and opportunities within the limited designation while still providing protection for sensitive resources and non-motorized recreation users. (BLM 2008b)

Mountain biking within the TMA is also limited to designated routes in the network.

2.6   Public Land Access

2.6.1   Introduction
Access to and across BLM lands within the TMA is influenced by land tenure and various land-use authorizations, such as rights-of-way (ROWs) 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 travel 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 long-term access for the public and for the maintenance and operation of authorized uses. The online interactive project map shows the TMP designated route network in relation to BLM surface ownership in the TMA.

2.6.2   Access Routes and Lands from which Access Originates
Access to and within the TMA exists primarily from the Anticline and Needles Overlook roads, which stem off U.S. Highway 191 on the TMA's eastern border. The northern portions of the TMA are accessed off the Looking Glass Rock road and Flat Iron Mesa road. The portion of the TMA to the north of the Colorado River is primarily accessed from State Highway 279 (Potash Road). In addition to these developed roads, many secondary routes provide access within the TMA. Access to the TMA is primarily from BLM lands, though a few routes enter from private and state lands. In areas where BLM-administered routes cross private lands, access into the TMA from these routes is not ensured for the long-term unless the BLM acquires legal permission across these lands. TMP route designations do not apply to private property. Access across private lands in the TMA is a concern for the public and for the BLM's management of adjacent public lands. The BLM may work to acquire easements from willing landowners to secure access across these lands. To avoid new ground disturbance and impacts to resources, the BLM may encourage use of existing roads in all ROWs issued to access private land.

2.6.3   Public Access Guidance from the 2008 RMP
Table 2.3, below, provides examples of some 2008 RMP goals, objectives, and management decisions that are more directly related to public land access than others. However, various RMP statements can relate to public access in some manner, and the list in Table 2.3 is not comprehensive. A complete list of lands and realty management statements can be found on pages 115-22 of the 2008 RMP.

<div align="center">Table 2.3: 2008 RMP Public Land Access-Related Goals, Objectives, and Management Decisions</div>

Goals and Objectives	
•	Meet public needs for use authorizations such as rights-of-way (ROWs), alternative energy sources, and permits while minimizing adverse impacts to resource values.
Management Decisions	

LAR-3	Give land exchanges with the State of Utah priority consideration to resolve inholding issues.
LAR-4	Areas of Critical Environmental Concern (ACECs) will be avoidance areas for any new ROWs (including communication sites and wind and solar sites).
LAR-8	As per the State of Utah v. Andrus, Oct. 1, 1979 (Cotter Decision), the BLM will grant the State of Utah reasonable access to State lands for economic purposes, on a case-by-case basis.

Note: In this guide, RMP details on public access for the purposes of roadside camping and big game retrieval can be found in [Section 10](#) and [Section 11](#), respectively.

3. IMPLEMENTATION

3.1 Introduction

This TMP Implementation Guide's primary purposes are to implement the designations in the adopted Canyon Rims TMP and to create a management framework that allows for current and future user needs while ensuring the protection of resources and reducing or preventing user conflicts. The implementation strategies in this section are expected to assist in achieving these purposes.

3.2 Implementation Strategy and Priorities

3.2.1 Priority of Implementation Actions

TMP implementation is staff- and funding-dependent and should be based on the strategies and priorities discussed below. The implementation priorities are based on the BLM's projected ability to operate and maintain the designated travel network in a manner that may change TMA conditions and influence visitor behavior to achieve desired conditions. Specific components of TMP implementation are described in more detail elsewhere in this plan. This section provides the reader with a sense of key implementation actions and when they could happen.

Monitoring, adaptive management, and budget limitations can affect the BLM's implementation priorities and timeline of completion. When selecting areas/routes for TMP implementation, priorities will be assigned using the five factors listed below. The highest priority for implementation will be given to areas/routes 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, recreational, etc.)?
3) Does the area/route include habitat for special status species?
4) Does the area/route have above-average surface disturbance?
5) Does the action resolve significant community or administrative interface issues?

Actions described below may be done concurrently, combined, or conducted in the order in which they are funded. The BLM may 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 (see [Section 1.2](#) for a listing of special emphasis areas in the TMA). The following list indicates the BLM's Canyon Rims TMP implementation actions:

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 closed routes. Mark obvious closed roads as "closed" to enable on-the-ground understanding and compliance. Pursue funding for materials and staff needed to implement route and transportation facility signing efforts.
3) Conduct maintenance as appropriate on the designated transportation system.
4) Establish or maintain partnerships with existing local groups and clubs and local, county, State, and tribal government organizations. As needed and when possible, recruit and train volunteers to establish monitoring patrols and place route markers to augment MFO efforts.
5) Establish route closures and assess restoration needs based on inventory and monitoring. Pursue funding for route closure and reclamation if necessary; then begin reclamation of closed routes.
6) Install informational kiosks and signs. Maintain and upgrade existing kiosk boards as necessary.
7) Monitor compliance with the TMP route network designations, including the route network markers.
8) Make changes to the route network and adjust management strategies as necessary.

Past agency experience gives insight into effective implementation actions as well as the order in which they best occur. The successful implementation of the TMP may proceed in the order listed in Table 3.1, below. Table 3.1 shows phased prioritization hierarchies.

Table 3.1: TMP Implementation Priorities

Phase	Task	Implementation Notes
Phase I	Assign a FAMS navigational identification number to each route that is designated open or limited.	*Enter in FAMS. Update GIS database to "crosswalk" with evaluation and inventory numbers.*
Phase I	Develop and publish up-to-date, readily available map of BLM travel route network.	*This is the first step in the effort to increase public knowledge of the travel network and plans for its future. To be cost-effective, maps may cover an area larger than just TMA BLM lands.*
Phase I	Develop a signing plan and initiate an outreach program.	*This can be done at the District level.*
Phase I	Pursue funding for outreach literature, signs, and staff needed to implement the route-marking effort.	
Phase I	Establish databases and protocols for collecting monitoring data. Identify initial sites for resource monitoring.	*Clear identification of the information required would result in more effective monitoring and data recording.*

Phase	Task	Implementation Notes
Phase I	Prepare for initial signing of network.	*As funding allows, this may include hiring seasonal trail ranger(s) or contracting for initial signing.*
Phase I	Sign the travel route network with route markers and inventory maintenance and restoration needs. Mark obvious closed roads as closed. Prioritize by area.	*The principal goal is to make the open and limited travel routes more attractive than closed travel routes.*
Phase I	Set up partnerships with existing local groups and clubs and local, county, State, and tribal government organizations. As needed/possible, recruit and train volunteers to establish patrols and place route markers.	*Greater public compliance with OHV regulations may be achieved over time by involving user groups for this task.*
End of Phase I	Monitor compliance with the TMP route network. Publish an annual report online.	*The report could include pictures of some actions taken.*
End of Phase I	Pursue funding for route reclamation. Establish restoration priorities using data from inventories and monitoring.	
Phase II	Take actions to reclaim "Closed and Decommissioned" travel routes that continue to receive vehicle traffic.	*Timely reclamation of such routes would reduce the potential for continued use of those routes.*
Phase II	Update travel network maps and re-publish as necessary.	
All Phases of Plan	Monitor and maintain the open route network markers based on direction in this guide's sign plan.	
Phase II or III	Install bulletin boards/kiosks at primary portals to public lands and where needed based on monitoring.	*Only install at non-portal sites if sites that require additional visitor information have been identified through monitoring.*
Phase III	Explore options for completing a visitor survey for each TMA.	

3.2.2 Funding Strategy

BLM will seek adequate funding to manage and maintain the TMA's route network. Funding will be needed for labor and supplies to provide law enforcement, recreation and visitor services, outreach programs, the restoration and decommissioning of closed routes, and maintenance and operational costs (supplies, materials, tools, equipment, vehicles, communications, etc.). Operational funding for cultural resources protection, wildlife surveys, transportation system maintenance, and related costs should be determined on an ongoing project basis and planned annually.

3.3 Education and Outreach

3.3.1 Introduction
Public education and outreach are important priorities in implementing the TMP. Successful implementation includes providing 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 may be distributed through news releases, traditional brochures and guides, travel maps, informational signage, social media sites, electronic media from BLM websites, and other means. Educational efforts may 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.

3.3.2 Objectives
The main education objectives for the Canyon Rims TMP are attaining voluntary compliance with route designations and closures and reducing conflicts among public land users. Ensuring 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 other identified objectives.

The outreach initiative will promote respect for public, private, and state trust land by providing information on access to public lands, by encouraging users to obtain permission from landowners if traveling across private lands, and by specifying where to get additional information and maps. Target messages or themes for this educational effort include:
- Public lands provide diverse recreational opportunities enjoyed by various users.
- Restricting travel to designated transportation systems protects resources and public access.
- Tread Lightly! (www.treadlightly.org)/Leave No Trace (www.lnt.org) outdoor ethics
- Share the trail (https://www.imba.com/ride/imba-rules-of-the-trail).
- Respect other users of public land and the rights of private landowners.
- Prevent wildfires.
- Practice OHV ethics and safety.
- Prevent the spread of invasive species.

3.3.3 Outreach Strategies
Effective communication with the public requires clear, concise messaging. This can be accomplished through direct and indirect public contact and through physical and virtual means. Though not exhaustive, the following list outlines potential targeted methods of communication for the:
- Kiosks and interpretive signage
- Visitor center displays
- In-person public presentations
- Paper and electronic format maps available to the public
  - General visitor map of designated route network (must follow mapping standards of the BLM's *Publication Standards Manual Handbook* [H-1553]).
  - Special area maps

- Website/electronic media
  - Georeferenced PDF maps for viewing on portable electronic devices
  - ArcGIS Online map server
  - Google Earth KML/KMZ files
  - Universal GPS files (GPX) for use with GPS units
  - GPS-compatible route and basemap data loaded on memory cards for sale online and/or at appropriate BLM offices and visitor centers
- Social Media
  - Twitter
  - Facebook
  - Instagram
  - BLM Tumblr Page

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. Appropriate, consistent signing that conforms to national standards will help ensure a safe and enjoyable visit to public lands. For more specifics on signage, see this guide's sign plan (section 3.4).

Maps and other information relating to the travel and transportation network will be available to the public at a future date in paper and electronic form at visitor centers, on BLM websites, and displayed on informational kiosks throughout the TMA. 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 BLM. Educational materials will also include information on the impacts that inappropriate visitor behavior has on TMA resources or other resource uses. The BLM will 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.

3.3.4 Partnerships

To achieve travel management implementation objectives, the BLM may 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.

Partnerships can enhance opportunities for community involvement in travel management implementation. Official partnerships may be established through agreements including memoranda of understanding, cooperative agreements, assistance agreements, landowner agreements, letters of agreement, and other types of documents for contributed goods and services.

3.4 Sign Plan

Signing is a key element in implementing comprehensive travel and transportation plans on the ground. The BLM may use discretion and professional judgment to select the best signing methods for each situation using the guidance set forth in the Sign Plan BMPs, Appendix G, and may develop more detailed, area-specific plans as needed. The sign component of this guide is

intentionally broad in scope. Rather than addressing specific sign needs, requirements or locations, it establishes sign standards and guidelines for implementation and management of TMP objectives. This is not a static implementation plan; it may be modified as new signing needs are identified. Additional details for signs on BLM lands (installation, ordering, etc.) can be found in the BLM's 2016 National Sign Handbook (BLM 2016a) and the Federal Highway Administration's Manual on Uniform Traffic Control Devices, which is also known as the MUTCD (FHWA 2019).

3.5   Maintenance and Engineering

3.5.1   Overview

This section covers maintenance and engineering considerations for the TMA route network. Routes should be added to the Ground Transportation Linear Feature (GTLF) dataset, which is the most up-to-date dataset for Utah BLM, and updates in the route network in GTLF will serve as updates to the TMP.

The routes should also be included in the Facility Asset Management System (FAMS). Each route will have a FAMS route number, a primary route management objective, a functional classification, a FAMS asset type, maintenance intensity, FAMS inclusion/nomination status, and FLTP and FLAP eligibility status. More details on these implementation data types are provided later in this section.

Route maintenance on BLM lands can include general grading and shaping of route surfaces, maintenance and installation of water control structures, placement of gravel surfacing, washout repairs or realignment, etc. The BLM will maintain roads on public lands in the TMA as specified by maintenance intensities, and condition assessment results that indicate a need for additional maintenance.

The conditions and use levels of routes can determine what maintenance intensities they receive. Route conditions, design standards, and guidelines are based on average daily traffic, functional classifications, and terrain. Changes to the transportation network (e.g., new routes, re-routes, or closures) in the TMA are made through project-level planning with site-specific review as appropriate under applicable laws.

As done in the past, maintenance efforts may 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 (e.g., 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. A current route maintenance MOU exists between the MFO and San Juan County and should be expected to remain in place in the future. 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.

Standards for design, construction, and maintenance of roads and trails within the network should follow BLM policy found in the following manuals and handbooks:

- MS 9113 - Roads (BLM 2015)
- H-9113-1 Road Design (BLM 2011)
- H 9113-2 Roads National Inventory and Condition Assessment Guidance & Instructions (2015a)
- H-9115-1 Primitive Roads Design (BLM 2012b)
- H-9115-2 Primitive Roads Inventory and Condition Assessment Guidance & Instructions (BLM 2012c)

3.5.2 Engineering Interface

This section describes the interface with the BLM Engineering program as an ongoing component of travel management planning and implementation. The components described below may only be fully attributed or documented as time and resources allow.

3.5.2.1 Routes in the Facility Asset Management System (FAMS)

The 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 appropriate designated roads, primitive roads, and trails within the travel network addressed in this TMP are classified as transportation assets in the FAMS and will be tracked in the FAMS as well as the Ground Transportation Linear Feature (GTLF) geospatial database.

