

**U.S. Department of the Interior
Bureau of Land Management**

**Pryor Mountain
Travel Management Area**

**DRAFT
Travel Management Plan
Environmental Assessment**

DOI-BLM-MT-C010-2019-0029-EA

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DOI-BLM-MT-C010-2019-0029-EA

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1 PURPOSE AND NEED FOR ACTION

1.1 Background

The Bureau of Land Management (BLM) Billings Field Office (BiFO) Travel Management Plan (TMP) for the Pryor Mountain Travel Management Area (TMA) has been prepared considering the direction of the Billings Approved Resource Management Plan and Final Environmental Impact Statement (RMP/FEIS) (BLM 2015a) and associated Appendix O of the RMP (the TMP). Appendix O outlined how travel management would be addressed for the BiFO and included management considerations, route inventory and evaluation assessments, designation of non-motorized routes, and implementation-level impacts and maintenance. Although much of the analysis for the Pryor Mountain TMA was completed as part of the RMP, decisions were deferred to allow for more in-depth analysis of non-motorized trails and implementation strategies for maintenance, education, law enforcement, signage, and other travel components.

The draft Pryor Mountain Environmental Assessment (EA)/TMP, which was released for public review in October 2019 (BLM 2019), carried forward information from Appendix O. The 2019 draft EA/TMP analyzed a Proposed Action (Alternative D from the RMP/FEIS) and the No Action Alternative. In response to public comments on the draft EA/TMP, BLM has updated the Proposed Action. The Proposed Action and the No Action Alternatives are the only two alternatives carried forward in this EA. This EA tiers to the RMP/FEIS and incorporates analysis results by reference from the EIS.

1.2 Purpose and Need

The purpose of the action is to provide a logical and sustainable travel and transportation network that addresses the diversity of access and recreational needs of the public, while protecting sensitive natural and cultural resources on public lands administered by the BiFO.

Due to population increases and the wide variety and availability of off-highway vehicles (OHVs), mountain bikes, and electric bicycles (e-bikes), there has been increased demand for public land use and access, which could affect resource conditions. The multiple use mission of the BLM requires consideration of diverse and competing recreational interests, including hiking, mountain biking, equestrian use, various forms of motorized uses, and newly emerging uses such as e-bikes. Action is needed to determine routes appropriate for motorized and non-motorized use; designate routes; and determine route maintenance levels.

1.3 Decision to be Made

When this TMP process concludes, the BLM Authorized Officer (AO) will decide whether to designate and implement identified routes as open, limited (to only a certain type of user, a certain type of vehicle or closed to motorized vehicles. Routes designated as open or limited could be subject to additional management measures (e.g., mitigation, monitoring). In addition to

route designations, the AO will determine whether to implement the actions outlined in the RMP that are brought forward in this TMP/EA.

1.4 Conformance with Land Use Plan

The BLM currently manages the TMA under the 2015 RMP/FEIS, which provides long-term goals specific to the BiFO's resources and uses. The Proposed Action presented in this EA is consistent with the Trails and Travel Management goals and objectives presented on page 2-185 of the RMP and in Chapter 2 of the TMP (Appendix B of this EA).

1.5 Relationship to Statutes, Regulations, and Policies

National and State goals, regulations, and policies regarding travel management are established in various documents including, but not limited to, the following:

- Travel and Transportation Handbook (BLM 2012a);
- Travel and Transportation Manual (BLM 2016a);
- Land Use Planning Handbook (BLM 2005);
- National Mountain Bicycling Strategic Action Plan (BLM 2002);
- BLM Manual 6330 Management of Wilderness Study Areas (BLM 2012b);
- National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands (BLM 2001); and
- Executive Orders (EOs) 11644/11989 (Appendix C); and
- Secretary's Order (SO) 3376 Increasing Recreational Opportunities through the use of Electric Bikes (SO 3376).

1.6 Public Involvement, Consultation, and Coordination

Notification for the release of the public draft EA was posted on the BLM ePlanning website, followed by a 30-day public comment period. The Draft Pryor Mountain EA/TMP (BLM 2019) was released for public review in October 2019 and public comments have been addressed and incorporated into this EA as appropriate. A total of 158 individual comment letters and submittals were received following release of the first draft of the EA/TMP. These comments were provided by 24 organizations (most as partnerships) and 131 individuals.

In addition, tribal letters were sent to the Blackfoot Nation, Chippewa Cree Tribe, Confederated Salish and Kootenai Tribes, Crow Tribe of Indians, Fort Belknap Indian Community, Fort Peck Tribes, Little Shell Chippewa Tribe, Northern Cheyenne Tribe, on March 28, 2019.

Comments were received from the Confederated Salish and Kootenai Tribes Tribal Historic Preservation Officer (THPO), the Little Shell Chippewa Tribe, the Crow THPO, and the Northern Cheyenne THPO. Details regarding tribal consultation for this EA can be found in the Administrative Record.

In addition to comments on the draft EA, extensive public input was gathered and documented in the RMP/FEIS. Route designations and alternatives were evaluated during the public involvement process. The Notice of Availability for the RMP/Draft EIS was published in the Federal Register on March 29, 2013, initiating the 90-day public comment period. Six public meetings were held in Billings, Bridger, Big Timber, Red Lodge, and Roundup, Montana; and Lovell, Wyoming. A total of 190 people attended the meetings. Written public comments were reviewed and considered by the BLM. During the public comment period for the RMP/Draft EIS, the BLM received a total of 771 comment letters or emails, of which 463 were unique comment documents and more than 276 were form letters, which are included in Chapter 5 of the RMP/FEIS.

Tribes, agencies, organizations, businesses and individuals were consulted or participated during the scoping process for the RMP/EIS (BLM 2015a).

BLM coordinated with the U.S. Forest Service (USFS) on all connecting individual routes regarding mechanized use during the winter of 2020. BLM coordinated with USFS 2017-2020 to update route names and numbers to be the same on both the BLM and USFS Pryor mountain landscape. Included in this process was the development of a cooperative interpretive panel placed on kiosks both on BLM and USFS lands showing new route numbers, names, and cooperating rules and regulations for the area. USFS and BLM management personal worked together thru field trips and various forms of communication to complete both projects.

1.7 Resource Issues Identified for Analysis

Table 1-1 presents key issues and indicators developed for the Proposed Action. Resource issues are analyzed in Chapter 3.

1.8 Resource Issues Considered but Eliminated from Further Analysis

Resource issues that were considered but eliminated from analysis and the rationale for their elimination are presented in Table 1-2. Some issues were considered but not analyzed because of inconsistencies with existing laws, higher-level management direction, or because they were beyond the scope of the purpose and goals of this EA. A checklist of resources that were not considered are shown in Appendix D.

1.9 Resource and Resource Use Issues Carried Forward for Further Analysis

Resources that would be affected by the Proposed Action and carried forward for analysis are identified in Table 1-3.

Table 1-1. Key Issues and Indicators Developed for the Proposed Action

| Issue | Indicator | Resource Potentially Affected |
|---|--|--|
| How would route designation and implementation of the TMP affect soil resources within the TMA? | Total miles of open routes through sensitive soils. | Soil Resources |
| How would route designation and implementation of the TMP affect greater sage-grouse habitat and breeding and nesting success? | Number of routes within a 2 mile radius of leks. Total miles of open routes within greater sage-grouse Priority Habitat Management Areas (PHMAs) and General Habitat Management Areas (GHMAs). | Wildlife Resources |
| How would route designation and implementation of the TMP affect the Rocky Mountain bighorn sheep population in the Pryor Mountains? | Total miles of open or limited routes in Rocky Mountain bighorn sheep habitat. | Wildlife Resources |
| How would route designation and implementation of the TMP affect cultural resources? | Total number of cultural sites with increased impact, number of sites with less impact. | Cultural Resources |
| How would route designation and implementation of the TMP affect areas with special designations including Areas of Critical Environmental Concern (ACEC) and Wild and Scenic Rivers (WSR)? | Total miles of open or limited routes within ACECs or WSRs | Special Designations |
| How would route designation and implementation of the TMP affect public access? | Total number of routes rerouted from private to public land. | Transportation and Access |
| How would route designation and implementation of the TMP affect opportunities for a remote recreational experience? | Total miles of motorized routes and new non-motorized routes within the TMA. | Wilderness Study Areas Lands with Wilderness Characteristics Recreation and Visitor Services Special Designations |
| How would route designation and implementation of the TMP affect motorized and non-motorized public recreation opportunities? | Total miles open to motorized and non-motorized use within the TMA. | Recreation and Visitor Services Transportation and Access |

| Issue | Indicator | Resource Potentially Affected |
|---|---|--|
| How would route designation and implementation of the TMP affect wilderness characteristics? | Total miles of new non-motorized routes within the TMA. | Wilderness Study Areas Lands with Wilderness Characteristics Recreation and Visitor Services |
| How would route designation and implementation of the TMP affect the distribution and spread of invasive, non-native species? | Total number of routes designated as closed or limited. | Invasive, Non-native Species |

Table 1-2. Resources Considered but Eliminated from Analysis

| Resource | Rationale |
|--|---|
| Air Quality (including Greenhouse Gases) | Air quality levels are not expected to change measurably among the alternatives. |
| Cave and Karst | There would be no impact to caves from route designation or implementation of the TMP. Caves are located within approximately 0.5 mile of open routes; however, access would be limited to non-mechanized travel (i.e., hiking). Caves are also located along administrative routes with no motorized public access. |
| Environmental Justice | Route designation and implementation of the TMP would not disproportionately impact low-income populations because they are dispersed throughout the entire BiFO. |
| Social and Economic Conditions | There would be no substantial changes to social conditions from route designation and implementation of the TMP. |
| Livestock Grazing | It was determined through preliminary analysis that route designation and implementation of the TMP would have negligible impacts on livestock grazing, thus it was not carried forward for analysis. There are a total of 14 grazing allotments and 74,721 acres currently permitted for livestock grazing within the TMA. Re-designation of routes as limited or closed to motorized and mechanized use benefits forage availability and Animal Unit Months through increases in vegetation production and composition on routes no longer receiving motorized traffic. The beneficial effects of these designations on forage availability would vary depending on soil type, level of initial disturbance, and ability of the site to recover. |
| National Natural Landmark | Crooked Creek is a National Natural Landmark; however, no routes cross Crooked Creek. |
| Native American Concerns | It was determined through preliminary analysis that route designation and implementation of the TMP would have negligible impacts on cultural resources (including sites of traditional religious and cultural importance) that are of concern to Native American tribes. To date, sites matching those criteria do not occur in the proposed travel routes. The Programmatic Agreement (PA) contains stipulations on how many sites meeting these criteria should be encountered during cultural resource inventory. The stipulations include notification, site visits and any necessary consultation to accommodate any tribal concerns that may arise. Mitigation would be completed in consultation with the Concurring Parties and the State Historic Preservation Office (SHPO). |
| Paleontological Resources | It was determined through preliminary analysis that route designation and implementation of the TMP would have negligible impacts on paleontological resources. Route closures under the Proposed Action would benefit paleontological resources due to a reduction in access to potential sites likely resulting in a reduction in damage or unauthorized collection. Indirect impacts from visitation, collection, and/or vandalism would also be reduced. |

| Resource | Rationale |
|--|---|
| Vegetation | It was determined through preliminary analysis that route designation and implementation of the TMP would result in negligible impacts to vegetation communities, thus it was not carried forward for analysis in this EA. |
| Special Status Plant Species | It was determined through preliminary analysis that route designation and implementation of the TMP would result in negligible impacts to special status plant species and BLM sensitive species, thus it was not carried forward for analysis in the EA. While the Information, Planning, and Consultation (IPaC) tool created for U.S. Fish and Wildlife Service (USFWS) identifies potential habitat for Ute ladies'-tresses (<i>Spiranthes diluvialis</i>), there are no documented occurrences of this species in the TMA. No new routes would be constructed. The only proposed route, Sykes Arch, would be marked by cairns, with no construction of new tread. As new routes such as the Sykes Arch are planned and developed, BLM resource specialists will survey proposed project areas for occurrence of special status plant species, and will mitigate impacts through additional site-specific analysis. |
| Visual Resources | It was determined through preliminary analysis that route designation and implementation of the TMP would have negligible impacts on visual resources. The density and location of routes on the landscape impact visual resources by creating contrasting elements of form, line and color. With implementation of the Proposed Action, the amount of visual contrast would diminish over time as a result of reclamation efforts. Reducing contrasting elements and improving visual quality creates a more positive recreation experience for public land users by creating a more cohesive and appealing visual environment. |
| Water Resources, Including Wetlands and Riparian | The TMA is located just west of Bighorn Canyon within portions of the Shoshone and Bighorn Lake Hydrologic Unit Code 8 watersheds. Riparian communities occur along the watercourses in the TMA and are largely confined to the banks of Sage Creek, Crooked Creek and Gypsum Creek. There are approximately 46 acres of riparian communities and 11 acres of freshwater emergent wetlands in the TMA. There would be a negligible impact to water resources and wetlands and riparian areas from route designation or implementation of the TMP. |
| Wild Horses and Wild Horse Herd Management Area | The travel management and wild horses decision was made in the RMP and there would be no new impacts to this resource from route designation or implementation of the TMP. Thus, this resource was not carried forward for analysis in this EA/TMP. |
| Wildlife, Terrestrial, Aquatic, Migratory Birds, and Special Status Species (except bighorn sheep and greater sage-grouse) | It was determined through preliminary analysis that route designation and implementation of the TMP would result in negligible impacts to general wildlife species, including terrestrial wildlife, aquatic wildlife, migratory birds, and most special status species (except Rocky Mountain bighorn sheep and greater sage-grouse, which are analyzed in Section 3.2). |

Table 1-3. Resources Carried Forward for Analysis

| Resource | Section |
|--|----------------|
| Soil Resources | Section 3.1 |
| Wildlife: Rocky Mountain Bighorn Sheep and Greater Sage-Grouse | Section 3.2 |
| Cultural Resources | Section 3.3 |
| Areas with Special Designations: ACECs, WSRs | Section 3.4 |
| Transportation and Access | Section 3.5 |
| Recreation and Visitor Services | Section 3.6 |
| Lands with Wilderness Characteristics | Section 3.7 |
| Invasive, Non-native Species | Section 3.8 |

2 ALTERNATIVES

2.1 Introduction

This chapter includes the Proposed Action and No Action Alternatives. An overview of the TMA is provided in Figure 2-1. The TMA is located south of the Pryor Mountains along the border between Montana and Wyoming and encompasses 80,711.2 acres of BLM-administered land, with interspersed private and State land. The TMA includes lands in both Carbon County, Montana and Big Horn County, Wyoming. The draft Proposed Action released in October 2019 was selected from a range of reasonable alternatives to address the relevant travel and transportation planning issues identified in the RMP/FEIS. In response to public comments on the draft EA/TMP, BLM has updated the Proposed Action.

The four alternatives considered in the RMP/FEIS include:

- The No Action Alternative, which would carry forward current management (Alternative A);
- An alternative emphasizing non-motorized recreational opportunities and natural resource protection (Alternative B);
- An alternative emphasizing motorized access (Alternative C); and
- The Proposed Action, which emphasizes a balanced approach (Alternative D).

The No Action and Proposed Action (Alternative D) alternatives from the RMP were carried forward in the 2019 draft EA/TMP for further analysis. Subsequently, the Proposed Action was updated in response to public comments.

2.2 Route Designations

Through the route evaluation process, BLM proposes route designations on BLM-administered lands within the TMA. Routes designated as closed would be closed to motorized and mechanized use. These routes may be available for pedestrian and equestrian travel. Some routes may involve physical closure structures, such as gates or barricades, with the goal of being restored or naturally reclaimed. Although some of the routes designated for closure may currently be used by the public, these routes are redundant; traverse through sensitive resources; create a public health and safety issue (e.g., excessive erosion, user conflict, etc.); or are not in accordance with criteria outlined in the TMP. Routes designated as open would permit all types of motorized and mechanized vehicle use at all times. They are subject to the operating regulations and vehicle standards set forth in 43 CFR 8341 and 8342, and would require additional management actions from BLM, such as routine maintenance or signage. Limited designated routes may or may not require additional management action. These routes fall into the following categories:

- Limited-Administrative and Authorized Users: This designation includes routes that allow motorized uses by BLM, permittees, private property owners, and other authorized users.
- Limited-Non-Motorized and E-Bike Class 1-3: This designation includes routes that allow public use, including hiking, equestrian, and bicycling. Additionally e-bike Classes 1-3 would be allowed on these routes.
- Limited-Non-Mechanized: This designation includes routes limited to hiking and equestrian use.
- Limited-OHV Width: This designation includes routes limited to 4-Wheel-Drive (4WD), modified and high clearance vehicles, all-terrain vehicle (ATV) use, and/or motorcycle use.

2.3 Modes of Transport Definitions

The BLM Planning for Travel and Transportation Management Manual 1626 defines the following classifications of modes-of-transport:

- Motorized Vehicles: Vehicles propelled by motors or engines, such as cars, trucks, off-highway vehicles, motorcycles, snowmobiles, and boats.
- Non-motorized Travel: Moving by foot, stock or pack animal, non-motorized boat, ski, or mechanized vehicle such as a bicycle.
- Mechanized Travel: Moving by means of mechanical devices not powered by a motor, such as a bicycle.
- Non-mechanized Travel: Moving by foot or by stock or pack animal.

The BLM Travel and Transportation Management Handbook 8342 defines the following classifications of modes-of-transport:

- Motorized Travel: Moving by means of vehicles that are propelled by motors such as cars, trucks, OHVs, motorcycles, boats and aircraft.
- Motorized Vehicle: Synonymous with off-highway vehicle (OHV). Examples of this type of vehicle include ATVs, Utility Type Vehicles (UTVs), Sport Utility Vehicles (SUVs), motorcycle, and snowmobiles.
- Non-motorized Travel: Moving by foot, stock or pack animal (or other animal-powered travel), boat, or mechanized vehicle such as a bicycle.

The RMP/FEIS states that all designated motorized routes, whether open or limited, are also available for non-motorized travel.

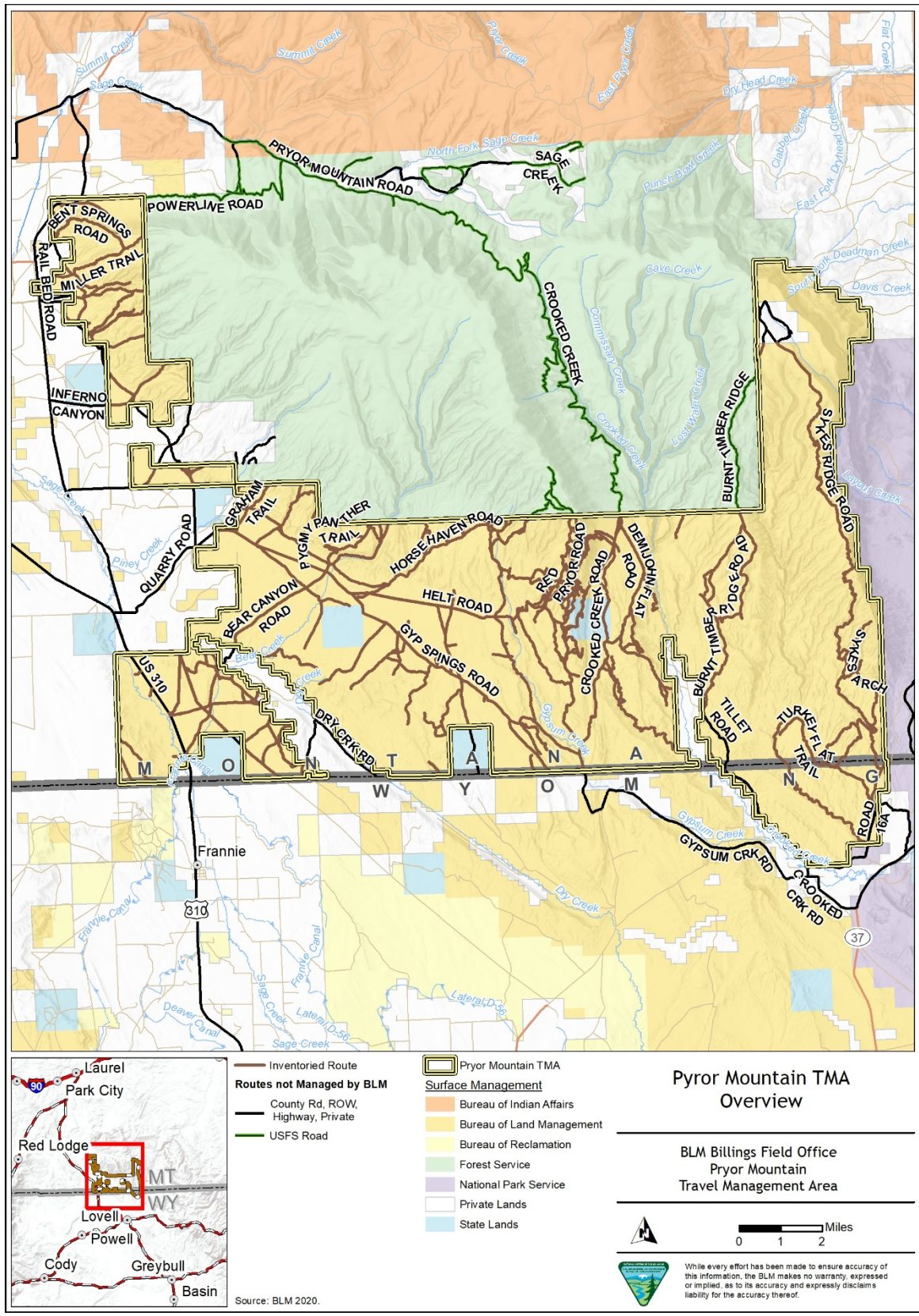


Figure 2-1. Pryor Mountain TMA Overview

2.4 Alternatives Considered but Eliminated from Further Consideration

Three action alternatives were evaluated under the 2015 RMP/FEIS. Alternatives B and C were considered as possible alternatives for the establishment of a route network within the TMA. Although these alternatives were fully analyzed in the 2015 FEIS, they are not being carried forward for analysis in this EA because they do not represent the preferred set of goals and management actions needed to guide the future management of TMA. The Proposed Action and the No Action Alternatives are carried forward for analysis in this EA.

2.4.1 Revised Statute 2477

A TMP is not intended to provide evidence, bearing on, or address the validity of any Revised Statute (R.S.) 2477 assertions. R.S. 2477 rights are determined through a process independent of the BLM's planning process. Consequently, this TMP did not consider R.S. 2477 evidence. The BLM bases travel management planning on purpose and need related to resource uses and associated access to public lands and waters. When a decision is made on R.S. 2477 assertions, the BLM would adjust its travel routes accordingly.

The BLM would continue to consider granting rights-of-way (ROWs) for, or including, vehicular use. ROWs would be processed under project-specific National Environmental Policy Act (NEPA) analysis and be subject to any requirements resulting from analysis. Upon granting of ROWs, they would be incorporated into this TMP on a case-by-case basis.

2.5 No Action Alternative

The No Action Alternative presented in the 2015 RMP/FEIS is the same alternative carried forward for the draft EA (2019) and the revised EA (2020). Per the RMP, a Federal Register Notice published in September 2001 updated and corrected errors in the September 25, 1979 and August 4, 1987 road designations based on decisions from the 1984 RMP (BLM 1984). The notice provided a list of routes in the Pryor Mountains that were designated as open, leaving the remaining routes in the Pryor Mountains designated as closed. Designations such as limited and administrative use were not used for travel management at that time and it was implied that administrative use would have fallen under the closed designation in 2001.

The No Action Alternative would maintain existing conditions, use management, and resource development or protection as currently inventoried. Route density of 1.9 miles of routes per square mile of BLM-administered land would remain. No route improvements would occur under this alternative. The No Action Alternative provides a baseline for a route network comparison and would maintain the existing route network and designations. It would not include the proposed reroute, establishment of additional non-motorized and non-mechanized opportunities, or implementation actions identified in the TMP. Figure 2-2 depicts the No Action Alternative. Table 2-1 presents mileages and percentages of route designations in the TMA under the No Action Alternative.