3.5.2.2 Routes in the Federal Lands Transportation Program (FLTP)

The BLM project lead must coordinate with BLM engineering staff to determine which routes are eligible for FLTP status. FLTP-eligible routes are:

- Owned and maintained by the federal government
- Important and highly valued by the BLM
- Located on, adjacent to, or provide access to federal lands
- Included in the national Federal Lands Transportation Facilities (FLTF) inventory

Routes in the FLTP are also intended to provide access to high-use recreation locations and federal economic generators. Documenting FLTP eligibility for FLTP funding is a requirement for travel management plans (TMPs) in the 2016 BLM travel management manual (BLM 2016b).

3.5.2.3 Route Functional Classifications

The BLM uses three functional classifications (collector, local, and resource) to categorize its roads.[2] These classifications reflect the area served, type and volume of traffic, and maintenance standards. These classifications are described in the subsections below with text taken from the BLM roads manual (BLM 2015).

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[2] Not all routes are considered "roads" in the context of BLM travel management. For example, a trail is a route but not a road. Therefore, functional classifications only pertain to roads and primitive roads. Most of the BLM-managed routes in the TMA function as resource roads.

Collector Roads: "These BLM roads normally 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 of all the roads in the Bureau 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 Bureau. As a result, they have the potential for creating substantial environmental impacts and often require complex mitigation procedures."

Local Roads: "These BLM roads normally serve a smaller area than collectors, and connect to collectors or public road systems. Local roads receive lower volumes, carry fewer traffic types, and generally serve fewer uses. 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 effect of terrain, may be single lane roads with turnouts. Environmental impacts are reduced as steeper grades, sharper curves, and lower design speeds than would be permissible on collector roads are allowable."

Resource Roads: "These BLM roads normally are 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 use. Use restrictions are applied to prevent conflicts 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 Bureau [BLM] costs, with minimal consideration for user cost, comfort, or travel time." (BLM 2015)

3.5.2.4 Primary Route Management Objectives

The primary route management objective for each route influences the type of maintenance and engineering to be applied to it. The BLM's GTLF guidelines state that the primary route management objective is "the BLM's reason for the route. [It] summarizes multiple reasons into a single presentable statement" (BLM 2014d). According to the BLM travel management manual, primary route management objectives "should reflect management area direction, including desired future conditions, uses, recreational outcomes and settings, as well as TMP objectives" (BLM 2016c). According to the BLM's GTLF guidelines (BLM 2014d), there are three possible individual route management objectives, which are listed and defined below:

- *Access* - Access to specific location for specific task/project.
- *Connectivity* - Primary objective is travel between 2+ other routes.
- *Experience* - Primary objective is to provide for recreational experience.

3.5.2.5 Engineering and Maintenance Best Management Practices (BMPs) and Standard Operating Procedures (SOPs)

The following engineering-specific BMPs and SOPs will be applied in the TMA:

Best Management Practices
- Road Construction
  - Construct culverts, cross drains, or other water control devices to prevent erosion.

- Locate and construct roads to minimize excavation and follow existing ground contours as closely as possible.
- Road Drainage
  - Provide adequate drainage from the surface of all roads by using out sloped or crowned roads, drain dips, or in sloped 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 in sloping and using relief culverts or out sloping and by grade changes. Plan for effective well-placed dips or water bars.
  - Design roads for minimal disruption of drainage patterns.
- 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 issues, conserve resources, or to maintain desired recreation experiences. In most cases, grading the full length of primitive roads is not required or desired.
  - Route maintenance will occur within standard widths based on route type.
- Non-motorized Trail Construction
  - Construction should follow the BLM 9114 Trails Manual (2012) or other applicable standards.
  - Design trails to minimize surface disturbance.
  - Linear areas of interest should be marked with fiberglass posts or rock cairns to establish footpaths.
  - Alternative types of transportation to link areas of interest should be considered.
- Design features for Threatened and Endangered species and Sensitive plant habitat
  - All efforts would be made to avoid disturbance in potential habitat areas
  - Maintenance activities would occur outside the flowering period
  - Dust would be suppressed using water
  - If disturbance outside the existing travel surface is required for maintenance activities, then surveys would be conducted within suitable habitat. If plants are located, then maintenance activities would not occur.
- General
  - Ensure that road specifications and plans are consistent with good safety practices.

- o Design, construction, and maintenance of roads, primitive roads, and trails should comply with guidelines identified in the BLM roads manual (BLM 2015), the BLM primitive roads manual (BLM 2012d), the U.S. Forest Service's Trail Construction and Maintenance Notebook (USFS 2007), Guidelines for a Quality [Mountain Bike] Trail Experience (BLM and IMBA 2017), and the National Off-Highway Vehicle Conservation Council's Great Trails resource guide (NOHVCC 2015).
- o Emphasize the use of existing routes (through continued use or reconstruction) to minimize new route construction.
- o 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.
- o Implement mitigation techniques when designing and implementing the route system.

Standard Operating Procedures
- Standards and guidelines should be followed per BLM Manuals 9113 (BLM 2015), 9114, and 9115 (BLM 2012d) for BLM road, trail and primitive road maintenance, new construction, or reconstruction.
- The standards and guidelines for primitive roads should be based on the functional requirements of the various types of recreational motorized users.
- The BLM should not develop, endorse or publish road or trail ratings. The BLM should 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 should 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 should be documented, and route modifications will be identified and recommended if necessary.
- Maintenance of routes may be done to minimize soil erosion and other resource degradation. This maintenance should be done on a case-by-case basis, depending upon annual maintenance funding.
- Once the number and type of barriers is determined, maintenance procedures for physical barriers should be developed and tracked manually or systematically by a system such as the FAMS.

3.5.3 Maintenance Intensities
Routes in the TMA network may be maintained in accordance with assigned maintenance intensities and in consideration of resource issues. 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, location, and type of maintenance activities that should be undertaken to keep routes in acceptable condition. They do not describe route geometry, type, types of use, or other physical or managerial characteristics of routes.

The aim of BLM route maintenance in the TMA is to sustain navigability for network roads, primitive roads, and trails without substantially changing routes' recreational experiences. The top priorities are to protect visitors, reduce hazards, and prevent the degradation of resources.

Based on resource management needs and functional classifications, each route in the TMA will be assigned a maintenance intensity level, which provides the basis for route maintenance in the BLM FAMS database.

Table 3.2, below, shows descriptions of maintenance intensities. The table's maintenance intensity descriptions are derived from the first appendix item of the BLM roads manual (BLM 2015). Details on the objectives and funding levels for reach maintenance intensity are also in the BLM's roads manual.[3] Most primitive roads are likely to have low maintenance intensities but should be managed to protect sensitive resources and provide for an acceptable level of health and safety risk given the type of use. Maintenance intensity levels provide the basis for performing maintenance and updating the BLM GTLF and FAMS database for the TMA.

Table 3.2: Maintenance Intensities Under Chosen Alternative

Maintenance Intensity	Descriptions of Routes Under Each Intensity Level
Level 0	Existing routes that would no longer be maintained or declared as routes. Routes identified for removal from the Transportation System entirely.
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.
Level 3	Routes requiring moderate maintenance due to low volume use (for example, seasonally or year-round for commercial, recreational, or administrative access). Maintenance intensities may not provide year-round access but are intended to generally provide resources appropriate to keep the route in use for the majority of the year.
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.

Upgrading a road's surface, width, 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 consider if additional environmental analysis is required.

3.5.4 Transportation Facilities

This TMP does not identify specific transportation facilities that may need improvement or development, although these needs may be considered as future needs arise. Any future agency actions involving facilities would be addressed in area-specific activity-level or project-level plans, which would include travel-related decisions. Examples of such facilities could include campsites, staging areas, protective fencing, barriers, information kiosks, administrative gates,

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[3] The BLM roads manual referenced above mentions maintenance intensity levels 2 and 4, which are not in the table below because they are "Reserved for Possible Future Use."

trailheads, and non-motorized trails. These site-specific projects would be subject to review as appropriate under applicable laws and would be developed to avoid or mitigate impacts to natural resources or significant cultural resources. After development, these sites would be incorporated into this TMP and considered part of the travel network.

3.5.5   New Route Development

The addition of new routes is part of the operation and management of the overall travel network. New route development may be prudent, depending on the situation. For example, resource protection or administrative concerns might require the relocation of an existing route. The BLM or members of the public might also request new routes to improve or enhance access or experiences (e.g., creating a travel loop or non-motorized trails). Engineering staff will be involved early in the process of planning, locating, designing, constructing, and choosing and applying BMPs associated with new routes. New routes and changes to the network require application of appropriate NEPA review.

New routes may be proposed through site-specific project plans, permits, or ROW requests. The route evaluation process and NEPA review (both of which may be done concurrently) must occur prior to the implementation or construction of a new route. If authorized, new routes and any associated ROWs would become part of the designated transportation system; closed routes would be removed from the transportation system. The BLM's travel management manual (BLM 2016c) provides broad guidelines on how to appropriately add new routes to a BLM travel network.

All new roads, primitive roads, and trails would meet the standards for design, construction, and maintenance found in BLM manuals and handbooks (e.g., "Appendix 8: Trail Planning and Standards" in the BLM travel management handbook (BLM 2012a)). Among other guidance, all new TMA routes would meet the standards for design, construction, and maintenance found in the BLM's Roads Design Handbook (BLM 2011) and Primitive Roads Design Handbook (2012b). Such guidance provides details on specifics such as degree of curvature, sight distance, alignment, etc.

3.5.6   Route Relocation and Realignment

Route widening, realignments, or travel surface upgrades can occur if:
- Appropriately addressed by TMP EA or other NEPA.
- Needed to achieve route standards or management objectives.
- Needed for public safety.
- Done in accordance with TMA route maintenance and construction standards.

3.5.7   Processing of Proposed Route Changes

The process of adding new routes (OHV or non-motorized) to the designated route network and implementing other route changes require appropriate NEPA review. All proposed route changes should be processed as follows:
- Route locations would, at a minimum, be mapped or located using accepted GPS devices and presented to the BLM (if proposed by a third party) for consideration. Locations of route proposals off designated OHV routes would be documented and mapped using non-OHV methods.

- The BLM may consider opening an administrative route to public use.
- Route proposals submitted to the BLM shall 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 shall be staked and flagged or otherwise identified for on-the-ground review by resource specialists.
- The route location shall be analyzed for potential conflicts, such as (but not limited to): wildlife habitat and movement, adverse effects to NRHP-eligible cultural resources, visual resources, other recreation uses, mining claims or leases, grazing facilities, ROWs, public safety, and proximity to other jurisdictions (such as private land). A structured process will be used to evaluate and document potential route conditions.
- The conflict assessment may lead to development of mitigation actions or alternative locations or designs.
- An NEPA review would be conducted to determine the environmental effects of the proposed route, any reasonable alternatives, and recommended mitigation.
- A decision would be issued by the field manager based on 2008 RMP conformance, resource objectives, and environmental impacts.
- If the decision is to approve the addition of the route, this TMP would be updated accordingly.
- The BLM may require that a licensed surveyor provide a cadastral survey (to be reviewed by a BLM cadastral surveyor) of a route prior to issuance of a ROW authorization.

3.6   Enforcement

3.6.1   Overview
Law enforcement coverage in the TMA is currently provided by BLM law enforcement and local sheriff and/or police departments. The BLM maintains the authority to temporarily, permanently, partially, or completely suspend any activity based on safety issues or unacceptable resource impacts. Enforcement actions typically occur in response to complaints, and patrols are conducted on a periodic basis, depending on other priorities. Typical law enforcement concerns related to public use in the TMA include: route proliferation, dumping, vandalism, theft of government property, littering, interfering with livestock operations, medical emergencies, search-and-rescue operations, illegal removal of natural resources, unauthorized cross-country OHV use, firearms violations, and driving under the influence of alcohol or drugs. State vehicle laws will be applied to OHV use where applicable. The following measures are important for successful law enforcement in the TMA:
- 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.
- Prioritize how to use limited law enforcement resources to the greatest effect:
  - Concentrate law enforcement efforts during high-use periods such as weekends and holidays.
  - Focus targeted enforcement in the most high-use areas.

- Support volunteer efforts to educate the public on rules and proper land use etiquette, such as NGOs leading Leave No Trace seminars.

3.6.2 Regulations to be Enforced

The public land regulations described in 43 CFR 8340 (GPO 2016), 43 CFR 8360 (GPO 2009a), and 43 CFR 9268.3 (GPO 2001) will be enforced to implement travel management and route designations within the TMA. These regulations will be enforced by BLM law enforcement officers to protect public safety and resources. They may be supplemented as deemed necessary by Supplementary Rules, which may be established pursuant 43 CFR 8360 under a separate action to implement use restrictions identified in RMP decisions. State of Utah motor vehicle laws and regulations, including OHV regulations, apply on BLM-administered lands in the TMA and will continue to be enforced.

3.6.3 Patrols

In addition to responding to complaints emergency situations, and where monitoring has found user conflicts or resource concerns BLM enforcement officers and field staff will focus patrols on those routes 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. During regular patrols, enforcement officers and field staff may document observed OHV impacts to resources as appropriate or as a general component of monitoring. Continual, highly visible patrols by BLM staff would maintain an authoritative presence in the field.

Personnel from partner agencies, such as the Utah Division of Wildlife Resources (UDWR), San Juan County Sheriff's Department, and the Utah Highway Patrol may also assist BLM staff with law enforcement duties on BLM-administered lands in the TMA. Local police departments may patrol in wildland-urban interface areas. Coordinated interagency efforts may be undertaken to provide an official presence during times of peak use or to supplement ongoing resource protection-related operations.

3.7 Supplementary Rules

Supplementary Rules can be established where current regulations (including route designations) do not provide adequate public safety or resource protection. See 43 CFR 8365.1-6 (GPO 2009b) for the supplementary rulemaking process. Speed limits would be an example of supplementary rules within the TMA.

4. LONG-TERM MONITORING PROTOCOL FOR MOTORIZED VEHICLE IMPACTS AND OTHER ITEMS

4.1 Overview

4.1.1 Introduction and Purpose of Monitoring

Monitoring is an important part of ensuring proper TMP implementation. Monitoring efforts will help determine the effectiveness of route management and inform BLM on issues that may need to be addressed with new management decisions, implementation planning or focused implementation efforts. The EA identified a number of important resource issues at the heart of

BLM's commitment to provide for multiple land uses while protecting sensitive cultural and natural resources. The following issues are of particular importance to the TMA:

- Impacts of OHV travel on known cultural resource sites
- Soil erosion, and its resulting impacts on vegetation
- OHV-related disturbances of special status species plant habitat
- OHV-related disturbances on special status species wildlife habitat
- Impacts from OHV travel on the defining characteristics of lands with wilderness characteristics and other special management area designations
- User conflicts within the TMA
- Route proliferation within the TMA.

As required in 43 CFR 8342.3 ("Designation changes"), "The authorized officer shall monitor effects of the use of off-road vehicles. Based on information so obtained, and whenever the authorized officer deems it necessary to carry out the objectives of this part, designations may be amended, revised, revoked, or other actions taken pursuant to the regulations in this part" (GPO 2016). In the broadest sense, monitoring helps to determine if adequate progress is being made toward management objectives. Among other things, this means that the monitoring program will be used to determine:

- If resource and resource use objectives are being met.
- Visitor satisfaction.
- Use patterns and volumes.
- Condition of roads and trails, the condition of public use areas, and compliance with route designations and use restrictions.
- Effectiveness of cross-jurisdictional enforcement.

4.1.2   Where to Find Monitoring Guidance

4.1.2.1 Individual Route Reports
While this guide provides some overall monitoring guidance for the TMA route network, specific monitoring protocols were laid out for some individual routes during the route evaluation process. Many of the routes with "Open with Management" and "Limited with Management" designations have monitoring specified for a variety of resources. Such resource monitoring is different than simply monitoring plan task completion or effectiveness and often covers motorized vehicle impacts. For route-specific monitoring details, see the route reports discussed in Appendix H of the EA as well as Table C.1: Route-by-Route Monitoring and Mitigation Details (Chosen Alternative) in Appendix C in this guide.

4.1.2.2 Settlement Agreement
This TMP has been influenced by what is referred to as the 2017 Settlement Agreement, which resulted from *Southern Utah Wilderness Alliance, et al. v. U.S. Department of the Interior, et al.*, Case No. 2:12-cv-257 (D. Utah). In the 2017 Settlement Agreement, the BLM agreed, among other things, to issue a new TMP for the Canyon Rims TMA. On pages 14 to 18, the 2017 Settlement Agreement provides specific requirements for monitoring travel management in TMAs found in the Kanab, Moab, Price and Vernal Field Offices. It provides details on baseline monitoring reports, monitoring during planning, consideration of considerable adverse effects,

and monitoring after TMP route network decisions are issued. These requirements are excerpted in the "Settlement Monitoring Requirements" section of Appendix C of this TMP.

4.1.3 Who Conducts Monitoring

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. Monitoring may be conducted by BLM staff, UDWR personnel, commercial Special Recreation Permit (SRP) holders, grazing permittees, and other partners as approved/authorized by the BLM. For example, the Utah Conservation Corps assisted the BLM with the baseline monitoring (BLM 2019a).

4.1.4 Baseline Monitoring Data

As part of complying with the 2017 Settlement Agreement, the MFO assembled the Canyon Rims Travel Management Plan Baseline Monitoring Report. This report can be found on the ePlanning website for this project. Assembling this report involved collecting information on visually apparent unauthorized surface disturbances off routes as well as visually apparent damage to public lands resources caused by OHV use within lands with BLM-inventoried wilderness characteristics. According to the report:

> The majority of disturbances or damage was documented with site photography and a written narrative, along with the following information:
> 1. Geospatial coordinate of the site
> 2. Route number or other identifier
>   - Date of the physical inspection
>   - Name of TMA
>   - Name of the inspector(s)
> 3. Observed usage intensity (none, light, medium, heavy)
> 4. Apparent geographic extent of disturbance or damage
> 5. If possible:
>   - Apparent type of motorized vehicle(s) that caused damage or disturbance
>   - Apparent purpose of the disturbance
>   - Type of public land resource damaged by motorized vehicle use (BLM 2019a)

The Richfield settlement agreement says, "These data can be used as a baseline against which future monitoring data can be compared in efforts to detect changes and implement more effective management." See Appendix C of this guide for more details on baseline monitoring report requirements associated with the Richfield settlement agreement.

4.2 Types of Monitoring

4.2.1 Introduction

There are three types of monitoring detailed in this guide: implementation, effectiveness, and resource monitoring. Implementation and effectiveness monitoring assess the effectiveness of management actions. Resource monitoring documents how various indicators of natural resources change over time.

4.2.2 Implementation Monitoring

Implementation monitoring is the most basic type of monitoring and simply determines whether management actions in the TMP have been implemented in the manners prescribed by applicable planning documents. Implementation monitoring documents the BLM's progress toward full implementation of land use plan (i.e., 2008 RMP) decisions. There are no specific thresholds or indicators required for this type of monitoring.

4.2.3 Effectiveness Monitoring

Effectiveness monitoring is used to determine if TMP implementation activities have achieved 2008 RMP goals and objectives. Effectiveness monitoring results are used to evaluate implementation progress and the effectiveness of the TMP in achieving desired outcomes and conditions. If adverse impacts are discovered, effectiveness monitoring results will also be used to identify adaptive management measures. Effectiveness monitoring will evaluate route conditions, public safety issues, and changes in visitor use patterns/preferences. Effectiveness monitoring may also quantify OHV user compliance.

Effectiveness monitoring asks the following question: Was an activity successful in achieving its objective? Effectiveness monitoring requires knowledge of the objectives established in the 2008 RMP as well as indicators that can be measured. To see the 2008 RMP's travel management-related goals, objectives, and management decisions, see Appendix B of this guide. Indicators are established by technical specialists to address specific questions and avoid unnecessary data collection. Effectiveness is measured against the benchmark of achieving the goals and objectives established by the 2008 RMP, which may include regulated standards for resources. Effectiveness monitoring for the route network will be conducted by staff, volunteers, users, and partners *as time and funding permit*; it may include the following elements:

- Visually document implementation or establishment of closure practices (signs, gates, berms, rocks, etc.) or road decommissioning practices and monitor effectiveness of closure. Establish photo-monitoring points to monitor long-term effectiveness of closing/decommissioning routes.
- Determine the level of OHV use across the landscape using trail counters and aerial photos over time. Traffic counters may be employed to determine levels of use on selected routes.
- Identify route proliferation, unauthorized route creation, route conditions, recreation conflicts, and resource damage compared to the Baseline Study. Measure illegal off-trail and off-road travel as linear disturbances or as area impacts, depending on the level and type of use that occurs.
- Monitor litter/trash.
- Monitor reclamation project success.
- 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 to identify adaptive measures as adverse impacts are discovered.

- Administer a survey on recreation demand, preferences, uses, satisfaction, and information needs in the TMA. This should be done as soon as possible and map publications updated periodically. Work with partners such as universities and user groups to conduct the surveys. Base specific schedule of surveys on TMA conditions and available resources.
- Acquire visitor feedback to monitor whether TMA BLM lands have been clearly mapped and signed for the public. This could be done as part of the survey efforts described above.
- Pay attention to recreational groups, records of field contacts, written trail register comments, and public phone calls to the PFO as part of monitoring the effectiveness of travel management in reducing conflict between different types of users.
- Monitor signing effectiveness through field visits and consideration of amounts of maintenance required.
- Assess primitive road and trail conditions.
- Assess indicators of potential recreation impact issues (e.g., number of new bare soil areas attributable to visitor use, number of campfire pits, additional litter or trash along primitive roads, etc.).

4.2.4   Resource Monitoring

Resource monitoring documents how implementation of the TMP influences natural resources over time. Validating management actions' effects on natural resources is more complex than determining the result of compliance or effectiveness monitoring.

Resource monitoring (as well as management) will be adaptive. Monitoring protocols or techniques may be adjusted as new methods are developed or if it is discovered that current monitoring is not meeting management information needs. Some routes with "Open with Management" designations have had monitoring specified for a variety of resources, and those monitoring protocols may be implemented (subject to funding and available resources). Resource monitoring may be accomplished through standard field office protocols in accordance with the 2008 RMP (see below).

4.2.5   TMA-Specific Monitoring

Monitoring the TMP route network could include observation and recording of conditions associated with special resources and indicators specific to the TMA. When monitoring indicates that use of a designated route is resulting in unacceptable resource degradation, it could be considered for redesign, closure, or decommissioning to minimize or eliminate adverse impacts

Appendix E in the 2008 RMP includes a table of specific monitoring guidelines applicable to various resources. Although various resources could somehow be impacted by travel management, Appendix Q includes specific methodologies for OHVs and transportation (see table below).

Table 4.1: 2008 RMP Travel Management-Related Monitoring

Resource	Suggested Monitoring and Methodology
Travel Management	Travel management and OHV use monitoring within the planning area will focus on compliance with specific route and area designations and restrictions with primary emphasis on those routes or areas causing the highest levels of user conflicts or adverse impacts to resources. Monitoring

Resource	Suggested Monitoring and Methodology
	will focus on the travel designation requirement that all motor vehicles remain on designated routes. Monitor the effect of the use of off-road vehicles. On the basis of information so obtained, and whenever necessary, the designations may be amended, revised, revoked, or other action taken. Modifications to the route system in the Approved RMP will not be considered until implementation of the travel portion of the plan has been substantially completed which includes mapping, signing, monitoring, and evaluation. The process for considering route modifications will be detailed in the Implementation Plan developed for the RMP after completion of the ROD. BLM could impose limitations on types of vehicle allowed on specific designated routes if monitoring indicates that a particular type of vehicle is causing disturbance to the soil, wildlife, wildlife habitat, cultural or vegetative resources, especially by off-road travel in an area that is limited to designated roads. The RMP must include indicators to guide future plan maintenance, amendments, or revisions related to OHV area designations or the approved road and trail system within "Limited" areas. Indicators could include results of monitoring data, new information, or changed circumstances (IM 04-005). Actual route designations within the "Limited" category can be modified without completing a plan amendment, although NEPA compliance is still required.

4.3   Adaptive Management

4.3.1   Overview of Adaptive Management

According to the BLM, adaptive management is "a tool designed after the scientific research process. . . [It] requires a measurable objective, monitoring to determine the effectiveness of the management practices in achieving the objective, evaluation to determine if the objective is being reached, and adaptation based on the results" (BLM 2014a). A similar definition is found in 43 CFR 46.30 (GPO 2011). In adaptive management, problems are assessed, designs are formulated to address problems, and then designs are implemented. During/after implementation, monitoring occurs, data gathered during monitoring are evaluated, and management is adjusted based on new findings. However, new problems could arise, or new approaches might be tried after management is adjusted, which could start the cycle over again. Figure 4.1 (below) shows the cycle of adaptive management.
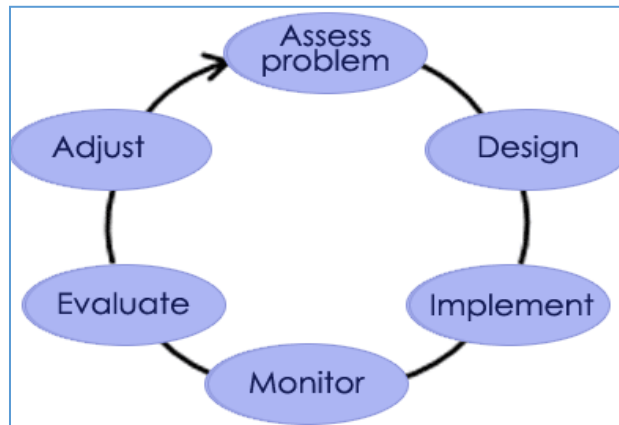
Figure 4.1: Adaptive management cycle

4.3.2   Implementing Adaptive Management in the TMA

Some designated routes in the TMA are in or near resources of concern (e.g., special status plants or wildlife, highly erosive soils, etc.) and mitigation is highlighted in route evaluation forms. However, BLM should mitigate adverse effects throughout the TMA on a case-by-case basis as directed in the 2008 RMP. For designated routes identified for adaptive management, results from ongoing monitoring and assessment may be used to adjust and improve management decisions over time. For TMA BLM-administered lands, sufficient monitoring must be planned to determine whether adequate progress is being made toward achieving priority tasks. If progress is insufficient to achieve tasks in a realistic time period, management actions could be revised.

Adaptive management monitoring may be based on limits of acceptable change (LAC) indicators. Below are some examples of LAC indicators/triggers, which may require adjusting the TMP:

- Desired recreation experiences are not being met as determined by surveys, visitor sign-in logs, or other data-gathering processes conducted in the TMA.
- Priority or special status species habitat conditions continue in a downward trend as a result of recreation or travel impacts.
- Riparian condition trend is not improving as a result of recreation or travel impacts.
- Degradation of cultural resource sites

Adaptive management monitoring focuses on changing conditions that could affect route designations. Through adaptive management, the BLM may modify the TMP to respond to a variety of issues or concerns that could arise in the TMA throughout the life of the TMP. Some more general examples of factors that might alter management are listed below:

- Need to create new roads to access private property, mining claims, or public utilities
- User-created route proliferation
- Listing of additional special status plant and animal species
- Discovery of additional resources
- Availability of funding to manage and operate the travel management network.

Applying adaptive management is an essential component of travel planning. Throughout the life of the TMP, the BLM may use adaptive management and rely on monitoring data to improve this plan. Modification actions based on adaptive management may require additional site-specific analysis in accordance with the NEPA.