Table 2-1. Route Designations under the No Action Alternative

| Designation | Miles | Percentage of Total* |
|---|--------------|-----------------------------|
| County Road, Highway, ROW | 10.1 | 4 |
| Open | 115.1 | 47 |
| Limited Non-Mechanized | 0.0 | 0 |
| Limited Administrative and Authorized Users | 119.8 | 49 |
| Limited Non-Motorized | 0.0 | 0 |
| Limited OHV Width | 0.0 | 0 |
| Closed | 0.0 | 0 |
| Total* | 245.0 | 100 |

Source: BLM 2020a

* Discrepancies are due to rounding.

Note: The No Action Alternative analyzed in this EA shows the routes that were designated as closed under the 2001 Federal Register notice as limited to administrative use, since these routes are currently used by BLM for administrative use.

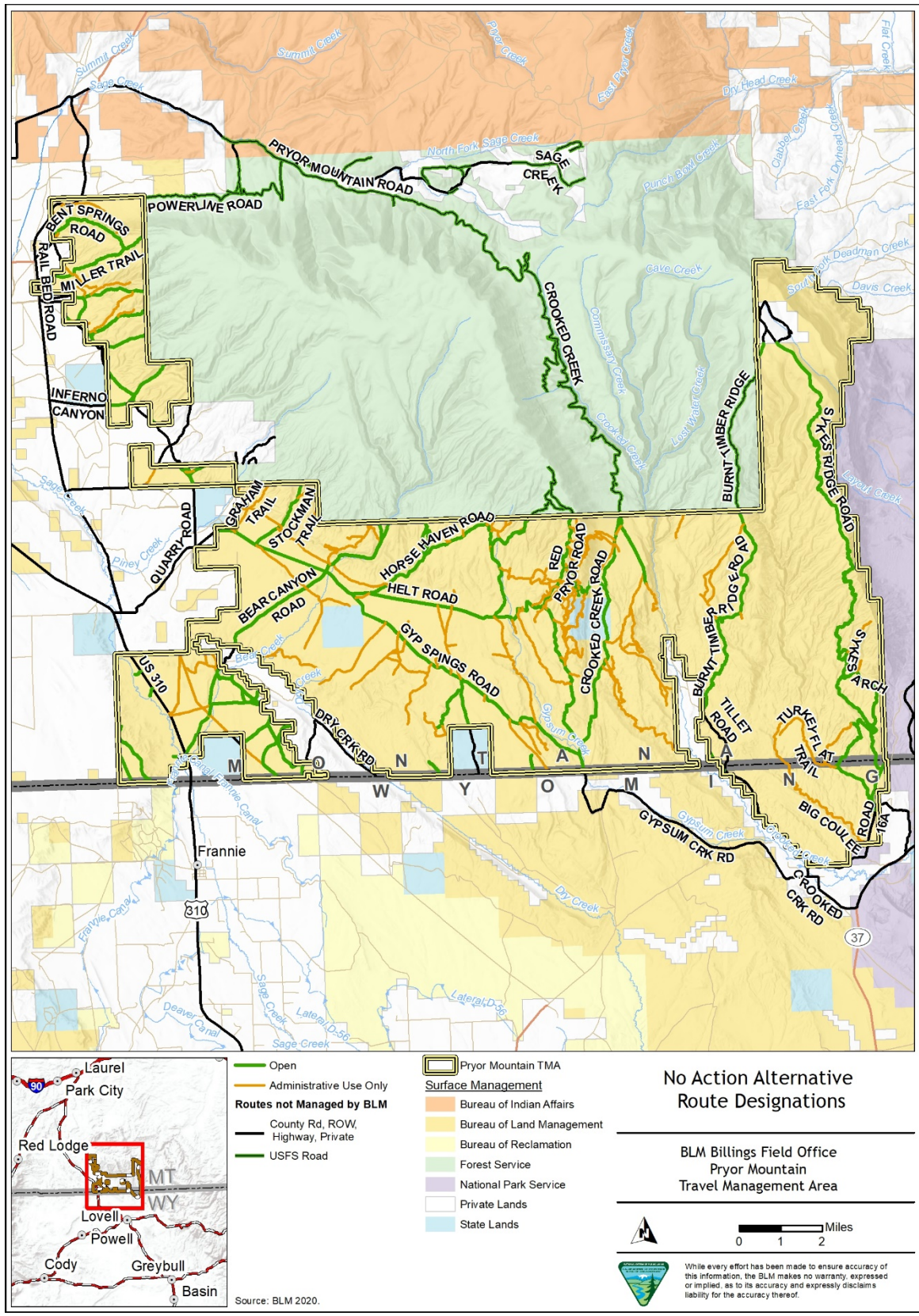


Figure 2-2. No Action Alternative

2.6 Proposed Action

The Proposed Action has been updated based on public comment on the October 2019 Draft EA. This alternative emphasizes multiple-use management by protecting resources, while providing recreation and travel opportunities for a wide variety of users. Opportunities for public recreation would be improved by providing more efficient route networks, route improvements, and additional user information. Objective MD TTM-61 from the RMP states: The Pryor Mountain TMA Management Objectives are to protect wilderness values, cultural/heritage/paleontological resources, visual characteristics, special status plants, fragile and erosive soils, wild horses, and wild horse habitat. While the TMP objectives for the Pryor Mountains prioritize conservation, the proposed travel network also provides enhanced recreation opportunities for the public and provides a balance between motorized and non-motorized uses. Figure 2-3 presents interconnections between BLM routes and USFS routes. Some USFS routes are not available to the public and are not displayed on maps in this EA.

The Proposed Action includes one reroute, the Stockman Trail, which would be rerouted to avoid private property. The reroute would confine the route to BLM-administered land. The proposed reroute of the Stockman Trail would be designated as open for motorized use and would extend east to west approximately 1.7 miles from Rail Bed Road to the Stockman Trail, as shown in Figure 2-3. The Stockman Trail reroute would provide access to the existing route from BLM land, replacing the current access across private land. The reroute would be constructed utilizing a small SWECO Product or similar equipment.

The following trails are proposed as limited to non-mechanized use under the Proposed action: Bear Canyon Trail, Big Sky Trail, Doug Fir Trail (PM 1033), Pygmy Panther Trail, Petroglyph Trail, Rocky Juniper Trail, Sykes Arch Trail, and Timber Canyon Trail (PM 1122). The Proposed Action also includes implementation of speed limits, proposed maintenance intensities, education, enforcement, signage, and other TMP components. It would maintain connections to USFS and National Park Service (NPS) routes.

All types of motorized recreation would continue to be allowed on all open routes. Per the RMP, snowmobile use would be allowed, except where restricted, and would be subject to the following restrictions: avoid locations where wind or topographic conditions may have reduced snow depth and create situations where damage to vegetation or soils would occur, or where vegetation is taller than the protective snow cover. Ecologically sensitive areas would be closed to snowmobiling if resource damage caused or exacerbated by snowmobile activity is found to be occurring in these areas.

Unrestricted Snowmobile (Over-the-snow [OSV]) use would be allowed within the BiFO lands except the following areas:

- Restricted to the following designated routes within the Pryor Mountain Wild Horse Range: Sykes Ridge Road – PM 1002, PM 1001, PM 1006 and Burnt Timber Road -PM

1011, (except between April 15 and June 15, when Burnt Timber Road is closed to all vehicle use for resource protection).

- Not allowed at any time within Wilderness Study Areas (WSAs) in accordance with Manual 6300.
- Motorized over-the-snow travel may be limited by vehicle type, season, snow-depth, or other conditions as necessary.

OSVs would be prohibited in big game winter range.

Mechanized recreation, including bicycles and e-bikes, would be allowed on routes designated as open or non-motorized. BLM proposes to design and implement a trail system incorporating existing routes that would focus on a balance of motorized and non-motorized use including mountain biking opportunities. The Horse Haven Trail would be designated as limited non-motorized and e-bikes Classes 1-3, and Red Pryor Mine Trails would be designated as limited to non-motorized use and e-bikes under the Proposed Action. This alternative would incorporate approximately 1.7 miles of a reroute of the Stockman Trail. The proposed new routes would include 2.01 miles of non-mechanized routes (Sykes Arch Trail) and 1.7 miles of routes designated as open (Stockman Trail reroute). Standard BLM construction methods and equipment such as a small SWECO or similar equipment would be used to construct the Stockman reroute. Best management practices (BMPs) and appropriate mitigation would be implemented, as necessary. Including these proposed routes, the route density of the proposed trail network under the Proposed Action would be reduced to 1.7 miles of route per square mile of BLM-administered land.

Figure 2-3 presents routes with updated designations under the Proposed Action. A compilation of designated routes, including administrative routes, is available on the Route Inventory Report (available on the Project website at: <https://eplanning.blm.gov/eplanning-ui/project/122592/510>). BLM has designated routes for administrative and authorized use primarily based on the route's use for livestock operations and range improvements.

Non-motorized and non-mechanized routes considered specifically in the route designation update are summarized below and in Appendix E, Proposed Action Trail Updates Table.

Bear Canyon Trail

Under the Proposed Action, the Bear Canyon Trail would be designated as limited to non-mechanized use (open to hiking and equestrian uses) The Bear Canyon trail offers access into the mouth of Bear Canyon and its unique ecosystem. The 0.28-mile section on BLM leads onto Forest Service lands and the ability to meet up with the Rock Juniper Trail, or Big Sky Trail.

Big Sky Trail

Under the Proposed Action, the Big Sky Trail would be designated as limited to non-mechanized use (open to hiking and equestrian uses). The Big Sky Trail offers wide open vistas, views of Big Pryor Mountain and into Wyoming. The Big Sky Trail is a 4.0-mile round-trip hike, and can be connected with the Rocky Juniper Trail and the Bear Canyon Trail to offer opportunities for longer hikes.

Doug Fir Trail (PM 1033)

Under the Proposed Action, the Doug Fir Trail would be designated as limited to non-mechanized users. The route runs for 0.4 mile across open prairie grasslands before leaving BLM-administered land and crossing into USFS-administered land.

Horse Haven Trail

Under the Proposed Action, the Horse Haven Trail would be designated as limited to non-motorized uses (open to hiking, bicycling, and equestrian uses) and Class 1-3 e-bikes. The Horse Haven Trail (PM 1027A) is a short 0.4-mile-long route that cuts between other designated routes. The route is an easy hike or ride following an old closed two-track road that has been converted to a single-track.

Petroglyph Trail

Under the Proposed Action, the primitive Petroglyph Trail would be designated as limited to non-mechanized use (open to hiking only, not accessible to equestrians). There is a route at the beginning and the end of the almost 3.0-mile-long canyon, but a designed, delineated trail tread does not exist after traveling into the canyon.

Pygmy Panther Trail

Under the Proposed Action, the Pygmy Panther Trail would be designated as limited to non-mechanized use. The route consists of 2.9 miles of an old road that has been closed to motorized travel for several years.

Red Pryor Trails Area

Under the Proposed Action, the Red Pryor Trails Area would be designated as limited to non-motorized use (open to hiking, bicycling (including e-bikes), and equestrian uses). In 2015 and in the draft 2019 EA/TMP, there were 23.3 miles of trail identified in this area that are remnants of a mining era boom that created an interconnected system of roads and mining disturbances, but not an opportunity-based travel opportunity. After further field investigation, the total number of route miles to be integrated into the Red Pryor Area Trail was reduced to 15.2 miles. Many of the previously identified routes are no longer present or have significantly revegetated due to non-use. Many of the routes dead-end at old exploration sites without providing any real value for

access or recreational use (e.g., not a desirable viewpoint or unique feature). Interim management would include signing any potential hazards, but no maintenance of these routes would occur. A future system of trails could be developed in this area in partnership with mountain biking enthusiasts. Future system development would include routing around any potential hazards, and coordinating with the Montana Department of Natural Resources to obtain necessary authorizations before including state properties in any future trail system development.

Rocky Juniper Trail

Under the Proposed Action, the Rocky Juniper Trail would be designated as limited to non-mechanized use (open to hiking and equestrian uses). The route begins on an old two-track route and follows a combination of this old route and game trails to a scenic saddle. The route and is approximately 1.7-miles-long (one way) to the point where it converges with the Big Sky Trail and the Bear Canyon Creek Trail.

Sykes Arch Trail

Under the Proposed Action, the Sykes Arch Trail would be designated as limited to non-mechanized use (open to hiking). The Sykes Arch Trail was proposed by the public. The trail is 2.01-miles-long and consists of a combination of undeveloped wild horse trails that follow the bottom of a wash for approximately 1.5 miles across NPS lands in the Big Horn Canyon National Recreation Area before crossing onto BLM-administered land. The route traverses highly scenic areas with unique limestone karst features. The route continues out of the drainage bottom to an administrative two-track road that leads to a water development for wild horses. From there, the route would follow existing horse trails up the drainage to the unique arch feature. This trail would be developed in collaboration with the NPS and would undergo additional NEPA analysis prior to implementation.