4.4   Route Designation Changes

The TMP will remain in effect until rescinded or amended by an amendment to the 2008 RMP supported by an appropriate NEPA document. However, monitoring and TMP evaluation may result in proposals to change individual route designations. Any person, organization, or governmental body may propose that any current route designation be changed. Requests to change route designations must be submitted in writing to the field manager and will be processed as follows:

- Upon receipt of a route change proposal, it will be reviewed by the field manager. The manager may determine whether 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 recommendations as to the appropriateness of the proposal and levels of required NEPA review and analysis. When accepting a proposal, the authorized officer should consider cost recovery.
- The BLM may require that a licensed surveyor provide a cadastral survey (to be reviewed by a BLM cadastral surveyor) of a route prior to issuance of a ROW or other authorization.
- Modifications of the road network during implementation of the TMP may require site-specific review as appropriate under applicable laws.
- Modifications and minor realignments, including alignment changes made through implementation actions shall be documented in the official record, kept on file in the field office, and considered an update to the TMP.

The authorized officer has the authority to make final decisions on route changes. A formal decision to accept or reject a specific request for a route change will only be issued appropriate NEPA documentation and evaluation of a proposal's effect on the total travel network.

4.5   Tracking Plan Implementation Progress

According to the BLM travel management manual, "Field offices will track planning and implementation progress using the travel management module in the Recreation Management Information System (RMIS). States will track statewide progress through long-range transportation plans (see section 6.8 [of the travel management manual]) using the BLM state's TTM planning schedule" (BLM 2016b).

5.   MITIGATION

Travel management related mitigation is prescribed and executed at multiple levels: first, as described in the 2008 RMP; second, as a component of selection of a travel network alternative where routes are assigned an OHV designation that considers impacts to resources, route purpose and need, route redundancy, etc.; and third, as specifically prescribed mitigation measures in

route evaluation reports. Additional mitigation will also occur as a result of resource monitoring via adaptive management if needed.

5.1   Overview

Emerging issues (related to specific routes and management actions) may be identified through adaptive management monitoring, and mitigation actions may be considered if monitoring reveals that conditions have reached identified thresholds. Typical mitigation measures would be the BMPs that respond to identified resource or resource use issues. Monitoring may continue to be done during and after mitigation measure implementation. Many of the routes with "Open with Management" and "Limited with Management" designations have mitigation specified for a variety of resources. For route-specific mitigation details, see the route reports discussed in Appendix H of the EA as well as Table C.1: Route-by-Route Monitoring and Mitigation Details (Chosen Alternative) in Appendix C of this Implementation Guide.

5.2   Travel Management Mitigations in the 2008 RMP

The 2008 RMP provides the following management statements closely tied to travel management mitigation. The list below is not exhaustive, but it is intended to capture the RMP statements most clearly related to travel management-related mitigation.

Table 5.1: 2008 RMP Travel Management-Related Mitigation Guidance

	Management Decisions
TRV-5	BLM could impose limitations on types of vehicle allowed on specific designated routes if monitoring indicates that a particular type of vehicle is causing disturbance to the soil, wildlife, wildlife habitat, cultural or vegetative resources, especially by off-road travel in an area that is limited to designated roads.
TRV-8	Where the authorized officer determines that off-road vehicles are causing or will cause considerable adverse impacts, the authorized officer shall close or restrict such areas. The public will be notified as to these closures and restrictions.
TRV-9	Any routes that are not baseline routes will be signed "Closed" on the ground. Such routes will be considered as impacts to the area's natural character, and use of such routes will be considered cross country use and not allowed. Non-inventoried routes should be rehabilitated.
TRV-14	Limit mechanized (mountain bike) travel to designated trails and managed routes for resource protection purposes. Routes that are no longer available for motorized travel may be converted to bike routes upon application of site-specific NEPA analysis.
	"Mitigations" section (N.7.2.2) from Appendix N
	Mitigations that can be utilized to address conflicts could include: 1. Non-designation; 2. The season and timing of use; 3. The types of vehicle use, motorized and non-motorized; 4. Re- routing of segments; and 5. Other methods of travel.

5.3 Route Management Mitigation Actions for Various Conflict or Impact Scenarios

Appendix H presents examples of possible route management mitigation actions that could be considered to address potential route-related resource concerns for riparian areas and water quality, wildlife and vegetation, user conflicts, vandalism, etc. The BLM travel management handbook (BLM 2012a) has additional examples of mitigation measures in "Appendix 5: TTM Challenges and Solutions for Recreation/Trail Management."

6. ROUTE CLOSURES

6.1 Introduction

Under certain circumstances, to protect public health and safety or prevent unnecessary or undue resource degradation due to unforeseen circumstances, route closures and restrictions will need to be implemented. The authority for implementing such closures and restrictions is given in Section 302 of the Federal Lands Policy and Management Act (FLPMA), which requires the Secretary of the Interior to take action to prevent unnecessary or undue degradation of the lands.

The two principal federal regulations for closures and restrictions during TTM are the special rules provided for OHV management in 43 CFR 8341.2 (GPO 2000) and the closures and restrictions for visitor services in 43 CFR 8364.1 (GPO 2004b).

6.2 Closures in General

The 2008 RMP says, "Where the authorized officer determines that off-road vehicles are causing or will cause considerable adverse impacts, the authorized officer shall close or restrict such areas. The public will be notified as to these closures and restrictions" (BLM 2008b). 43 CFR 8364.1 regulates the ability of the authorized officer to close or restrict a specific use or uses of the public lands for the protection of persons, property, and resources. Unlike the special rules found in 43 CFR 8341.2, these closure and restriction orders can apply to any transportation mode or activity but require a formal notification process, including Federal Register publication. The use of this authority is limited to two years by policy, but extensions are approved on a case-by-case basis. NEPA compliance is required for use of this authority.

6.3 Emergency Closures

Emergencies are unforeseen events of such severity that they require immediate action to avoid dire consequences. In the event of an emergency, immediate actions (e.g., closures or public land use restrictions) must be taken to prevent or reduce risks to public health or safety, property, or important resources. Section 2.3 of the BLM NEPA handbook (BLM 2008a) defines the following actions as typical emergency situations:
- Cleanup of a hazardous material spill
- Fire suppression activities related to ongoing wildland fires
- Emergency stabilization actions following wildland fires or other disasters

6.4   Temporary Closures

Where OHV activities are causing considerable adverse effects to resources, temporary closures can be implemented under the authority of 43 CFR 8341.2 and 8364.1. The purpose of a temporary closure and restriction is to protect public health and safety or prevent undue or unnecessary resource degradation due to unforeseen circumstances and should not be used in lieu of permanent closures. The BLM's travel management manual states,

> Where off-highway vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife *and fisheries* habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas will be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures are implemented to prevent their recurrence (43 CFR 8341.2). (BLM 2016b)

If site, issue, or resource-specific evaluation is handled through the NEPA analysis process associated with either the 2008 RMP or the TMP's supporting EA, temporary closures and restrictions exercised under this process may not require further NEPA review. This may include closure of routes or areas.

7.   ROUTE DECOMMISSIONING AND RECLAMATION

7.1   Overview

When a closed route is successfully decommissioned and reclaimed, it should blend into the surrounding 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 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-reclaimed routes slated for reclamation.
- Restored natural appearance of the landscape.
- Protection of natural resources.

See Appendix D for details on reclamation methods as well as the routes that are earmarked for reclamation under the chosen alternative. Note that not all routes designated as OHV-closed are scheduled for decommissioning, as they may remain available for other non-OHV uses.

7.2   Priorities

Certain routes slated for reclamation should have a higher implementation priority than others. The BLM may prioritize reclamation in special management areas (e.g., SRMAs), special

designation areas (e.g., wilderness, LWCs, etc.), and other sensitive areas. In general, initial reclamation efforts may focus on the following priority types 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, or any other resources requiring special management or protection

7.3   General Reclamation Strategy

The overall objective for routes slated for reclamation is to remove them from the landscape using a variety of reclamation techniques. The most effective method of reclaiming these routes and preventing further use is to disguise its location. This process favors a natural form of recovery where possible and is the most cost-effective way to reclaim routes slated for reclamation. If disruptive reclamation techniques are to be used, sensitive timeframes or seasons for protected, sensitive, or management priority species should be taken into account. In an attempt to minimize route closure impacts, whenever practicable, the BLM may implement the least intrusive, minimal impact closure methods first. Initially, most of the routes slated for reclamation may be allowed to naturally reclaim. By preferentially implementing low impact manual reclamation techniques, surface disturbances may be kept to the minimum necessary to close most routes and fulfill management objectives.

Each route was evaluated on a case-by-case basis, and the most appropriate method of reclamation was identified based on factors such as geography, topography, soils, hydrology, and vegetation, as well as management objectives, reclamation costs, modes and conditions of travel, Recreation Setting Characteristics, and other factors. BLM will compile a prioritized list of routes scheduled for reclamation including the reclamation method as prescribed by the TMP's route evaluation reports.

Post-reclamation monitoring of routes is essential to maintaining successful closures. If monitoring indicates the need for additional reclamation efforts after less intrusive closure methods have not been successful, the BLM may consider other closure options through adaptive management. Unless determined as necessary at the beginning of the implementation process, surface-disturbing reclamation actions may only take place after less intrusive methods have been tried. For example, continued vehicular use on a closed route may indicate that natural reclamation has been ineffective on that route. If it is determined that surface-disturbing reclamation techniques are necessary to effectively close a route, the Reclamation Techniques Toolbox in Appendix D should be consulted. It features a series of options designed to effectively ensure that closed routes are reclaimed and revegetated. The minimum necessary or "least impact" treatment analyzed in the Reclamation Techniques Toolbox may be applied to each route slated for reclamation to achieve desired outcomes.

7.4   Reclamation Standards

If disruptive reclamation techniques will be used in route reclamation, the reclamation standards listed below should be followed as applicable.

a) Routes slated for reclamation 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 should be fully re-contoured and re-vegetated with BLM-preferred seed mixtures.
c) Seeding should be done where necessary to aid reclamation of closed routes. Appropriate seed mixtures should 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 should be done prior to winter. Some areas should 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) The BLM should utilize native material such as rock and large woody debris to the greatest extent practicable in combination with manufactured storm water structures (e.g., silt fence, straw waddles, etc.), and mechanical erosion control techniques (e.g., ripping, pocking, etc.) to minimize erosion and facilitate site stability.
e) Reclamation techniques for routes in designated wilderness and lands with wilderness characteristics should attempt to return the area to its original condition in the shortest amount of time.
f) Weed and vegetation treatment control measures should be implemented as needed to promote re-vegetation with native plants, prevent any new weed establishment, and control existing weed sources.

Consult Appendix A from the 2008 RMP (BLM 2008b) for stipulations for surface-disturbing activities, which may apply to some forms of intrusive route reclamation.

8. CULTURAL RESOURCE CONSIDERATIONS

Properly considering cultural resources is a critical component of effective travel management: "The BLM must address cultural resources in consultation with state historic preservation officers and under various state-specific protocol agreements, if applicable. The cultural resource inventory strategy required to make TTM decisions should be commensurate to the identified risk to resources. This risk should be based on the known presence of historic properties or on the potential/likelihood for historic properties to occur in a given area based on professional knowledge, judgment, and feedback received during the planning and consultation processes." (BLM 2016c)

Any and all cultural resource identification efforts, assessments, consultations, mitigations, treatments, protection measures, and/or site treatments for the Canyon Rims Travel Management Plan have been or will be addressed in separate NHPA Section 106 compliance documents and are therefore not addressed in this document. Cultural resource compliance documents for this TMP undertaking consist of (but are not limited to) a Class III Intensive Field Survey report (and any report amendments or addendums that may take place in the future), government-to-government tribal consultation correspondences and documents, interagency consultation correspondences and documents (including the State Historic Preservation Office), and consulting party consultation correspondences and documents.

9. REVISED STATUTE 2477 ASSERTIONS

A travel management plan is not intended to provide evidence, bearing on, or address the validity of any Revised Statute 2477 (R.S. 2477) assertions. R.S. 2477 rights are determined through a process that is entirely independent of the BLM's planning process. Consequently, this TMP process does not take into consideration R.S. 2477 evidence. BLM bases travel management planning on purpose and need related to resource uses and associated access to public lands and waters given consideration to the relevant resources. At such time as a decision is made on R.S. 2477 assertions, the BLM will adjust its travel routes accordingly (BLM Manual 1626).

10. ROADSIDE CAMPING AND PULL-OFF CONSIDERATIONS

A management decision in the 2008 RMP allows dispersed camping "where not specifically restricted" and that "all vehicle use associated with dispersed camping activities is required to stay on designated routes." Another decision states that "parking areas associated with dispersed campsites will be marked during travel plan implementation." Vehicle-based camping in the Highway 279/Shafer Basin/Long Canyon ACEC is restricted to designated campgrounds. (BLM 2008b)

11. GAME RETRIEVAL

The 2008 RMP does not allow OHV use off designated routes for big game retrieval (BLM 2008b).

12. NEEDED AUTHORIZATIONS

As part of implementing the TMP, the BLM may seek to acquire legal access to public land where appropriate and necessary. The BLM may also identify needs and request funding for access, exchanges, and acquisitions and incorporate them in the existing ranking system. Easements, ROWs, and permissive access license agreements may include the acquisition of road or trail easements or the issuance of ROWs on an existing or historic physical access. The BLM may pursue such actions where they may contribute to natural resource protection and/or recreation enhancement opportunities. Easements may be acquired through donation or purchase following the procedures set forth in the BLM's acquisition handbook (H-2100-1) (BLM 2002). Table 2.3 in section 2.6 in this guide lists 2008 RMP public land access-related goals, objectives, and management decisions; some of these are related to needed authorizations. The BLM's travel management manual provides guidance concerning authorized and permitted motorized uses (BLM 2016b).