Timber Canyon Trail

Under the Proposed Action, the Timber Canyon Trail would be designated as limited to non-mechanized use (open to hiking and equestrian uses). The Timber Canyon Trail (PM 1122) is in the canyon north of Water Canyon. route forks to the south off motorized route PM 1124 and winds thru the juniper woodland for 1.65 miles to the USFS boundary.

Water Canyon Road (PM 1121)

Under the Proposed Action, the Water Canyon Road would be designated as limited to administrative and authorized uses. The public would have access to this route for non-mechanized use, including hiking and equestrian uses. The Water Canyon Road is a two-track road that originates at PM 1114 and continues on BLM-administered land for 1.06 miles before crossing onto the Custer National Forest.

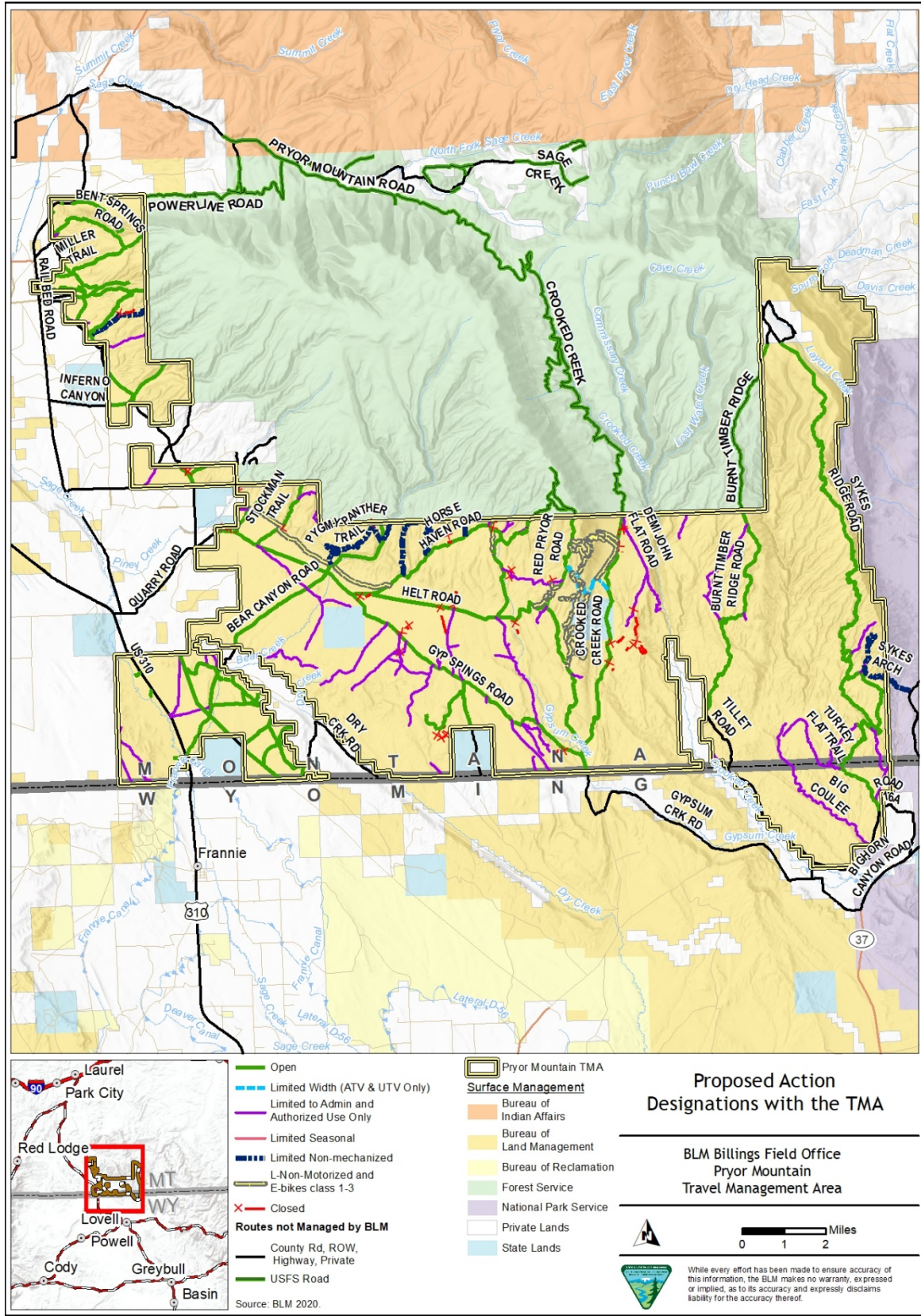


Figure 2-3. Proposed Action

The Proposed Action includes the results of route evaluations conducted by BLM in 2009, which change the closed designations (from the 2001 Federal Register) to limited administrative use or non-motorized use. While the designations have changed, uses remain the same because the definition of Closed under the 2001 Federal Register included only closed to public use, while routes remained open to administrative use. Coordination would occur to ensure consistent signage and public information across BLM, USFS, and NPS jurisdictions. Table 2-2 includes mileages and percentages of route designations under the Proposed Action.

Table 2-2. Route Designations under the Proposed Action

| Designation | Mileage | Percentage of Total* |
|---|----------------|-----------------------------|
| County Road, Highway, ROW | 10.1 | 4 |
| Open ¹ | 114.9 | 46 |
| Limited Non-Motorized and E-Bike Class 1-3 | 16.8 | 7 |
| Limited Administrative and Authorized Users | 62.9 | 25 |
| Limited Non-Mechanized ¹ | 11.0 | 0 |
| Limited OHV width | 2.6 | 1 |
| Closed | 32.2 | 14 |
| Total* | 250.4 | 100 |

Source: BLM 2020

¹ Includes proposed new routes or reroutes.

* Discrepancies are due to rounding.

2.6.1 E-Bikes on BLM-Administered Lands

The Department of the Interior (DOI) released Secretarial Order (S.O.) 3376 on August 29, 2019 (BLM 2019b), which instructs all DOI agencies to develop a proposed rule to revise 43 CFR 8340.0-5. E-bikes are currently not authorized in areas that are closed to motorized travel. Current regulation from the BiFO RMP/EIS (BLM 2015a) limits motorized and mechanized travel to existing routes, unless otherwise noted. Upon implementation of the TMP, motorized and mechanized travel would be limited to designated routes. This EA determines which routes e-bikes would be allowed on within the Pryor Mountain TMA. E-bikes would not be permitted on routes designated as limited to non-mechanized use. Closed routes are no longer considered routes in the travel network. They would be decommissioned and allowed to passively revegetate, including the possible use of barricades, signage, etc. Off-road cross-country travel is prohibited by motorized and mechanized vehicles, including e-bikes.

Table 3-13 presents proposed e-bike status by route designation under the Proposed Action. It was determined that Class 1, 2, and 3 e-bikes could safely use these routes without causing undue resource damage. The BLM conducted a route-specific review regarding e-bikes and trails use based on public comments received during the public comment period for the October 2019 Draft EA. In 2020 BLM re-considered route designations on two motorized routes to allow e-bikes on these

routes. The Proposed Action was updated to consider public input and e-bikes. For additional discussion on e-bikes as it relates to recreation and route use, refer to Section 3.6 of this EA.

2.6.2 Minor Realignment

The Proposed Action would include minor route adjustments to address erosion issues, access issues, or other resource concerns. Route adjustments would not change more than 0.25 mile of a designated route. These adjustments could also include opening a separate existing route that serves the same access need as the route that is to be realigned. Minor realignments of the route network would be considered to be maintenance actions under the TMP, consistent with the BLM NEPA Handbook (BLM 2008).

Maintenance would not include new surface disturbance for the construction of new routes except where new construction would be necessary for the following situations:

- Minimize effects to cultural resources;
- Reduce impacts to sensitive species or their habitats;
- Increase the quality of a recreational experience, while not affecting sensitive species or their habitats or any other sensitive resources; and
- Opening or limited opening of a route where valid ROWs or easements of record were not accurately identified in the route designation process.

2.6.3 Route Closures

The BiFO strategy for restoring closed/decommissioned or unauthorized travel routes would be accomplished as time and funding permit. Travel routes identified for closure under the Proposed Action would be allowed to naturally revegetate. Passive restoration would be implemented and could incorporate natural features to help disguise the route to discourage continued OHV use.

Regarding routes that are not closed to the public, per 43 CFR 8341.2 (a), if it is determined that OHVs are causing, or would cause, considerable adverse effects to resources along a route, the affected area would be immediately closed to the type(s) of OHVs causing the adverse effects until the effects are eliminated and measures are implemented to prevent recurrence. These closures would not prevent designation of the route in accordance with 43 CFR 8342. These areas would not be opened to the type(s) of OHVs for which they were closed unless the AO determines that the adverse effects have been eliminated and measures have been implemented to prevent recurrence. Measures to control invasive, non-native species are discussed in Section 3.9, Invasive, Non-native Species.

Similarly, if it is determined that use of mountain bikes or e-bikes is causing, or would cause, considerable detrimental impact to resources along a route, the affected area would be closed to either all mountain bike or e-bike use, or to a specific class of e-bikes (Classes 1, 2, or 3) in accordance with applicable regulation. Closure would remain in effect until impacts are remedied and mitigation measures are implemented to prevent recurrence. These areas would not

be opened again to mountain bike or e-bike use unless the AO determines that adverse effects are eliminated and these recreational uses would be appropriate.

2.6.4 Authorizations

Under the Proposed Action, routes that were not included in the inventory or documented during the BiFO travel management planning process would be considered on a case-by-case basis. Travel management designations would not affect valid existing rights for permitted uses, including ROWs, County or State roads, or authorized livestock operations.

Additional authorizations for authorized or permitted access to range improvement projects would be incorporated into the travel management and grazing permit authorizations as needed with approval from the AO, unless detrimental resource concerns require analysis or cannot be mitigated. These projects would be documented in the Rangeland Improvement Project System and/or have a signed cooperative agreement, range improvement permit, or other documentation requiring maintenance. These routes, which may provide important access for required maintenance activities, are used intermittently and could have been missed during field inventories.

Any permittee or lessee may apply for a range improvement permit to install, use, maintain, and/or modify removable range improvements that are necessary to achieve management objectives for the allotment. If maintenance is no longer possible, access may be necessary for potential removal and abandonment of these range improvement projects and reclamation. Any new range improvement projects installed during the life of the TMP should have administrative access for maintenance. Any new projects would require site-specific NEPA analysis.

Under the Proposed Action, the BLM would continue to consider granting ROWs for, or including, vehicular use. Approved ROWs, including roads or vehicular ways, would automatically be incorporated into the TMP on a case-by-case basis.

2.6.5 Cultural Resources

The BiFO, in consultation with the Montana SHPO, has determined that a phased identification and evaluation of historic properties and application of criteria of adverse effect is appropriate for the Undertaking, as specifically permitted under 36 CFR §800.4(b)(2) and 36 CFR §800.5(a)(3). A PA specifying the terms of Section 106 completion has been established and signed by participating parties. Montana Department of Natural Resources and Conservation Management and the Advisory Council on Historic Preservation have declined to participate.

The PA allows for the completion of the identification and evaluation of historic properties, determinations of effect on historic properties, and consultation concerning measures to avoid, minimize, or mitigate any adverse effects across the Project area. These activities will be completed after the BiFO releases its Finding of No Significant Impact but prior to approving and implementing any specific activities associated with the Undertaking.

The BiFO shall provide all parties to this PA with an inventory report and site evaluations at the completion of the planned Class III inventory and site evaluation project, pursuant to the terms of the PA.

2.6.6 Future Improvements

The TMP (Appendix B) provides specifications for associated BiFO maps and signage, including signage for ports-of-entry. The TMP considers routes that provide access to public lands, recreational opportunity areas (e.g., hunting, fishing, boating, camping), and allows for future funded improvements (e.g., staging areas, non-motorized, non-mechanized routes). Any improvements beyond those discussed would require separate site-specific NEPA analysis. Mitigation measures for all resources are outlined in Appendix B of the RMP/FEIS. The TMP is meant to be a living document throughout the life of the plan. Adaptive management opportunities and strategies would be implemented to minimize impacts and conflicts and maximize multiple use benefits.

2.7 Summary Comparison of Alternatives

Table 2-3 presents the resource issues and indicators and provides a comparison of the alternatives.

Table 2-3. Resource Issues and Indicators under the No Action and Proposed Alternatives

| Resource Issues/Indicators | No Action Alternative | Proposed Action |
|--|--|---|
| How would route designation and implementation of the TMP affect soil resources within the TMA? | Existing routes would be maintained and no additional improvements or changes to existing routes would be implemented. Impacts to soils would remain the same or increase with increased route use. | Passive reclamation would occur on the current route after closure. |
| How would route designation and implementation of the TMP affect greater sage-grouse habitat and breeding and nesting success? | No additional improvements or changes in route designations would be implemented. Reroute construction would not occur within identified greater sage-grouse habitat and no additional improvements would be implemented. Route use would continue and likely increase with resultant impacts to greater sage-grouse habitats. | Route closures and limited designations would reduce potential impacts to greater sage-grouse habitat and breeding areas. This is based on 2.8 miles of route closures within two miles of an active lek and associated decrease in habitat degradation, loss, fragmentation, noise, and human disturbance. |

| Resource Issues/Indicators | No Action Alternative | Proposed Action |
|--|---|---|
| How would route designation and implementation of the TMP affect the Rocky Mountain bighorn sheep population in the Pryor Mountains? | No additional improvements or changes would be implemented. | Open routes within bighorn sheep habitat would be reduced by approximately four miles and an additional 10.6 miles of existing motorized routes within this habitat would be designated for non-motorized use only. |
| How would route designation and implementation of the TMP affect cultural resources? | No additional improvements or changes in route designations would be implemented. | Route closures and limited designations would reduce potential impacts to cultural resources. |
| How would route designation and implementation of the TMP affect Areas with special designations (ACECs and WSRs)? | No additional improvements or changes in route designations would be implemented. | Route closures and limited designations would reduce potential impacts to special designations. |
| How would route designation and implementation of the TMP affect public access? | Public access within the TMA would be maintained as is and no additional improvements or changes would be implemented. | Public access would be improved by relocating routes onto BLM-administered land and off of private land. |
| How would route designation and implementation of the TMP affect opportunities for a remote recreational experience? | Existing opportunities for remote recreational experiences would be maintained and no additional improvements would be implemented. | Opportunities for remote recreational experiences would increase due to changes in route designations and improvements proposed in the TMP. |
| How would route designation and implementation of the TMP affect motorized and non-motorized public recreation opportunities? | The existing motorized and non-motorized public recreation opportunities would be maintained and no improvements would occur. | Additional motorized and non-motorized public recreation opportunities would be implemented. |
| How would route designation and implementation of the TMP affect wilderness characteristics? | Existing wilderness characteristics within the TMA would be maintained and no additional hiking trails would be implemented. | Existing wilderness characteristics within the TMA would be impacted from designation of new non-motorized routes within these areas, resulting in more use. |
| How would route designation and implementation of the TMP affect the distribution and spread of invasive, non-native species? | There would be no improvements or changes made to the existing distribution and spread of invasive, non-native species. | The existing distribution and spread of invasive, non-native species would be increased during reroute construction. However, impacts are expected to be temporary and would not result in long-term or irreversible impacts. |

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter includes a description of the affected environment of the TMA and provides analysis of impacts (environmental consequences) that would result from implementation of the No Action and Proposed Action (Chapter 2). An environmental impact or consequence is a modification or change to the existing environment resulting from an action. Impacts can be direct, indirect, short-term, long-term, or permanent. Definitions of these impact classifications are included in the glossary under “Impacts (Common Terms).” Affected environment issues are stated as questions for each resource and resource use. Unless otherwise specified, the analysis area is defined as land and water within the TMA boundaries (Figure 2-1).

In many cases, impacts are analyzed qualitatively; quantitative impacts are evaluated when possible. The evaluation focuses on direct and indirect effects (impacts) on specific resources and resource uses where they occur, and cumulative impacts when applicable. Data for the existing route network was collected by the BiFO and its contractors. Additional Geographic Information System (GIS) databases were used for mapping, describing relevant resources, and calculating mileages and acreages.

3.1 Soil Resources

Issue: How would route designation and implementation of the TMP affect soil resources within the TMA?

3.1.1 Affected Environment

Soil resources have formed within three Major Land Resource Areas (MLRA) (NRCS 2006), as described below. The majority of the TMA is located within the Northern Rocky Mountain Foothills MLRA, an area of eroded plateaus and terraces.

3.1.1.1 MLRA 32 – Northern Intermountain Desertic Basin

The northern two-thirds of this MLRA is in the Bighorn Basin. It is in the Middle Rocky Mountains Province of the Rocky Mountain System. Elevations range from 3,900 to 5,900 feet. This portion of the MLRA is an elevated, dissected basin surrounded by mountain ranges to the east, west, and south and situated in a syncline between anticlinal mountain ranges. The surface is covered with old deposits of sand and gravel washed into the basin by the streams and rivers draining from surrounding mountains. The present-day rivers and streams have excavated old pediment surfaces, forming terraces. Alluvial fan deposits grade into the valley fill pediments. The dominant soil orders in this MLRA are Entisols and Aridisols. They are generally shallow to very deep, well drained, and loamy.

3.1.1.2 MLRA 46S – Northern Rocky Mountain Foothills, South

The Northern Rocky Mountain Foothills MLRA, with elevations ranging from 3,600 to 7,870 feet, is in the south and northwestern region of the TMA. The foothills east of the northern

Rocky Mountains are on an old plateau of uplifted marine sediments. The rugged hills and low mountains are cut by many narrow valleys with steep gradients. Broad floodplains and alluvial fans border a few of the major rivers. These marine sediments are primarily sandstones and shales with some layers of chalk and conglomerate. The dominant soil orders in this MLRA are Mollisols and Entisols, and soils are shallow to very deep, generally well drained, and loamy or clayey.

3.1.1.3 MLRA 58A – Northern Rolling High Plains, Northern Part

This area is in the Missouri Plateau unglaciated section of the Great Plains Province of the interior plains. It is an area of old plateaus and terraces that have been deeply eroded. Elevations range from 2,950 to 5,900 feet, increasing gradually from north to south. This MLRA is an important mining (coal and uranium) and petroleum district. The largest deposits of coal in the United States occur in this area. The dominant soil orders in this MLRA are Aridisols and Entisols. The soils in the area predominantly have a mesic soil temperature regime, an aridic soil moisture regime that borders on ustic, and mixed or smectitic mineralogy. They are shallow to very deep, generally well drained, and loamy or clayey.

The main characteristics for evaluating the suitability of soils are their susceptibility to erosion, or the capacity of a site to limit redistribution and loss of soils (including nutrients and organic matter) by wind and water. Water erosion is the detachment and movement of soil by water. Natural erosion rates depend on inherent soil properties, slope, soil cover, and climate. The water erosion hazards from unsurfaced roads and trails are based on soil factors such as slope, rock fragment content, and the K factor (soil erosion factor). Water-erodible soils are rated as having a high, medium, or low potential for water erodibility. Figure 3-1 shows the areas within the TMA with high, medium, and low potential for water erosion. Most soils in the TMA have low water erosion potential. Areas with medium water erosion potential are distributed throughout the TMA, while most of the high erosion potential areas are located within two to three miles of the Wyoming state line. Table 3-1 presents the number of acres within the TMA in each of the water erosion risk classes. Note that approximately half of the TMA consists of areas with no available water erosion data.

Wind erosion is physical wearing of the earth's surface by wind. Wind erosion removes and redistributes soil. Small blowout areas may be associated with adjacent areas of deposition at the bases of plants or behind obstacles, such as rocks, shrubs, fence rows, and road banks. Wind erodible soils are rated as having a high, medium, or low potential for wind erodibility. Figure 3-2 shows the distribution of areas within the TMA with high, medium, and low potential for wind erosion. Most of the TMA falls into the medium potential for wind erosion class. Only a few isolated areas have high wind erosion potential. Table 3-1 presents the number of acres within the TMA in each of the wind erosion risk classes. Note that approximately half of the TMA consists of areas with no available wind erosion data.