13. GROUND TRANSPORTATION LINEAR FEATURE (GTLF) GEOSPATIAL DATA

The BLM's travel management manual provides the following guidance concerning the maintenance of travel management geographic information systems (GIS) data in the GTLF format (BLM2016c).

For GTLF adherence guidance, consult the BLM's GTLF data standard, data report, and data implementation guidelines (BLM 2014b, c, and d). A 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 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 should 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 would increase the effectiveness of implementation within the TMA by facilitating management adjustments and informing future management actions.

14.   PRE- AND POST-TMP/EA MANAGEMENT ACTIONS IN GENERAL

Creating a TMP route network and analyzing the potential resource or resource use effects in an EA is a key component of travel management, but other important related actions take place before and after the TMP and its EA are approved. Many of these actions (monitoring, enforcement, etc.) are described in previous sections of this document. Active management of the routes in the TMA requires consistent monitoring and maintenance. Statewide, OHV recreation continues to increase, and the trend is expected to continue in this TMA as well. The BLM's travel management manual provides a reminder on the importance of continuing TTM beyond TMP and EA creation:

> [TTM] is a dynamic process. Upon completion of a TMP, the BLM should keep information and data concerning the travel network and transportation systems up to date, as staffing, budget and priorities allow. The BLM may modify the travel network and transportation systems through monitoring and adaptive management protocols or by specific BLM actions and authorizations. It is critical that the BLM continue TTM after completion of the initial TMP as a routine part of land management. (2016b)

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2016. Code of Federal Regulations: Title 43, Part 8340 – Off-Road Vehicles. https://www.gpo.gov/fdsys/pkg/CFR-2016-title43-vol2/pdf/CFR-2016-title43-vol2-part8340-subpart8340.pdf (accessed December 15, 2017).

APPENDIX B. TRAVEL MANAGEMENT-RELATED GOALS OBJECTIVES, AND MANAGEMENT DECISIONS FROM 2008 RMP

Table B.1: 2008 RMP Transportation/OHV Language

	Transportation
TRV-2	BLM, in preparing its RMP designations and its implementation-level travel management plans, is following policy and regulation authority found at: 43 CFR Part 8340; 43 CFR Subpart 8364; and 43 CFR Subpart 9268.
TRV-3	Provide opportunities for a range of motorized recreation experiences on public lands while protecting sensitive resources and minimizing conflicts among various users. Identification of specific designated routes will be initially established through the chosen Travel Plan accompanying this RMP (see Appendix N) and may be modified through subsequent implementation planning and project planning on a case-by-case basis. These identified routes will be available regardless of other management actions. These adjustments will occur only in areas with limited route designations and will be analyzed at the implementation planning level. These adjustments will be done through a collaborative process with local government and will include public review of proposed route changes. Site-specific NEPA documentation will be required for changes to the route designation system.
TRV-4	All areas are limited, open, or closed to motorized travel. Limit travel by motorized vehicle on all lands administered by the MFO to designated routes, except for Managed Open Areas, and for areas that are closed to motorized travel (see Map 30; see Appendix N for Travel Plan development).
TRV-5	BLM could impose limitations on types of vehicle allowed on specific designated routes if monitoring indicates that a particular type of vehicle is causing disturbance to the soil, wildlife, wildlife habitat, cultural or vegetative resources, especially by off-road travel in an area that is limited to designated roads.
TRV-6	OHV access for game retrieval, antler collection and dispersed camping will only be allowed on designated routes (designated routes/spurs and have been identified specifically for dispersed camping; parking areas associated with dispersed campsites will be marked during travel plan implementation). Adherence to the Travel Plan is required for all activities, except where otherwise explicitly permitted.
TRV-7	Only designated roads and managed open areas are available for motorized commercial and organized group use (see Maps 2 and 3 for route designations).
TRV-8	Where the authorized officer determines that off-road vehicles are causing or will cause considerable adverse impacts, the authorized officer shall close or restrict such areas. The public will be notified as to these closures and restrictions.
TRV-9	Any routes that are not baseline routes will be signed "Closed" on the ground. Such routes will be considered as impacts to the area's natural character, and use of such routes will be considered cross country use and not allowed. Non-inventoried routes should be rehabilitated.
TRV-10	**OHV Designations:** • About 339,298 acres will be closed to OHV travel. • About 1,481,334 acres will be limited to designated routes. • Approximately 2,000 acres (White Wash Sand Dunes) will be open to cross country travel (see Map 30).
TRV-11	**Designated Routes – Motorized:** • Designate 3,693 miles of motorized routes. • Designate 313 miles for motorcycles (163 miles on inventoried routes and 150 miles on inventoried single-track). • Designate a dirt bike route from Colorado State Line to Thompson (see Map 3), utilizing 9 miles of single-track designated above and 22 miles of inventoried Grand County roads. These totals are reflected in the mileage under "designated routes."
	Recreation and Off-Highway Vehicles

REC-5	Recreational off-highway vehicle (OHV) and mechanized travel will be consistent with area and route designations described in the travel management plan. BLM will work with agency and government officials and permit holders to develop procedures, protocols, permits or other types of authorization, as appropriate, to provide reasonable access for non-recreational use of OHVs for military, search and rescue, emergency, administrative, and permitted uses.
REC-6	Dispersed camping is allowed where not specifically restricted. Dispersed camping may be closed seasonally or as impacts or environmental conditions warrant. All vehicle use associated with dispersed camping activities is required to stay on designated routes.
REC-14	Continue to manage Kane Creek Road to Hurrah Pass and the roads to Needles, Anticline, and Minor overlooks as Utah Scenic Backways.
REC-36	Canyon Rims SRMA (excerpts): • Manage the entire area as OHV travel limited to designated roads. • Manage Hatch Wash and the lower section of West Coyote Creek for primitive, nonmotorized recreation. • Restrict backcountry motorized events to commercial and non-race special events on the Flat Iron Mesa Jeep Safari route only. Focus Area -- Non-mechanized Recreation (3,642 acres): Hatch Wash Hiking and Backpacking Focus Area inclusive of the area from Goodman Canyon to the confluence of Hatch Wash with Kane Creek Canyon including the lower section of West Coyote Creek (from private land west to confluence with Hatch Wash) and the lower section of Troutwater Canyon. • New motorized routes will not be considered in the Hatch Wash Hiking and Backpacking Focus Area. • **Focus Area -- Scenic Driving Corridors:** Needles and Anticline Roads – Utah Scenic Backways. Manage for scenic driving enjoyment. The corridor is defined as having a width of 1/2 mile from centerline (or to border of adjoining Focus Area).
REC-37	Colorado Riverway SRMA (excerpts): • Manage the Colorado Riverway as a Destination SRMA to manage camping, boating, river access, trail, and interpretive facilities in popular areas along or near the Colorado River and to protect the outstanding resource values of the area. Guidance for management is included in the Colorado Riverway Recreation Area Management Plan. • Manage the Kane Creek Crossing area to emphasize responsible designated camping and scenic touring. • Manage the Shafer Basin addition to emphasize scenic backcountry driving opportunities (no camping allowed in this area). • Restrict motorized and mechanized travel to designated routes. • **Focus Areas -- Scenic Driving Corridors:** These corridors include Highways 128 and 279 (which are both designated Utah Scenic Byways), as well as the Kane Creek/Hurrah Pass portion of the Lockhart Basin Scenic Backway and the BLM portion of the La Sal Mountain Loop Road Scenic Backway. Manage for scenic driving enjoyment. The corridor is defined as having a width of 1/2 mile from centerline, or line of sight or to border of adjoining Focus Area (whichever is shorter; see VRM for management prescriptions).
Other Resources and Off-Highway Vehicles
SOL-WAT-20	No additional OHV routes will be allowed in saline soils other than those already designated in the Travel Plan accompanying this RMP (see Appendix N). An exception will be considered on a case-by-case basis for proposed routes in the Dee Pass Motorized Focus Area and in the Utah Rims SRMA. Exceptions could also be considered on a case-by-case basis outside these two areas if potential impacts could be mitigated and if the action will benefit other natural and cultural resources.
WSR-4	OHV travel will be limited to designated routes or closed, depending on the river segment.

APPENDIX C. MONITORING SUPPORT MATERIALS

Table C.1: Route-by-Route Monitoring and Mitigation Details (Chosen Alternative)

Table will be filled in after alternative is chosen to fulfill proposed action.

Route Number	Designation	Monitoring	Miles

Settlement Monitoring Requirements for Kanab, Moab, Price, and Vernal Field Offices

The BLM needs to comply with the 2017 Settlement Agreement which resulted from Southern Utah Wilderness Alliance, et al. v. U.S. Department of the Interior, et al., Case No. 2:12-cv-257 (D. Utah), hereinafter referred to as the 2017 Settlement Agreement.

Below are monitoring requirements from the 2017 Settlement Agreement that apply to the Moab Field Office (among other BLM offices in Utah), and therefore the Canyon Rims TMA.

Monitoring During and After Travel Planning

20. **Monitoring in the Vernal, Price, Moab, and Kanab TMAs**

a.   **Baseline Monitoring Report.** Except for the Henry Mountains and Fremont Gorge TMA, for each TMA identified in paragraph 13, BLM will complete a baseline monitoring report that will document visually-apparent unauthorized surface disturbances off routes as well as visually-apparent damage to public lands resources caused by OHV vehicle use within WSAs, Natural Areas, and/or lands with BLM-inventoried wilderness characteristics. To create the baseline monitoring report, BLM will physically inspect those portions of routes within the TMA that are within or constitute a boundary to a WSA, Natural Area, and/or lands with BLM-inventoried wilderness characteristics. For those portions of routes, BLM will document by site photography and written narrative each disturbance and damage site. At a minimum, BLM will document the following information: (1) the geospatial coordinate of the site of disturbance or damage; (2) the route number or other identifier where the disturbance or damage was observed, the date of the physical inspection, the TMA in which the inspection took place, and the name of the inspector; (3) the observed usage intensity (i.e., none, light, medium, or heavy); (4) the apparent geographic extent of the disturbance or damage; and (5), if possible, (a) the apparent type of motorized vehicle(s) that caused the disturbance or damage, (b) the apparent purpose of the disturbance (e.g., short spur, dispersed camping, play area, or inadvertent travel), and (c) the type of public land resource damaged by motorized vehicle use. The baseline monitoring report will include the information gathered and recorded during the physical inspection, as well as maps showing the location and nature of any documented disturbance or damage sites. BLM will make its baseline monitoring report available for public review at the same time as the preliminary route evaluation documents identified in paragraph 16.d. BLM need not complete the baseline monitoring report prior to that time, but may do so at its discretion. Baseline monitoring reports described in this paragraph may be used to explain or support any BLM final agency action, but do not themselves constitute final agency action.

b.   **Monitoring during planning.** After BLM completes the baseline monitoring report required by paragraph 20.a, BLM will, at least one time per year, inspect all sites where BLM's baseline monitoring report previously identified disturbance and damage. If BLM receives credible information that any new visually-apparent unauthorized surface disturbances off routes or visually-apparent damage to public lands resources caused by motorized vehicle use (1) has occurred along those portions of routes within the TMA that are within or constitute a boundary to a WSA, Natural Area, and/or lands with BLM-inventoried wilderness characteristics and (2) is adversely affecting public land resources, then BLM will inspect the portion of that route, subject to available personnel and passable route conditions. BLM will document its inspection and monitoring of these sites during planning by site photography and written narrative describing each disturbance and damage site. BLM's documentation will include, at a minimum, the following information: (1) the geospatial coordinate of the site of disturbance or damage; (2) the route number or other identifier where the disturbance or damage was observed, the date of physical inspection, the TMA in which the inspection took place, and the name of the inspector; (3) the observed usage intensity (i.e., none, light, medium, or heavy); (4) the apparent geographic extent of the disturbance or damage; and (5), if possible, (a) the apparent type of motorized vehicle(s) that caused the disturbance or damage, (b) the apparent purpose of the disturbance (e.g., short spur, dispersed camping, play area, or inadvertent travel), and (c) the type of public land resource damaged by motorized vehicle use. BLM's documentation and/or reports described in this paragraph may be used to explain or support any BLM final agency action, but do not themselves constitute final agency action. BLM will undertake monitoring more

frequently if it determines additional monitoring is warranted. BLM's monitoring obligation identified in this paragraph for the TMAs identified in paragraph 13 will terminate when BLM issues the new TMP for that TMA, regardless of whether administrative or judicial review is sought.

22. **Consideration of Considerable Adverse Effects.**

a.   Any party to the agreement may provide BLM with evidence that (1) motorized vehicle use is causing or will cause considerable adverse effects as set forth in 43 C.F.R. § 8341.2(a) or (2) that action is required to protect persons, property, and public lands and resources pursuant to 43 C.F.R. § 8364.1. When BLM receives such information, it will promptly make such information available to all parties to the Settlement Agreement. BLM will provide a written response assessing whether action pursuant to § 8341.2(a) or §8364.1 is necessary to the party submitting such information as well as all other parties to the agreement within 90 days of receiving the information.

b.   BLM will consider the information collected during monitoring identified in paragraphs 20-21 of this Settlement Agreement and any other relevant information to determine whether motorized vehicle use is causing or will cause considerable adverse effects as set forth in 43 C.F.R. § 8364.1. If so, BLM will take appropriate management action.

c.   The obligations outlined in this paragraph start on the effective date of this Settlement Agreement and end eight years after this Settlement Agreement becomes effective, provided that nothing in this Settlement Agreement exempts or absolves BLM from compliance with applicable regulations, including 43 C.F.R. subparts 8341 and 8364.