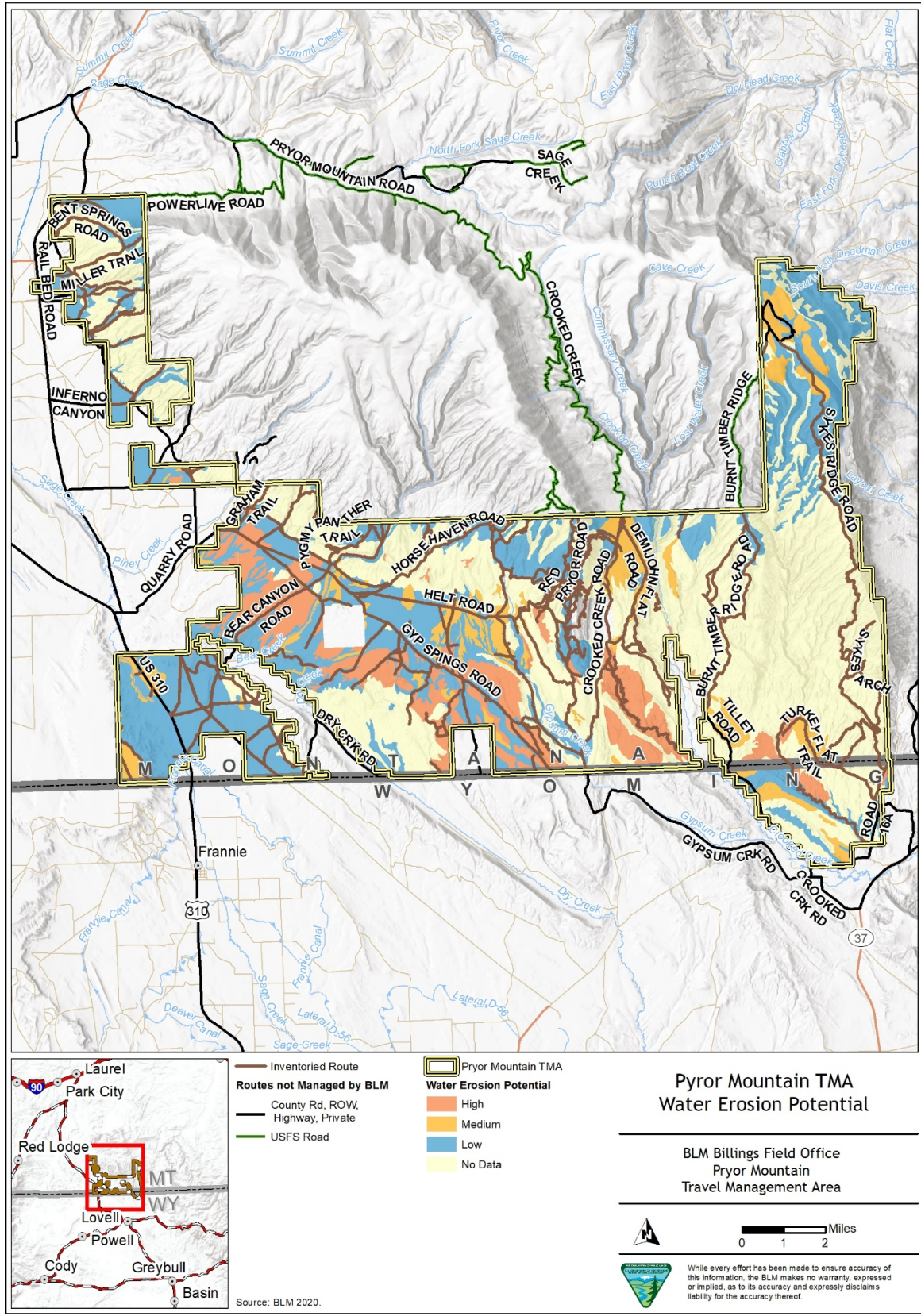


Figure 3-1. Water Erosion Potential

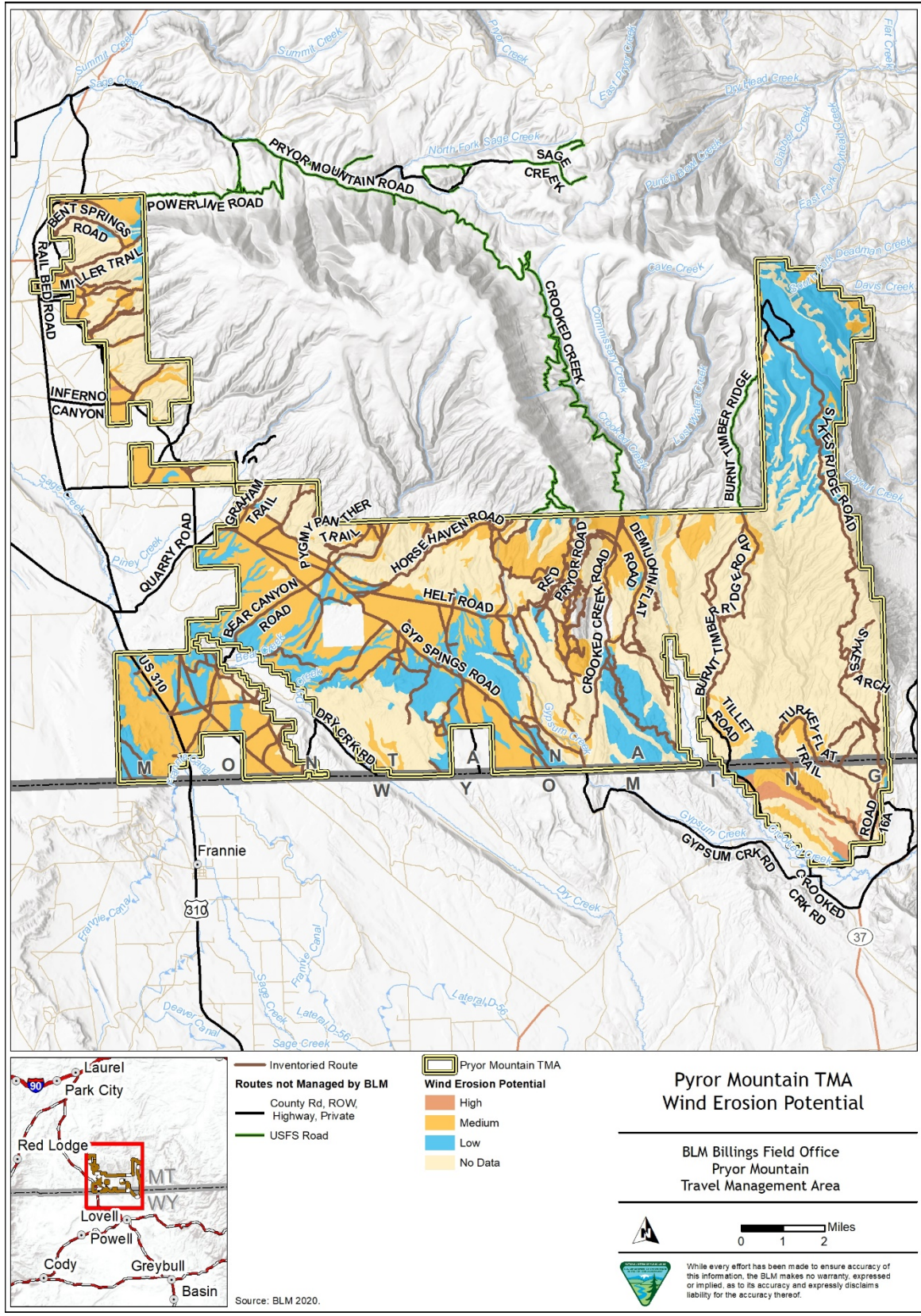


Figure 3-2. Wind Erosion Potential

Table 3-1. Water and Wind Erosion Potential on BLM-Administered Land within the TMA

| Rating | Water Erosion Potential (Acres)* | Wind Erosion Potential (Acres)** |
|---|---|---|
| High | 8,328 | 827 |
| Medium | 5,931 | 23,756 |
| Low | 25,491 | 15,165 |
| No data for this area per the Natural Resources Conservation Service (NRCS) | 40,944 | 40,946 |

Source: NRCS 2013

*Water erosion potential factors ratings: Low - 0.05 to 0.25, Moderate - 0.25 to 0.4, High - 0.4+

**Wind erodibility group ratings: 1-3 severe, 4-5 moderate, and 6-8 slight.

3.1.2 Environmental Consequences

Soils within the TMA are susceptible to impacts from compaction and disturbance, which can lead to accelerated erosion and soil loss, changes in soil chemistry, and/or disturbance of soil crusts. Surface disturbances generally increase soil susceptibility to erosion and compaction, which increases the potential for offsite movement. Management actions that involve surface disturbing activities; a reduction in vegetation cover; trampling; and the use of vehicles, bicycles, and heavy machinery can result in such impacts. This is especially true in areas where natural erosion rates are high because of soil type, condition, or slope.

The greater the number of routes, the greater the potential for impacts to soils from compaction and erosion. The types of routes open to motorized and mechanized uses vary, with two tracks creating a wider footprint than a single track for motorcycles or non-motorized travel (bicycles, horses, hikers). Routes located on steep slopes and in areas with fragile, exposed soils are vulnerable to disturbance. The displaced soil particles can be transported by wind, water, or other natural and anthropogenic forces. Traveling on routes during the spring season, or other times of year with high soil moisture content (i.e., after a recent precipitation event), could lead to rutting, compaction, accelerated runoff, and erosion. Table 3-2 and Table 3-3 present the miles of designated routes in areas with wind and water erosion potential under the No Action and Proposed Actions, respectively.

3.1.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. Approximately 5.1 miles of open or limited routes would remain located on soils with high wind erosion potential, and 25.7 miles of open or limited routes would remain on soils with high water erosion potential. An additional 110.8 miles of open or limited routes would remain located on soils with moderate wind erosion potential, and 24.0 miles of open or limited routes would remain on soils with moderate water erosion potential. Erosion and

sedimentation would be expected to continue at current levels or increase with increased route use. Compaction would decrease the infiltration of moisture, and increase runoff and erosion. Routes located on steep slopes would also be prone to increased runoff and erosion, leading to the formation of rill and gullies if left unmitigated. Table 3-2 presents designated routes in areas of high and moderate wind and water erosion potential under the No Action Alternative.

Table 3-2. Designated Routes within Areas with Wind and Water Erosion Potential under the No Action Alternative

| Designation | Severe Wind Erodibility** (miles) | Moderate Wind Erodibility** (miles) | High Water Erodibility* (miles) | Moderate Water Erodibility* (miles) |
|---|--|--|--|--|
| County Road, Highway, ROW | 1.2 | 4.9 | 0.1 | 2.8 |
| Open | 0.6 | 52.6 | 7.9 | 11.1 |
| Limited Non-Mechanized | 0.0 | 0.0 | 0.0 | 0.0 |
| Limited Non-Motorized | 0.0 | 0.0 | 0.0 | 0.0 |
| Limited Administrative and Authorized Users | 3.3 | 53.3 | 17.7 | 10.0 |
| Limited OHV Width | 0.0 | 0.0 | 0.0 | 0.0 |
| Closed | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 5.1 | 110.8 | 25.7 | 24.0 |

Source: NRCS 2013

*Water erosion potential factors ratings: Low - 0.05 to 0.25, Moderate - 0.25 to 0.4, High - 0.4+

**Wind erodibility group ratings: 1-3 severe, 4-5 moderate, and 6-8 slight.

3.1.2.2 Proposed Action

Under the Proposed Action, there would be fewer open routes than under the No Action Alternative and route density would be reduced by closing and decommissioning routes. Soil compaction and rutting would decrease on routes closed to motorized and mechanized uses. A total of 7.3 miles of route located on soils with high water erodibility would be closed. An additional 11.4 miles of routes located on soils with moderate wind erodibility and 3.0 miles of routes with moderate water erodibility would be closed. As decommissioned routes naturally revegetate, soil erosion rates would decrease. Table 3-3 presents designated routes within areas with high or moderate wind or water erosion potential under the Proposed Action.

Table 3-3. Designated Routes within Areas with Wind and Water Erosion Potential under the Proposed Action

| Designation | Severe Wind Erodibility** (miles) | Moderate Wind Erodibility***¹ (miles) | High Water Erodibility* (miles) | Moderate Water Erodibility* (miles) |
|---|--|---|--|--|
| County Road, Highway, ROW | 1.2 | 4.9 | 0.1 | 2.8 |
| Open | 0.5 | 55.5 | 7.8 | 6.8 |
| Limited Non-Mechanized | 0.0 | 3.0 | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Classes 1-3 | 0.0 | 10.0 | 0.4 | 1.0 |
| Limited Administrative and Authorized Users | 3.4 | 26.8 | 10.2 | 10.0 |
| Limited Width OHV | 0.0 | 1.4 | 0.0 | 0.4 |
| Closed | 0.0 | 11.4 | 7.3 | 3.0 |
| Totals | 5.1 | 112.9 | 25.7 | 23.9 |

Source: NRCS 2013

*Water erosion potential factors ratings: Low - 0.05 to 0.25, Moderate - 0.25 to 0.4, High - 0.4+

**Wind erodibility group ratings: 1-3 severe, 4-5 moderate, and 6-8 slight.

¹Includes proposed new routes (0.5-mile non-mechanized, 1.7 miles open)

The Stockman Trail would be rerouted and the reroute would provide access to the existing route from BLM land, replacing the current access across private land. The reroute would be constructed utilizing a small SWECO or similar equipment. As closed and decommissioned routes are naturally revegetated, soil erosion would be reduced.

3.2 Wildlife Resources (Rocky Mountain Bighorn Sheep and Greater Sage-Grouse)

Issue: How would route designation and implementation of the TMP affect greater sage-grouse habitat and breeding and nesting success?

Issue: How would route designation and implementation of the TMP affect the Rocky Mountain bighorn sheep population in the Pryor Mountains?

3.2.1 Affected Environment

3.2.1.1 Rocky Mountain Bighorn Sheep

Rocky Mountain bighorn sheep typically inhabit cliffs, mountain slopes, and rolling foothills with open to semi-open conditions. Within the TMA 13,878 acres of general bighorn sheep habitat is occupied seasonally or year-round (Montana Fish, Wildlife, and Parks [MFWP] 2019).

The Pryor Mountain bighorn sheep herd is the only population documented on BLM-administered lands managed by the BiFO. This herd occupies areas on USFS, NPS, BLM, State, and private lands surrounding the east and west Pryor Mountains. Table 3-4 presents population numbers from 1997 to 2020. Population trends in the TMA have been increasing, with 155 bighorn sheep reported in 2020 (MFWP 2020). Hunting of this species was initiated in 1990. Bighorn sheep habitat is generally located along the eastern edge of the TMA near Bighorn Canyon and Crooked Creek in remote and complex mountainous terrain.

Table 3-4 Bighorn Sheep Population Numbers from 1997 to 2020

| Year | Total | Year | Total |
|------|----------|----------------------|-------|
| 1997 | 85 | 2009 | 43 |
| 1998 | 78 | 2010 | 25 |
| 1999 | 64 | 2011 (January) | 31 |
| 2000 | 42 | 2012 (December 2011) | 54 |
| 2001 | 52 | 2013 (December 2012) | 44 |
| 2002 | No Count | 2014 | 49 |
| 2003 | 33 | 2015 (December 2014) | 62 |
| 2004 | 31 | 2016 (December 2015) | 64 |
| 2005 | 66 | 2017 (November 2016) | 110 |
| 2006 | 65 | 2018 (December 2017) | 66 |
| 2007 | No Count | 2019 | 106 |
| 2008 | 78 | 2020 (December 2019) | 155 |

Source: MFWP 2020

3.2.1.2 Greater Sage-Grouse

The greater sage-grouse is a sagebrush obligate species. Both PHMA and GHMA are present in the TMA (Table 3-5; BLM 2019c). The MFWP statewide monitoring dataset identifies two active greater sage-grouse leks within the TMA (MFWP 2018). Specific goals for travel management can be found in the Billings Field Office Greater Sage-Grouse Approved Resource Management Plan (BLM 2015b).