23.   Monitoring after TMPs are issued. BLM will develop a long-term motorized vehicle monitoring protocol as part of each new TMP prepared for the TMAs identified in paragraph 13. BLM's proposed long-term monitoring protocol will be outlined in the draft and final NEPA document for each TMP, and the public, cooperating agencies, and other stakeholders will have an opportunity to provide input on each TMP's long-term monitoring protocol during the relevant public comment period. Each TMP's long-term monitoring protocol will become effective as provided in the applicable TMP. Once each TMP is issued, the long-term monitoring protocol specific to that TMP will apply and not the terms of this Settlement Agreement.

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

Strategies and Schedules

Travel Management				
Location(s)	Issue/Objective	Indicator (what)	Protocol (how/methods)	Trigger/Action
Designated road/trail system	Management of designated system	• Number of roads/trails meeting targeted maintenance intensities • Placement and retention of all signing	Road/trail condition assessments	
		Average daily traffic	Traffic counters on key roads/trails	
		Number of illegal, off-system vehicle incursions	• Visual inspections • NAU protocols	

Soil, Water, and Air				
Location(s)	Issue/Objective	Indicator (what)	Protocol (how/methods)	Trigger/Action
TMA-wide	Study the effects of continuing erosion that endanger floodplain soils. Map out these areas.	• Gully, rill, and sheet erosion • Vegetative cover • Compaction	• Monitor erosion • Monitor vegetative cover • Monitor impacts and gully progressions • Collect and analyze sedimentation and erosion data	
Wildfire burns and other select disturbed areas	Assess the effects of disturbance and reclamation	• Erosion or stabilization • Vegetative cover	Visual inspection	• Large wildfire • Erosion and flooding

Recreation				
Location(s)	Issue/Objective	Indicator (what)	Protocol (how/methods)	*Trigger/Action
SRMAs	Produce targeted recreation opportunities specific to each SRMA	Realization of targeted benefits for each SRMA.	• Visitor surveys • Focus groups	Targeted recreation benefits not realized

		Recreation		
Location(s)	Issue/Objective	Indicator (what)	Protocol (how/methods)	*Trigger/Action
	(or RMZ within the SRMA if RMZs are established in the future).	Physical setting conditions, such as remoteness, naturalness, facilities	• 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 SRMAs where development was targeted • Monitor landscape change via VRM	
		Social setting conditions, such as group size, encounters with other users, and evidence of use	• Existing NAU protocols for evidence of use (rapid site inventory, human impact site monitoring) • Actual counts for group size and encounters	
		Administrative setting conditions, such as visitor services, management controls, mechanized use	• 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	

Resource/Use Impact Indicators

Below is a sampling of indicators that could be used for measuring the impacts the final travel route network may have on the resource/use analyzed in the EA. For more details on some indictors primarily related to plants, soils, and water, see Interpreting Indicators of Rangeland Health: Version 4 (BLM 2005). Note: Miles and/or numbers of routes in or near the presence of particular resources/uses (or associated features: e.g., habitats) could be used as impact indicators for all the items listed below. Also, the indicators listed below are not necessarily the same indicators used for specific table-based effects analysis in the EA.

Wildlife and Fish
- Change in miles of motorized routes within habitats
- Density of motorized routes in habitats
- Measurements of characteristics of aquatic habitats (water levels, water flow patterns, erosion, sedimentation, native and non-native riparian vegetative cover, etc.)
- Number of threatened/endangered and BLM sensitive species present (or any other species of concern or interest)
- Amount of ecologically harmful non-native species (e.g., invasive plants/weeds, introduced fish, etc.) that could be spread by increased routes/human travel
- Amount of landscape/habitat fragmentation and wildlife corridor interruption
- Surface area of key habitats
- Edge-to-volume ratio of key habitats
- Water use/controls that impact wildlife

Plants
- Plant community composition and distribution
- Annual production
- Reproductive capability of perennial plants
- Invasive plants (surface areas, species counts, densities, etc.)

Soils
- Erosion rates, amounts, and features (e.g., terracettes, gullies, wind-scoured areas, etc.)
- Signs of accelerated erosion (e.g., rilling, gullying, water flow patterns, and pedestalling)
- Soil surface resistance to erosion
- Soil surface loss or degradation (could be measured by surface area of bare ground)
- Litter movement
- Soil productivity
- Compaction

Minerals
- Access restrictions to mineral resources

Wetlands/Riparian Areas and Water Quality
- Health/quantity/distribution of riparian vegetation
- Miles and/or numbers of routes crossing riparian areas
- Surface area taken up by routes in riparian areas

- Potential for flood hazards
- Water flow patterns
- Plant community composition/distribution relative to infiltration and runoff

Special Management Areas
- Types and amounts of travel allowed to and through these areas
- Conflict with VRM classifications

Recreation
- Amount of conflict between different users and uses (could be measured in reports to law enforcement or land managers, scoping comments, etc.)
- Visitation levels in general (could measure visitors with traffic counts, self-registration kiosks, permit requirements, etc.)
- Quantity and details of SRPs and their associated activities
- Amounts of access to recreation sites
- Amount of recreation facilities, areas, sites, etc. available to different users

Travel Management
- Changes in total miles of the existing route system by existing designation
- Levels of access to various resources and for various purposes (recreation sites, emergency services, hunting areas, private lands, etc.)
- Densities of routes (in miles, footprint surface area estimates, etc.) of particular types in certain areas of concern

Socioeconomics
- Travel-related recreation expenditures in TMA
- See recreation impact indicators for more related indicators

Visual Resource Management
- Changes to line, color, and form in the landscape measured from key observation point

APPENDIX D.   ROUTE RECLAMATION

Closed OHV Routes and Travel Maps
In general, OHV-closed routes should not appear on the travel map associated with the TMP.

Disguising Routes with Natural Materials
This method, sometimes referred to as "vertical mulching," is used to hide routes from view. If routes are not on travel maps and are not evident to visitors, they will be unlikely to receive additional use. Often, the first several hundred feet of illegal routes or routes slated for reclamation may be disguised to look like surrounding areas by placing rocks, dead wood and plants, and in some cases planting live vegetation in a natural-looking arrangement. Where possible, materials used should be large enough and abundantly placed in order to deter persons familiar with route locations from easily removing them. In some cases, mechanical tools such as shovels, rakes, and other hand tools may be employed to obliterate embankments, ruts, water bars and ditches.

Ripping and Reseeding Routes
This process mechanically removes routes from the landscape and revegetates them. Native seed mixes should be used. Mechanical removal may be accomplished by hand or, among other methods, with the use of power equipment, excavators, bulldozers, or harrow or seed drills. Herbicides may also be used for revegetation. Based on site-specific conditions, seeding and planting treatments may include:
- Preparing a seedbed.
- Selecting an appropriate seed mix.
- Applying the seed.
- Covering the seed.

Due to the broad spectrum of situations encountered, all possible treatment options and combinations of treatments may be utilized. This process ultimately results in closed routes becoming undetectable.

Barrier Installation
In locations where it is impractical to employ any of the previous methods (e.g., extremely rocky areas) and in areas where administrative use may occasionally be required on a route closed to the public, it may be necessary to install natural or human-made barriers such as large boulders, fences with gates, or other barriers to physically prevent unauthorized use. Where possible and practical, these measures may be removed when routes are reclaimed or fully disguised.

Closing Routes with Informational Signs
This measure may be employed in cases where the previous measures have failed but ripping and seeding or the use of physical barriers is impractical or ineffective. It may also be used on routes to establish an "administrative use only" designation or to identify seasonal closures. Signs may be clearly marked and placed in locations where they may be highly visible. Signs may be removed when routes are reclaimed or fully disguised.

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 routes. 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 reclamation efforts.

A first step in reclamation is to obliterate obvious tracks and other evidence of use on closed routes. Techniques to accomplish this include hand-raking and cutting track edges or berms to break up straight lines. Additional techniques include placing small rocks on routes and mulching routes with local vegetation or dead plant materials. Reclamation actions would 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 closed routes and reducing the need for signage. The work may be limited to existing surface disturbance, and any reclamation work should first be cleared with the appropriate BLM office's Authorized Officer. A travel route that has historical significance (e.g., an old wagon trail) will not be subjected to any surface disruption. Because surface-disturbing reclamation actions may draw public attention to reclamation sites, the BLM may choose to provide informative signs near the sites that explain the need for and value of resource protection.

Where practicable, reclamation actions may include leaving the beginning portion of a closed route exposed. This would provide pullout areas or dispersed camping opportunities and is likely to discourage or prevent new surface disturbances elsewhere. Also, where appropriate, management may direct travel along open routes to concentrate traffic on maintained routes away from closed routes. This could include focusing maintenance on certain routes far from closed routes. Users may be more attracted to such well-maintained routes because of a more comfortable travel experience. Signing that strategically emphasizes use of routes far away from closed routes could also concentrate traffic away from closed routes. Routes far from closed routes could be well-signed and more emphasized in interpretive materials while routes near closed routes could receive minimal signing and low levels of publicity.

Reclamation Techniques Toolbox

A full suite of reclamation techniques may be employed throughout the TMA, depending on the appropriateness of the method for each route. While most routes may be reclaimed naturally, some may require more intrusive, surface-disturbing restoration methods. The full suite of closure reclamation techniques considered for use within the TMA is described in the Reclamation Techniques Toolbox (Table 7.1) below. As deemed appropriate by BLM management, these closure methods may be used in any combination for each route.

Table D.1: Reclamation 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 a route. Fencing and signs can later be removed to complete the reclamation 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 for 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 reclamation 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 lightly used routes. 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 reclamation.
Vertical mulch with berm/fence and sign	This method works in upland areas where occasional use of routes 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 sagebrush, 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 reclamation.
Barriers	Physical blockades constructed to prevent the passage of vehicles. Barriers may 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. To the greatest extent practicable, the BLM may 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.
Fence/barrier with signs and parking area	Where an open route dead-ends at a closed route or limited use route, the 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.
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 because soil is only moved to create a berm at the beginning or end of a 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 a route has restored, berms can be removed or flattened to complete the reclamation 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 it is not made completely obvious that the route is being restored. 100% of a 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 subsurface cultural resources. Under this method, soils would be ripped or harrowed to a depth of 18 to 24 inches. Preferably compacted soils would be ripped in two passes at perpendicular directions to a minimum depth of 18 inches at a furrow spacing of no more than 2 feet.
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.

Table D.2: Routes To Be Reclaimed (Chosen Alternative)

Route Number	Initial Restoration Prescription

Route Number	Initial Restoration Prescription

APPENDIX E.   TRAVEL MANAGEMENT AND ROUTE DESIGNATION GUIDANCE FOR KEY PROTECTED AREAS

Overview
Some special designation rules apply to wilderness, Wild and Scenic Rivers, wilderness study areas (WSAs), inventoried lands with wilderness characteristics (LWCs), and lands managed for wilderness characteristics (MWCs or "natural areas"). In Utah and in the 2017 Settlement Agreement, BLM lands managed for wilderness characteristics in RMPs (MWCs) are known as "natural areas." The TMA includes various LWC units. It does not currently contain WSAs, though they could be established in the future. Also, no TMA LWC units are currently managed for wilderness characteristics in the RMP, but that could change with RMP revisions. Therefore, guidance for all special designations below is included in this guide.

Wilderness
The BLM's wilderness management manual (BLM 2012h) contains guidance about routes and vehicles in wilderness areas. It lists permanent roads, temporary roads, motor vehicles, and mechanical transport as prohibited uses in wilderness areas. Pages 1-12 to 1-13 of the manual provide more specifics. The BLM's wilderness manual also provides details on exceptions to these prohibitions on pages 1-15 to 1-17. Information on access authorizations in wilderness areas is provided on pages 1-30 to 1-31. The manual provides guidance on trails and trail systems (including new construction and access points) on pages 1-40 to 1-41.

Wild and Scenic Rivers
The BLM's wild and scenic rivers manual (BLM 2012i) provides some travel management guidance in the context of rivers officially designated as wild and scenic and rivers that are eligible and suitable for such a designation but not designated. According to the manual, for both designated and eligible/suitable wild and scenic rivers, "motorized and mechanized travel on land or water may be permitted, prohibited, or restricted to protect the river values" (BLM 2012i). For designated wild and scenic rivers, for the "Wild" designation, the BLM manual provides the following guidance under the heading of "Transportation System":

1. *Wild*. New roads are not generally compatible with this classification. A few existing roads leading to the boundary of the river corridor may be acceptable. New trail construction should generally be designed for nonmotorized uses. However, limited motorized uses that are compatible with identified values and unobtrusive trail bridges may be allowed. In order to protect and enhance river values, the BLM should consider restrictions or prohibitions of new airfields if such development is proposed.
2. *Scenic*. New roads and railroads are permitted to parallel the river for short segments or bridge the river if such construction fully protects river values (including the river's free-flowing condition). Bridge crossings and river access are allowed. New trail construction or airfields must be compatible with and fully protect identified values.
3. *Recreational*. New roads and railroads are permitted to parallel the river if such construction fully protects river values (including the river's free-flowing condition). Bridge crossings and river access are allowed. New trail construction or airfields must be compatible with and fully protect identified values. (BLM 2012i)

For eligible/suitable wild and scenic rivers, the BLM manual provides the following guidance under the heading of "Transportation System":

1. *Wild*. New roads and airfields are not generally compatible with this classification. A few existing roads leading to the boundary of the river corridor may be acceptable. New trail construction should generally be designed for nonmotorized uses. However, consider allowing limited motorized uses and unobtrusive bridges that are compatible with identified values.
2. *Scenic*. New roads and railroads may be allowed to parallel the river for short segments or bridge the river if such construction fully protects river values (including the river's free-flowing condition). Bridge crossings and river access are allowed. New trail construction or airfields should be compatible with and fully protect identified values.
3. *Recreational*. Consider permitting new roads and railroads that parallel the river if such construction fully protects river values (including the river's free-flowing condition). Bridge crossings and river access are allowed. Consider new trail construction or airfields that are compatible with and fully protect identified values. (BLM 2012i)

Wilderness Study Areas

In WSAs, OHV and mechanized route use is permitted to continue along certain existing routes, but the BLM is not to designate OHV or mechanized routes and is to instead classify them as "primitive routes." However, in WSAs, primitive routes can be designated as non-motorized and non-mechanized trails. So, to summarize, in WSAs, OHV use is allowed to continue on some routes, but these routes are not to receive comprehensive individual route designations—unless such designations are non-motorized/non-mechanized (BLM 2016b). Below is the specific related language from the BLM's travel management manual:

> 1. In wilderness study areas, the BLM may permit motorized and mechanized use to continue along existing routes identified in the wilderness inventory conducted in support of sections 603 and 202 of FLPMA. In these cases, the BLM delays final route classification until Congress takes action or the final land use plan decision is to close those routes to motorized and mechanized use. The BLM will not designate primitive roads and motorized/mechanized trails within Wilderness Study Areas (WSA) and will not classify them as assets. The BLM will identify any motorized/mechanized Transportation linear feature located within these areas in a transportation inventory as a motorized/mechanized "primitive route" (see Glossary of Terms).

> 2. Primitive routes will not become part of the transportation system, classified as a transportation asset, or entered into the FAMS unless they meet one of the following conditions: the BLM designates the routes as non-motorized and nonmechanized trails or Congress releases the WSA from wilderness consideration and the BLM designates the routes. (BLM 2016b)

In paragraph 20 a., the 2017 Settlement Agreement provides details on baseline monitoring report requirements applicable to visually apparent impacts off routes in WSAs, LWCs, and MWCs/natural areas. See the "Settlement Monitoring Requirements for Kanab, Moab, Price, and Vernal Field Offices" section of Appendix C of this guide for an excerpt of the monitoring report requirement language.

The BLM's WSA management manual (BLM 2012g) also provides guidance on travel management in WSAs. In its "Policies for Specific Activities" section it covers motorized/mechanical transport and trails guidance on pages 1-27 to 1-29. According to the WSA manual, "Recreational use of motor vehicles or mechanical transport . . . may only be allowed when such use is consistent with all applicable laws and meets the non-impairment standard" (BLM 2012g).

LWCs and MWCs/Natural Areas

Travel management in LWCs and MWCs/natural areas should follow national guidance, which includes the following BLM manuals: 6310—Conducting Wilderness Characteristics Inventory on BLM Lands (Public) (BLM 2012e) and 6320—Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process (Public) (BLM 2012f). Management should not be based on BLM Utah-specific management LWC guidance tied to UT-IM-2016-027[4] as such guidance was rescinded in December 2018. The LWC inventory manual provides LWC context-based definitions for primitive routes and roads on pages 11 to 12; it also provides route analysis guidance in Appendix C.

In MWCs/natural areas, the BLM is not to designate OHV/mechanized routes and is to instead classify them as "primitive routes." However, in MWCs, primitive routes can be designated as non-motorized and non-mechanized trails (BLM 2016b). Below is the specific related language from the BLM's travel management manual:

> In lands managed for wilderness characteristics, the BLM will not designate primitive roads and motorized/mechanized trails and will not classify them as assets within lands managed for wilderness characteristics protection in land use plans. Any motorized/mechanized Transportation linear feature located within these areas will be identified in a transportation inventory as a motorized/mechanized "primitive route" (see Ch. 7 – Travel and Transportation Management Definitions) unless a land use plan decision is made to close those routes to motorized/mechanized use. Primitive routes will not be made a part of the transportation system, classified as a transportation asset, or entered into FAMS unless they meet one of the following conditions: the BLM designates routes as non-motorized and non-mechanized trails or, under an RMP decision, the wilderness characteristics will no longer be protected and the BLM designates the routes. (BLM 2016b)

The 2017 Settlement Agreement provides specific guidance applicable to routes in WSAs, LWCs, and MWCs/natural areas. This guidance is excerpted above in the "WSAs" subsection of this appendix and includes requirements for management alternatives and baseline monitoring reports.

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[4] The following documents should not be followed: *BLM-UT Additional Guidance for Manual 6310 – Conducting Wilderness Inventory on BLM* and *BLM-UT Additional Guidance for Manual 6320 – Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process*.

APPENDIX F. ROUTE-BY-ROUTE DETAILS

As timing and resources allow BLM will assign the following attributes for each route and track that information in the Ground Transportation Linear Feature dataset:

- Evaluation Route #
- FAMS #
- Primary Route Management Objective
- Functional Classification
- FAMS Asset Type
- Maintenance Intensity
- Indicator of routes inclusion in FAMS
- Indicator of routes FLTP eligibility
- Indicator of routes FLAP eligibility

APPENDIX G.   SIGN PLAN BMPS

This section identifies and describes BMPs for signing routes on BLM land. It focuses on portal/entry signs and route marker signs for individual routes. Additional details for signs on BLM lands (installation, ordering, etc.) can be found in the BLM's 2016 *National Sign Handbook* (BLM 2016a) and the Federal Highway Administration's *Manual on Uniform Traffic Control Devices*, which is also known as the MUTCD (FHWA 2019).

Signing Objectives

The main objectives of this sign plan are to identify designated routes on the ground in a clear and consistent manner to eliminate or minimize off-network travel and other misuse of the TMA while reducing user conflict and resource impacts. To accomplish this, the BLM may create and distribute well-designed signs so that the public can understand the designated travel network and comply with its terms and regulations. Signs in the TMA should adhere to a consistent theme and will be consistent with all applicable laws, regulations, policies, and land use plans.

Specific objectives of this sign plan 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 TMA.
3) Address sign placement for current and proposed signs.
4) Outline basic protocols for the monitoring and maintenance of the sign system, including future signing needs.

General objectives for the BLM's use of signs in the TMA are to:
1) Identify public lands.
2) Promote the health and safety of visitors to the public lands.
3) Meet visitor needs for information and direction.
4) Ensure visitors are aware of route designations.
5) Use sign communication to:
   a. Inform the visitor of the natural and management features of the public lands and waters.
   b. Enhance visitor experiences.
   c. Reduce or mitigate user and management issues.
6) Uniformly promote public awareness of the BLM's multiple use mandate and stewardship responsibilities in managing the U.S. public lands and waters through consistent messages and signage.
7) Provide uniformity in the shapes, materials, messages, and appearance of BLM signs.

The BLM's 2016 National Sign Handbook provides specific objectives pertaining to sign design:
   The BLM must use and place signs judiciously; use the established emblem or wordmark, where appropriate; use approved international symbols and established standards of the sign industry; comply with Uniform Federal Accessibility Standards (UFAS) guidelines; meet specifications established in the Manual on Uniform Traffic Control Devices (MUTCD) for vehicle and pedestrian traffic control signs; comply with federal, state, and local laws, as appropriate; and complement other media, such as maps, brochures, and webpages. (BLM 2016a)

Sign Types and Design

<u>Sign Types Overview</u>
Under the final TMP, various types of signs and markers will be installed according to the current BLM policies and guidance for recreation and travel management signing. Signs appropriate to travel settings (i.e., Backcountry, Frontcountry, etc.) may be installed along roads, primitive roads, and trails. BLM travel management signs should use positive, clear, and simple messaging (BLM 2012a).

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, to avoid sign clutter, messages should not be mixed on a single sign or in a grouping of signs. The following categories of signs and may be installed in the TMA and include categories listed in the BLM's national sign handbook (BLM 2016a):
- Identification
- Guide (navigation)
- Informational
- Traffic control devices
- Regulatory/warning/safety
- Miscellaneous (temporary, special event, etc.)

<u>Sign Design Overview</u>
From large, informational portal signs to small, individual route markers, clear and accurate signing is crucial to provide all users of the travel network with the information they need to comply with route designations and meet TMP goals and objectives. New signage may incorporate elements from the design standards outlined in the most current version of the BLM's sign handbook (BLM 2016a) in addition to design specifications from the BLM sign shop. Any deviations from these standards must be approved by the BLM National Sign Coordinator.

<u>Portal/Entry Signs</u>
Large wooden portal identification signs (see Figure G.1-Figure G.3 below) may be installed at the beginning of popularly used areas, routes, or entrance points. Figure G.1 shows the current format of portal identification signs on BLM lands that are outside National Conservation Areas (NCAs). The BLM sign handbook (BLM 2016a) provides greater detail on formatting BLM signs.

Figure G.1: Portal/Entry Sign Example

Figure G.2: Non-NCA BLM Identification Sign

The illustration at the top of the sign example above (taken from the latest BLM sign handbook) may be used for non-NCA BLM land identification signs in the TMA. According to the BLM sign handbook, this type of sign may require a waiver or approval if located within another agency's ROW. Within BLM ROWs, the BLM state engineer can make the determination on a case-by-case basis; otherwise signs should comply with the U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD) standards. The handbook goes on to provide specifications for MUTCD-compliant identification signs.

Figure G.3: MUTCD-Compliant BLM Identification Signs

Directional/Guide Sign Overview

Directional signs are essentially guide signs, which typically use arrows and distance indicators to provide guidance for the wayfinding process with roads and trails (BLM 2016a).
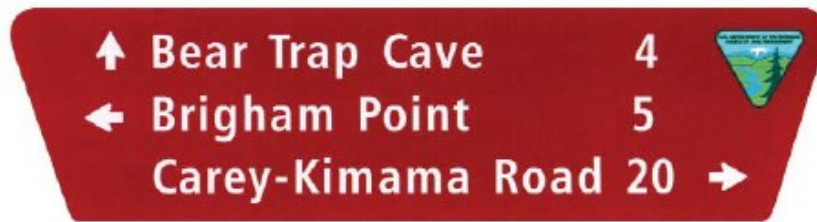
Figure G.4: Directional Guide Sign with Guidance to Multiple Destinations

Figure G.5: Directional Guide Sign with Guidance to One Destination

Information Signs

Information signs may also be used throughout the TMA. See examples below.

Figure G.6: BLM Information Sign Examples

Overview of Route Identification Marker Signing and Numbering Standards

Route markers are a specific type of guide sign. Most TMA signs may be route marker guide signs. Most primitive roads and trails may be identified by their number with flexible, brown fiberglass markers, generally referred to as fiberglass or Carsonite posts. Figure G.7 provides an example of a layout for route markers. Most BLM route markers have white lettering on a brown background.

All numbers and decals should be placed within the top portion of the post that will not be driven into the ground. At a minimum, these signs should 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 allowed or authorized.

Each route ID should come from a pre-assigned TMA -specific block of numbers, which utilize four-digit numbers with no commas, and that start with a particular number (e.g., 9000). If any route is already numbered outside this block, it may need to be re-numbered. Long distance routes, touring loops, or routes to specific destinations may have a route name or symbol in addition to a number (e.g., 9012 Bull Mountain Trail). Local input may be sought when naming loops and trails. The numbering system will be flexible, and numbers may not always be in numeric order. Note: routes that travel between field offices or planning areas may use the navigation number that was assigned to them in the jurisdiction or area that had the earliest designation date.

Figure G.7: Route Marker Examples

During the planning process, final navigational identifying numbers may be assigned for marking routes on the ground and in future published maps. However, throughout the travel management process, each travel route may have been assigned more than one identifying number. During the route evaluation phase of travel planning, a unique number is assigned that ensures that routes in GIS correspond to routes in a separate evaluation database. Sometimes existing route label numbers are changed to clarify segments into transportation assets (e.g., roads, primitive roads, and trails). These evaluation numbers are used in route reports (described in Appendix G of the EA). Finally, navigational identifying numbers are assigned as described above, and they become the official FAMS asset numbers as well. All versions of the travel network routes' various identifying number schemes may be maintained in a GIS database.

To limit the number of markers at an intersection, two routes may be identified on one post using arrow symbols and 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 needed messages or trail names. If a volunteer group adopts a route, they may be allowed to develop a decal to place on the route's markers. On sign marker posts, trail names or trail adopters may be identified and labeled above route numbers. Not all route markers need to include a route name and numeric route identifier.

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 may 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.
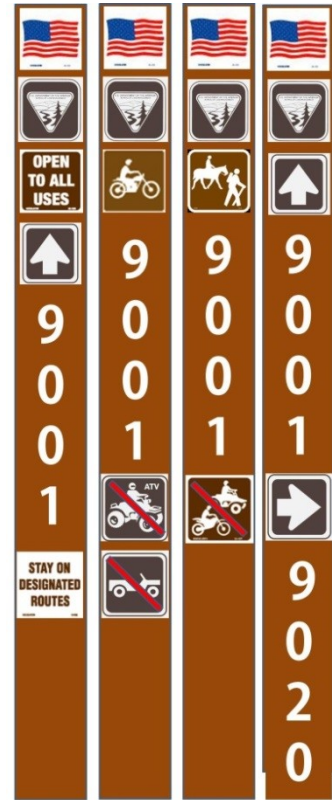
Figure G.8: BLM Route Marker on the Ground

Where designated OHV routes intersect with closed routes, "closed" route markers may be placed only where absolutely necessary for resource protection or public safety. When these closed routes are completely reclaimed either through natural re-vegetation or reclamation efforts, and the "closed" route markers are no longer necessary, the markers may be removed.

Implementation of signing should be completed in accordance with current BLM policy and guidance per the most current BLM sign handbook (BLM 2016a). Specifics for sign design, use, and location are also determined by the BLM's manuals for roads (BLM 2015) and primitive roads (BLM 2012d), the BLM's sign manual (BLM 2004), and the BLM's travel management handbook (BLM 2012a).

<u>Markers for Travel Routes That Are Open and Limited</u>
Markers for travel routes that are open or limited to OHV travel may follow the basic layout depicted in the signs in Figure G.7. Each marker post may contain the following elements:
- Arrow pointing in the direction of the route being marked
- Route identification number
- Symbols of allowed uses to which the route is open
- Symbols of prohibited uses to which the route is closed
- BLM logo

Markers may also have a decal with GPS coordinates marked at strategic locations.