Table 3-5. Greater Sage-Grouse Habitat within the TMA

| Habitat Type | Acres | Percentage of TMA |
|--------------|--------|-------------------|
| GHMA | 9,157 | 11 |
| PHMA | 23,950 | 29 |

Source: BLM 2019c

3.2.2 Environmental Consequences

3.2.2.1 Rocky Mountain Bighorn Sheep

The No Action and Proposed Action would result in the continued and increased use of routes that are located within bighorn sheep habitat. Increased recreational use under both alternatives would increase potential impacts to the species and its habitats. Recreational uses impact bighorn sheep through habitat loss and fragmentation, degradation, and noise, limiting their ability to travel freely within and between habitat patches.

Route limitations would restrict motorized and mechanized uses, which would reduce noise and human disturbance in bighorn sheep habitat. Route closures would also allow vegetation to passively restore. Route maintenance within bighorn sheep habitat could have short-term adverse impacts, but would result in long-term benefits to the species due to the reduction in erosion, resource damage and noise from the existing alignment. Table 3-6 presents route designations within bighorn sheep habitat, by alternative.

3.2.2.1.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. A total of 20.7 miles of routes would remain designated as open and 19.1 miles of routes would remain limited to administrative and authorized users within bighorn sheep habitat in the TMA.

3.2.2.1.2 Proposed Action

Under the Proposed Action, open routes within bighorn sheep habitat would be reduced by approximately 4 miles compared to the No Action Alternative. This reduction in open routes would continue to maintain bighorn sheep habitat and protect their population (Shawn Stewart, MFWP, 2020 personal communication).

The route designations under this alternative would generally benefit bighorn sheep through reduced access and human disturbance. Passive restoration of vegetation along closed routes would also improve bighorn sheep habitat and reduce habitat fragmentation.

Table 3-6. Designated Routes within Rocky Mountain Bighorn Sheep Habitat in the TMA

| Designation | No Action Alternative | Proposed Action ¹ |
|---|-----------------------|------------------------------|
| County Road, Highway | 0.0 | 0.0 |
| Open | 20.7 | 16.4 |
| Limited Non-Mechanized | 0.0 | 2.0 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Classes 1-3 | 0.0 | 7.3 |
| Limited Administrative and Authorized Users | 19.1 | 4.8 |

| Designation | No Action Alternative | Proposed Action¹ |
|--------------------|------------------------------|------------------------------------|
| Limited OHV Width | 0.0 | 2.5 |
| Closed | 0.0 | 8.8 |
| Totals | 39.8 | 41.8 |

Source: BLM 2020a

¹Differences in total result from the addition of proposed routes under proposed action. Includes 2.0 miles of non-mechanized proposed new routes

3.2.2.2 Greater Sage-Grouse

The types of impacts to greater sage-grouse and its habitat from route uses include:

- Mortality from collision with vehicles (adults and less mobile young);
- Habitat loss, degradation, and fragmentation;
- Reduced connectivity among habitats and populations (restricting gene flow);
- Decreased nest initiation/success and lower population survival and growth rates resulting from disruption of seasonal movement, brooding, wintering, or lekking activities; and
- Increased susceptibility to disease and predation resulting from habitat fragmentation and loss, and physiological stress induced by noise and human activity.

Both alternatives would result in continued and increased use of routes located within greater sage-grouse habitat. Route use would continue to cause impacts to this species and its habitat. Route closures and limitations would have long-term beneficial effects to the greater sage-grouse and its habitat through reduction of the types of impacts listed above. Tables 3-7 and 3-8 present route designations within greater sage-grouse PHMA and GHMA in the TMA (BLM 2019c). Table 3-9 presents route designations within two miles of an active greater sage-grouse lek (MFWP 2018).

3.2.2.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. Potential impacts to the greater sage-grouse and its habitat under the No Action Alternative would continue and increase. A total of 37.5 miles of routes within PHMA and 15.0 miles within GHMA would be designated as open. In addition, approximately 20.0 miles of open routes and 24.4 miles of routes limited to administrative and authorized users would remain within two miles of an active greater sage-grouse lek. The types of impacts described above would continue and potentially increase as use increases.

Table 3-7. Route Designations in Greater Sage-Grouse PHMA within the TMA

| Designation | No Action Alternative | Proposed Action¹ |
|---|------------------------------|------------------------------------|
| County Road, Highway | 3.6 | 3.6 |
| Open | 37.5 | 40.8 |
| Limited Non-Mechanized | 0.0 | 0.1 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 2.8 |
| Limited Administrative and Authorized Users | 38.1 | 29.9 |
| Limited OHV Width | 0.0 | 0.0 |
| Closed | 0.0 | 3.3 |
| Totals | 79.2 | 80.5 |

Source: BLM 2019c

¹ Includes 1.3 miles of open proposed new routes.

Table 3-8. Route Designations in Greater Sage-Grouse GHMA within the TMA

| Designation | No Action Alternative | Proposed Action¹ |
|---|------------------------------|------------------------------------|
| County Road, Highway | 0.1 | 0.1 |
| Open | 15.0 | 14.5 |
| Limited Non-Mechanized | 0.0 | 0.1 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 3.6 |
| Limited Administrative and Authorized Users | 20.4 | 5.6 |
| Limited OHV Width | 0.0 | 0.0 |
| Closed | 0.0 | 11.6 |
| Totals | 35.5 | 35.6 |

Source: BLM 2019c

¹ Includes 0.1-mile of non-mechanized proposed new routes.

Table 3-9. Route Designations within two miles of an Active Greater Sage-Grouse Lek

| Designation | No Action Alternative | Proposed Action¹ |
|---|------------------------------|------------------------------------|
| County Road, Highway | 0.0 | 0.0 |
| Open | 20.0 | 21.0 |
| Limited Non-Mechanized | 0.0 | 0.4 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 2.5 |

| Designation | No Action Alternative | Proposed Action¹ |
|---|------------------------------|------------------------------------|
| Limited Administrative and Authorized Users | 24.4 | 17.8 |
| Limited OHV Width | 0.0 | 0.0 |
| Closed | 0.0 | 2.8 |
| Totals | 44.4 | 44.5 |

Source: MFWP 2018

¹ Includes 0.1-mile of non-mechanized proposed new routes.

3.2.2.2 Proposed Action

The Proposed Action would include route closures and limitations within greater sage-grouse habitats (Tables 3-7 through 3-9). A total of 3.3 miles of route within PHMA and 1.4 miles of route within GHMA would be closed. These route designations would result in a reduction in the impacts to the species and its habitat described above. Passive restoration would occur on closed routes, which would improve sagebrush habitat in the long-term. In addition, 2.8 miles of route located within two miles of active sage-grouse leks would be closed.

3.3 Cultural Resources

Issue: How would route designation and implementation of the TMP affect cultural resources?

3.3.1 Affected Environment

Cultural resources are locations where humans worked, subsisted, traveled, lived, slept – the whole spectrum of human activity. These resources can be identified through field inventory (survey), historic documentation, and sometimes oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional, cultural, or religious importance to specified social and/or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identification, protection, and utilization for public benefit.

Relevant laws, ordinances, EOs, policies, regulations and agreements other than NEPA include:

- Antiquities Act of 1906 (16 U.S.C. 431–433);
- National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. § 306101 et seq.);
- EO 11593, Protection and Enhancement of the Cultural Environment (May 13, 1971);
- American Indian Religious Freedom Act of 1978 (92 Stat. 469: 42 U.S.C. 1996);
- Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa–470mm);

- Native American Graves Protection and Repatriation Act (NAGPA) of 1990 (25 U.S.C. 3001-3013);
- EO 13007 Indian Sacred Sites (May 24, 1996); and
- Federal Land Policy and Management Act of 1976 (90 Stat. 2743; 43 U.S.C. 1701).

The State of Montana uses “The State Protocol Agreement between the Montana State Director, Bureau of Land Management and the Montana State Historic Preservation Office Regarding the Manner in which the Bureau of Land Management will meet its Responsibilities under the National Historic Preservation Act as Provided for in the National Programmatic Agreement” (BLM 2015c). This agreement outlines implementation of the BLM National Programmatic Agreement (2012).

Archaeologists have documented a long history of human occupation in Montana. The cultural history of the region, which spans approximately 12,000 years, is divided into numerous periods that reflect changing adaptations and lifeways. Many Native American tribes have migrated through or near the TMA in the last several hundred years; however, the Crow are considered to have traditional lands in the vicinity. The Pryor Mountains are sacred to the Crow people and are known as the Arrow Shot Into Rock Mountains. Other recognized tribes in Montana that should be considered for NAGPA consultation include:

- Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation;
- Blackfeet Tribe of the Blackfeet Indian Reservation of Montana;
- Chippewa-Cree Indians of the Rocky Boy's Reservation;
- Confederated Salish and Kootenai Tribes of the Flathead Reservation;
- Fort Belknap Indian Community of the Fort Belknap Reservation of Montana; and
- Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation.

Approximately 19,457 acres (24 percent) of the 80,690 acres of BLM-administered land within the Pryor Mountain TMA has been previously surveyed for cultural resources; 245 miles of existing routes have been inventoried. A previously recorded site was re-evaluated for significance as part of this project. Some of the previous inventory data was outdated and areas where specific projects would be implemented would be assessed for any cultural resource inventory needs. The need for additional inventory would be assessed on a case-by-case basis.

A total of 123 sites have been previously recorded in the TMA. A total of 69 sites have a site type associated with the site. Prehistoric sites include lithic concentrations, tipi rings, rock cairns, hearths or roasting pits, petroglyphs and pictographs, rock shelters, and a surface stone quarry. There are also temporally unaffiliated rock structures. Historic-age sites include a railroad, a road/trail, homesteads/farmsteads, a cribbed log structure, and the Bean Post Office. One site is documented as “other” and 53 of the sites have spatial data but no additional information regarding site type. All sites are have either been determined eligible for the National Register of

Historic Places (NRHP) or have eligibility undetermined or unresolved. All of the previously identified sites that have been found not eligible for the NRHP have been omitted.

3.3.2 Environmental Consequences

As stated in Section 2.6.5, BLM would consult with the SHPO in order to fulfill the process required by Section 106 of the NHPA. The exact nature and extent of this consultation is defined in the PA regarding cultural resources, with additional ongoing consultation with the SHPO. The PA allows for the completion of the identification and evaluation of historic properties, determinations of effect on historic properties, and consultation concerning measures to avoid, minimize, or mitigate any adverse effects across the project area. These activities will be completed after the BiFO releases its Finding of No Significant Impact but prior to approving and implementing any specific activities associated with the Undertaking.

Future revisions to the TMP, the addition of a new trail or facility, reroutes of existing roads, and any new disturbances would require compliance with Section 106 of the NHPA on a case-by-case basis. NRHP-eligible sites discovered along routes during future surveys, after designation of an official route network, may warrant additional route closures to avoid unacceptable impacts to cultural sites.

Routes limited or closed by the Proposed Action would be signed and closed. Closed routes may be barricaded, where feasible, and passively restored. This would allow BLM to better manage and enforce route closures. Although route limitations and closures lower the potential for damage to cultural sites, the risks to cultural resources caused by vehicular traffic and illegal collecting would remain under the No Action and Proposed Actions. Potential impacts would increase with increased recreational use under both alternatives.

In the analyses in this section, a 100-foot-wide buffer surrounding each route is considered to be an area of direct impact, while a 0.25-mile-wide buffer surrounding each route is considered to be an area of indirect impact. Access to sites can present a range of potential impacts, including direct effects (e.g., artifacts and/or features being displaced, broken, or eroded out from route development and use, parking areas, and vehicle pull-off/turnaround areas). Indirect effects include collection and looting; inadvertent damage to sites resulting from off-road driving; and visual, audible, and atmospheric effects that may diminish integrity of setting or feeling. Higher levels of human traffic may pose greater risks to cultural resources. Adaptive management would allow access to be altered to lessen resource impacts.

The proximity of routes to cultural resources can be used as an indicator of the potential direct impacts that the Proposed Action may have on cultural resources in the TMA. To assess direct impacts to cultural resources, Table 3-9 lists mileages of each route designation under the No Action and Proposed Action that intersect or lie within 100 feet and 0.25 mile of previously recorded cultural sites. This includes sites that have been recommended or determined eligible

for listing in the NRHP, and sites that have not had their NRHP-eligibility evaluated or status is unknown.

3.3.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. To assess impacts to cultural resources, Table 3-10 lists mileages of each route designation under the No Action and Proposed Actions that lie within 100 feet or 0.25 mile of previously recorded cultural resource sites.