Markers for Routes That Are Limited (Administrative) or Closed

Markers for travel routes where public motorized vehicle travel is allowed but limited (with various restrictions) may use signs formatted like the first sign in Figure G.9 below. Markers for travel routes that are decommissioned or closed to all forms of motorized vehicle travel may use signs similar to that at the right in Figure G.9. Where motorized vehicle travel is limited to administrative use, signs stating closure to OHVs may be used. Once a route has been decommissioned, and the route footprint has revegetated and blends in with the adjacent landscape, signs may be removed so as not to attract attention to the fact that a travel route once existed.

Figure G.9: Route Designation, Restriction, and Closure Signs

Additional Sign Examples

In addition to portal/entry signs, directional signs, general guide signs, designated route marker guide signs, and closure/limitation signs, the following signs may be used:
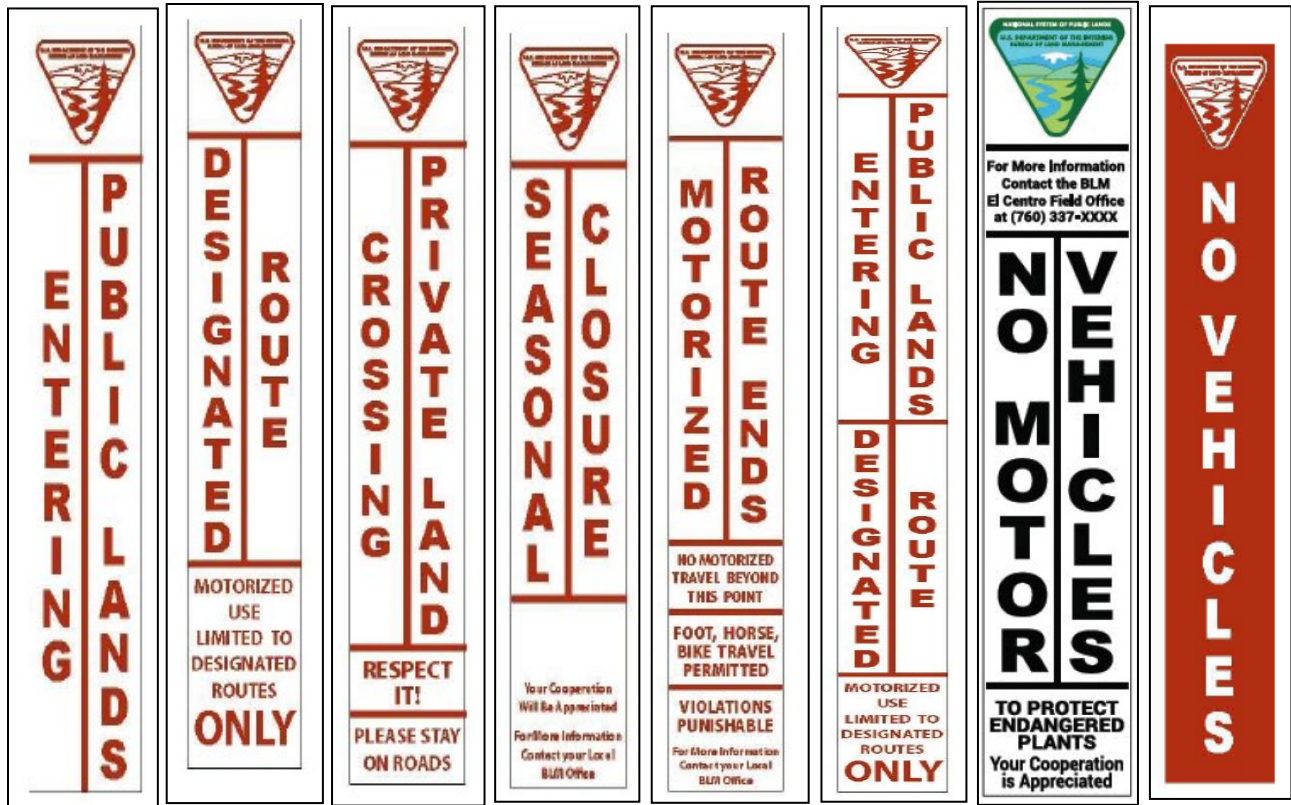
Figure G.10: Additional Travel Management Signs

Sign Placement

Priorities for Placing Signs
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, watchable wildlife sites, trails, backcountry 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

Priority should be given to the installation and maintenance of route markers (e.g., guide or navigation signs). The intention is to make the network of open and limited routes more obvious and attractive than the closed routes.

Sign Distribution
Signing should be kept to the minimum necessary for visitor management and assistance. Signing may also be used as a tool for resource protection and regulatory and informational purposes. Though signs may not be placed on every route in the travel network, most routes designated as "open" or "limited" to motorized/mechanized travel may be marked with their

navigation number or route identification number 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. Signing may also occur at other points where following a primitive road or trail might be difficult or confusing to visitors. 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 may be placed within the TMA as needed according to BLM management priorities.

Sign Monitoring and Maintenance

Monitoring/Maintenance Overview
Through monitoring and ongoing public input, strategies may be developed to constantly improve signing effectiveness. Maintenance procedures and schedules may be developed for signs and markers. Such procedures and schedules would include anticipated replacement needs. A sign inventory and database (see next section) may also be created to facilitate tracking of sign locations and sign maintenance.

Signs may be removed or destroyed during the first few years following implementation. Sign replacement could involve utilizing different techniques to more securely ensure a sign's physical placement (e.g., using concrete instead of a stake). The messages some removed or destroyed signs conveyed may also be communicated through alternate means (e.g., public notices, increased BLM interaction with visitors, etc.).

Public message signs may be routinely evaluated 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 may be monitored more frequently for evidence of damage and other problems.

The BLM may strive to monitor and maintain TMA signs. Signs may be updated, repaired, or replaced as soon as possible; signs that are found to be unnecessary may be removed. General sign maintenance should be conducted according to Chapter 8 of the BLM's sign handbook (BLM 2016a). Public land users will be encouraged to report missing or damaged signs, and volunteer efforts may be developed to help monitor and replace signs. Costs may be identified through the sign inventory database. For consistency, all future signing should conform to the design standards set forth in the BLM's sign handbook (BLM 2016a).

Sign Surveys and Inventories
A sign inventory (stored in a GIS database) should be developed and maintained. On a regular basis, the BLM should evaluate signs and other communication products (brochures, maps, etc.) for effectiveness (BLM 2016a).

A sign survey may be used to create a sign inventory. Current markers and signs may be inventoried upon TMP implementation. The sign survey used to create a GIS database of sign inventory details may include photos and information such as location, category, sign text, size and color, substrate material, and condition. An electronic GPS data dictionary and fillable

electronic BLM sign survey form are available online. More details can be found on page 8 of the BLM's sign handbook (BLM 2016a).

Sign Effectiveness Planning and Review
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 which signs should be clarified. Field staff may also identify locations where signs are needed to resolve use problems, to improve stewardship ethics, or to accommodate public health and safety issues. Each sign should be planned and reviewed to fulfill the minimum review requirements of the BLM's sign handbook, including visibility, location, condition, etc. (BLM 2016a).

APPENDIX H.   ROUTE MANAGEMENT MITIGATION ACTIONS FOR VARIOUS CONFLICT OR IMPACT SCENARIOS

Introduction

The following sections present examples of possible route management mitigation actions that could be considered to address potential route-related resource concerns. Mitigating actions are listed under resource-conflict scenario descriptions in order of possible implementation from least restrictive to most restrictive. For additional examples of mitigation measures, consult "Appendix 5: TTM Challenges and Solutions for Recreation/Trail Management" in the BLM travel management handbook (BLM 2012a). It provides mitigation measures to address the following topics:

- Route density
- Access management
- Circulation improvement
- Parking improvement
- User conflict resolution
- Quality and diversity of trail experiences

Riparian and Water Quality

Route Location Degrades Riparian Conditions
1. Relocate the route to avoid riparian areas.
2. Raise the route above water level if route is necessary, and it cannot be relocated. Remove compacted road fills and replace with permeable fills (such as corduroy) that allow riparian vegetation root systems to continue to function. If riparian crossing is unavoidable, choose nick points where crossing can occur with minimized impacts.
3. Close the route if no suitable mitigation is possible and perform reclamation.

Route-Associated Human Use Degrades Riparian Conditions
1. Place information and interpretive signs encouraging positive behavior (e.g., "Use only when dry," etc.).
2. Raise the route above water level or place barriers to keep vehicles and people on routes. Remove compacted road fills and replace with permeable fills (such as corduroy) that allow riparian vegetation root systems to continue to function. If riparian crossing is unavoidable, choose nick points where crossing can occur with minimized impacts.
3. Relocate the route to allow riparian condition to improve.
4. Close the route if no suitable mitigation is possible and perform reclamation.

Route-Associated Human Use Contributes to Water Quality Degradation and Excessive Erosion
1. Review the situation to determine source of degradation; monitor to determine severity.
2. Place water control measures on the route, such as lead-off ditches and rolling dips to drain the entire road surface.
3. Check and ensure adequate buffer strips are provided at drainage structures to avoid direct drainage into water bodies.
4. Tighten spacing between drainage structures based on soil types and route grade.

5. Take reasonable measures to further harden/stabilize the route.
6. Relocate the route or raise the grade if the route is incised.
7. Close the route if no suitable mitigation is possible.

Wildlife and Vegetation

<u>Route-Associated Human Use Degrades a Wildlife Habitat</u>
1. Educate route users through interpretive signs and other information facilities.
2. Place use limitations on the route (time/season of use, type of use, number of users).
3. Review management plans for species (including recovery plans for Endangered Species Act (ESA)-listed species) and follow recommendations.
4. Design mitigation plans to address:
   - Temporary conditions
   - Seasonal conditions
   - Year-round conditions
5. Develop specific mitigation measures based on the site if species management plans are insufficient.
6. Initiate consultation with the U.S. Fish and Wildlife Service (in the case of ESA-listed species).
7. Replace/enhance habitat to offset problems caused by human use; methods could be to:
   - Augment food/water sources.
   - Place barriers along the route to protect specific habitat features.
   - Relocate or expand reproduction sites to be away from the route.
8. Relocate the route.
9. Close route if no suitable mitigation is possible and perform appropriate reclamation. Regarding intrusions into wildlife habitat, a management decision from the 2008 RMP says, "Where the authorized officer determines that off-road vehicles are causing or will cause considerable adverse impacts, the authorized officer shall close or restrict such areas. The public will be notified as to these closures and restrictions" (BLM 2008b).

<u>Route-Associated Human Use Degrades Plant Communities</u>
1. Place interpretive signs to encourage vehicles and people to stay on routes.
2. Conduct public outreach and education regarding noxious weeds and conserving vegetation.
3. Fence the area or place barriers to manage people.
4. Develop a program to improve desired plant communities.
5. Close the route and perform reclamation.

<u>Route Use Contributes to Invasive Plant and Noxious Weed Spread</u>
1. Educate the public about the spread of invasive weeds to prevent new infestations.
2. Encourage thorough cleaning of vehicles entering the area and include cleaning requirements for contractors or authorized users and permittees of the route.
3. Increase weed treatment along the route.
4. Require use of certified weed-free hay for horse users using the route.
5. Possibly limit the season of use on the route to prevent the spread of seeds if weeds are more likely to be spread during a particular season.

6. Limit the route to administrative use.

User Conflicts

Different Travel Speeds Cause Conflict Between Route Users
1. Place signs and information kiosks to raise awareness of need for considerate use of the area.
2. Monitor situation on the ground and request law enforcement support as necessary.
3. Conduct public outreach and education in an attempt change behavior.
4. Eliminate conflicts by separating uses or limit traffic by type or time of use.

Sound Levels Cause Conflict Between Recreationists and/or Local Residents
1. Place signs and information kiosks to raise awareness of sound issues.
2. Monitor situation on the ground and request law enforcement support as necessary.
3. Conduct public outreach and education in an attempt change behavior.
4. Implement "Quiet Time" use restrictions.
5. Reroute traffic to minimize conflict.
6. Place sound-reducing vegetative or constructed embankment barriers (if applicable).
7. Close route if no suitable mitigation is possible.

Administrative Use Attracts Unpermitted Use
1. Limit the amount or season of authorized use of the routes.
2. Add additional signing to the routes indicating they are limited to administrative vehicle use and public non-motorized use.
3. Fence and gate the routes at their intersections with open routes.

Vandalism and Other Resource Impacts

Route Use-Related Resource Vandalism of Range, Wildlife, or Other Facilities
1. Sign and provide informational materials to the visiting public about the protection of range and wildlife facilities.
2. Close the area around range and wildlife facilities to camping and recreational shooting.
3. Designate facility access routes as limited to administrative use.

Route Causes Unacceptable Recreation Settings Characteristic (RSC) Changes
1. Investigate the cause and implement signage and law enforcement as necessary.
2. Design mitigation plans to address:
   - Short-term conditions
     - o Implement new signing and public outreach to explain problem.
     - o Implement temporary use restrictions (e.g., no overnight camping).
     - o Issue emergency closure order and address conditions during closure.
   - Long-term conditions
     - o Implement signing and mapping protocols for the area.
     - o If no suitable mitigation is possible, amend 2008 RMP to close the area.
     - o Issue emergency closure order and address conditions during closure.

3. Close areas near the route contributing to unacceptable changes.

Proposed Route Exceeds a Visual Resource Management (VRM) Objective
1. Take appropriate action to make the proposed route less noticeable (e.g., landscaping) using the Visual Contrast Rating worksheet.
2. Realign or relocate the proposed route.
3. If no suitable mitigation is possible, construction of the proposed route should not be allowed.