Table 3-10. Route Designations in Proximity to a Cultural Site

| Designation | No Action Alternative (100 feet) | Proposed Action (100 feet) ¹ | No Action Alternative (0.25 mile) | Proposed Action (0.25 mile) ² |
|---|----------------------------------|---|-----------------------------------|--|
| County Road, Highway, ROW | 1.4 | 1.4 | 3.3 | 3.3 |
| Open | 8.7 | 8.9 | 38.9 | 40.7 |
| Limited Non-Mechanized | 0.0 | 0.3 | 0.0 | 3.0 |
| Limited Non-Motorized | 0.0 | 0.0 | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 0.8 | 0.0 | 5.9 |
| Limited Administrative and Authorized Users | 3.8 | 2.0 | 30.0 | 12.2 |
| Limited OHV Width | 0.0 | 0.0 | 0.0 | 0.9 |
| Closed | 0.0 | 0.7 | 0.0 | 7.3 |
| Totals* | 14.0 | 14.1 | 72.2 | 73.3 |

Source: BLM 2020a

* Discrepancies are due to rounding.

¹includes proposed new routes (0.1-mile non-mechanized, <0.1-mile open)

²includes proposed new routes (0.3-mile non-mechanized, 0.7-mile open)

3.3.2.2 Proposed Action

The Proposed Action would result in fewer direct and indirect impacts to significant or potentially significant cultural resources due to route closures. There would be a slight increase in potential indirect impacts within 0.25 mile of a cultural site. The Water Canyon Trail would be limited to non-motorized use to avoid sensitive cultural resources in the area (Appendix E). The overall potential impact to cultural resources from route designation and implementation of the TMP is anticipated to be minimal. However, potential impacts would increase with increased recreational use. The PA stipulates that when additional sites are documented and previously recorded sites evaluated for the NRHP, an analysis of effects would be completed. Any necessary mitigation would be completed in consultation with the SHPO and Concurring Parties.

3.4 Areas with Special Designations

Issue : How would route designation and implementation of the TMP affect areas with special designations (ACECs and WSRs)?

3.4.1 Affected Environment

3.4.1.1 Areas of Critical Environmental Concern

ACECs are areas where special management attention is needed to protect and prevent damage to important historical, cultural, and scenic values; fish, or wildlife resources; or other natural systems or processes (BLM no date). Managing ACECs to protect and prevent damage to the resources and values for which they were designated is part of BLM’s multiple-use mission. Routes to and within these areas provide important public access for their use and enjoyment.

There are three ACECs designated within the TMA (Table 3-11, Figure 3-3). The smallest, Petroglyph Canyon ACEC (239 acres), is located along the Montana/Wyoming border and was designated in 1999 for its important cultural value. The East Pryor Mountain ACEC (11,008 acres) consists of several non-contiguous tracts that comprise much of the lands in the eastern portion of the TMA adjacent to the Pryor Mountain Wilderness Study Area (WSA). It was designated in 1999 for its scenic, geologic, cultural, paleontological, and biological values. The Pryor Foothills ACEC (2,606 acres) was designated in the 2015 RMP for its significant biological and cultural values. OHV travel is limited to designated routes in the East Pryor Mountain and Pryor Foothills ACECs. Some routes in the Pryor Foothills ACEC are limited to non-motorized use. Petroglyph Canyon ACEC is closed to OHVs. The Petroglyph Trail is proposed as a hiking-only route within Petroglyph Canyon (Appendix E).

Table 3-11. ACECs within the TMA

| ACEC | Acres | Percentage of TMA | Miles of Existing Routes within ACEC |
|--------------------------|--------|-------------------|--------------------------------------|
| East Pryor Mountain ACEC | 11,008 | 14 | 44.1 |
| Petroglyph Canyon ACEC | 239 | < 1 | 0.3 |
| Pryor Foothills ACEC | 2,606 | 3 | 7.3 |

Source: BLM 2018a

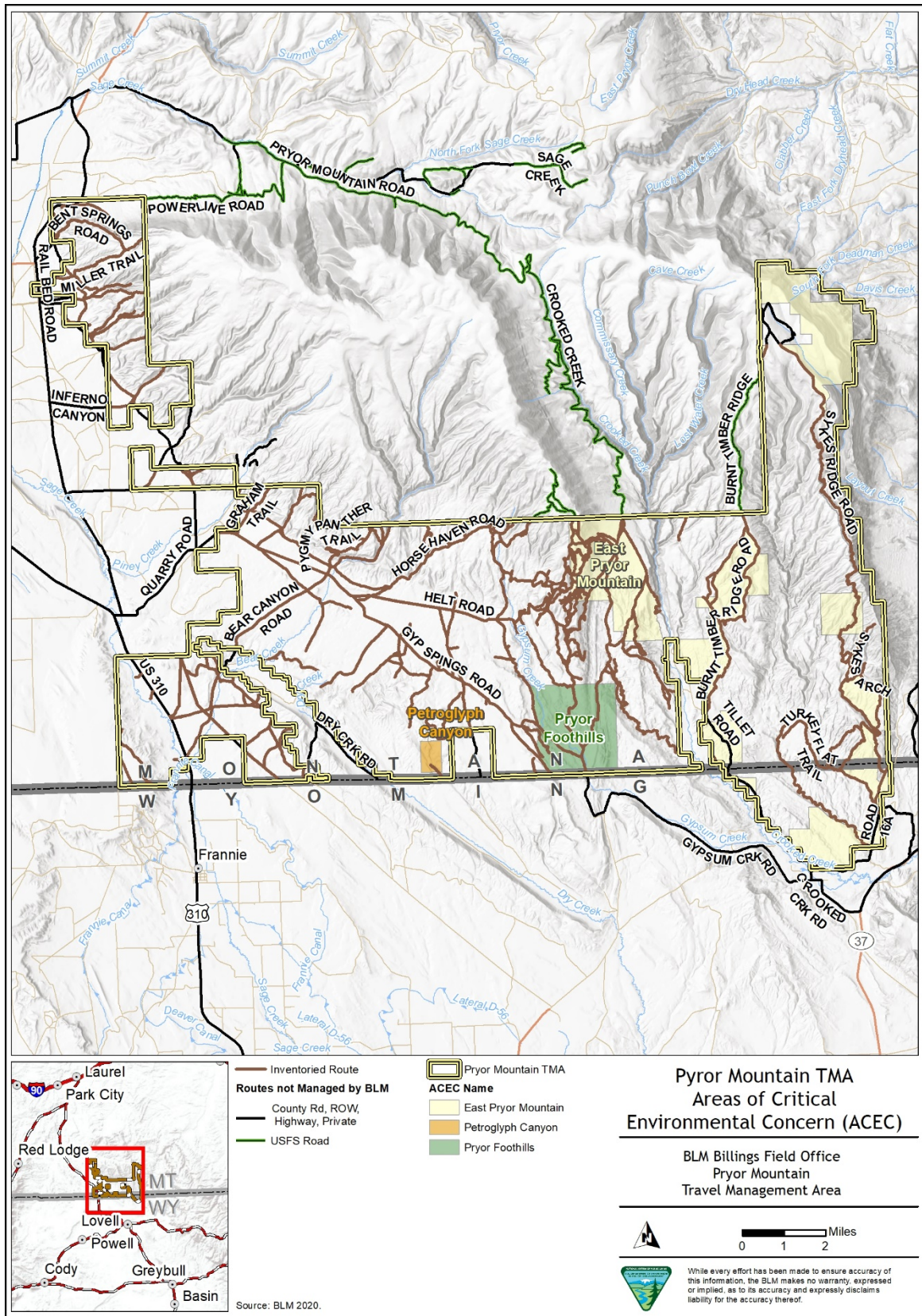


Figure 3-3. ACECs within the TMA

3.4.1.2 Wild and Scenic Rivers

The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287, October 2, 1968) directs Federal agencies to consider potential WSRs in their planning processes. The inventory and study processes determined that two segments of Crooked Creek located within the TMA (3.15 miles total) met the eligibility criteria. The first segment, 1.59 miles of Crooked Creek above the fish barrier, contains free flowing determination, scenic, recreation, fish, and cultural eligibility. The second segment, 1.56 miles of Crooked Creek below the fish barrier, contains free flowing determination, scenic, recreation, and cultural eligibility (BLM 2015a). There are no designated WSR segments in the TMA. Both eligible segments are located within the roadless Burnt Timber Canyon WSA.

3.4.2 Environmental Consequences

3.4.2.1 Areas of Critical Environmental Concern

Designating routes within ACECs in the TMA would enhance visitor experiences and benefit unique natural and cultural resources by limiting public use on some routes to specific sizes of vehicles, limited seasons, or to non-motorized or non-mechanized travel only. Designating routes as non-motorized would decrease soil erosion, re-establish and stabilize vegetation on parts of the route no longer in use (e.g., conversion from two-track to single-track), and reduce impacts to wildlife species and habitats through the removal of full-sized vehicle traffic. Restricting full-sized vehicle travel would also help protect nearby paleontological, cultural, and historic resources from potential collection, degradation, or damage (Section 3.3).

Travel on designated routes would continue to pose a risk of damaging natural and cultural resources in ACECs within the TMA. Routes designated as open would continue to provide public access to ACECs. BLM would provide accurate maps of the available routes in ACECs to users to facilitate visitor enjoyment and compliance with route designations. Table 3-12 presents the route designations within ACECs in the TMA under the No Action and Proposed Action.

3.4.2.1.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. Potential impacts to ACECs would remain the same and potentially increase with increased recreational use.

3.4.2.1.2 Proposed Action

A reduction in open and limited routes would improve the scenic and ecological integrity of the landscape and improve plant and wildlife habitat. In addition, the Proposed Action would result in unique recreation and travel opportunities by balancing non-motorized and motorized uses. The great majority of currently open routes would remain available for motorized uses, while new opportunities would be created for travel along routes limited to non-motorized use. The

non-motorized designation would allow two-track routes to passively restore to single-track routes.

Impacts from routes and route use on various ACEC resources and values are also described in the Section 3.2, Wildlife Resources, and Section 3.3, Cultural Resources. Table 3-12 presents route designations within ACECs under the alternatives. Table 3-12 shows miles of routes bordering or within ACECs.

Table 3-12. Route Designations in ACECs within the TMA, by Alternative

| Designation | No Action Alternative | Proposed Action |
|---|------------------------------|------------------------|
| County Road, Highway | 4.2 | 4.2 |
| Open | 28.6 | 22.0 |
| Limited Non-Mechanized | 0.0 | 0.0 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 7.2 |
| Limited Administrative and Authorized Users | 18.9 | 10.7 |
| Limited OHV Width | 0.0 | 2.3 |
| Closed | 0.0 | 5.1 |
| Totals* | 51.7 | 51.6 |

Source: BLM 2020a

*Discrepancies are due to rounding.

3.4.2.2 Wild and Scenic Rivers

Potential impacts to eligible WSR segments within the TMA from designated routes would be minimal. The nearest roads are located on the boundaries of the Burnt Timber WSA. One of these is the Demijohn Flat Road, which is located approximately 0.25 mile to the west of Crooked Creek. The other route (segments PM 1019 and PM 1022) splits from Demijohn Flat Road and parallels Crooked Creek approximately 0.1 mile to the west. This route is used only for administrative access under both alternatives. Burnt Timber Ridge Road is also in proximity to eligible WSR segments and is located approximately one mile east of Crooked Creek.

3.4.2.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. This alternative would leave approximately 1.5 miles of Demijohn Flat Road open to public use. An additional 1 mile of routes that parallel Crooked Creek along the edge of the Burnt Timber WSA (approximately 0.1 mile west of Crooked Creek) would remain limited to administrative and authorized users. The segment of Demijohn Flat Road that remains open under the No Action Alternative could have indirect impacts to the WSR eligibility criteria of Crooked Creek through continued disturbance associated with full-sized vehicle travel.

3.4.2.2 Proposed Action

The Proposed Action would designate approximately 1.0 mile of Demijohn Flat Road along the edge of Burnt Timber WSA from open to limited to administrative and authorized users. The public would still have non-mechanized access to the area. However, potential indirect impacts to resources such as scenic and cultural eligibility would be reduced by limiting the amount of OHV, e-bike, and bicycle use near the eligible WSR segments.

3.5 Transportation and Access

Issue: How would route designations and implementation of the TMP affect public access?

3.5.1 Affected Environment

The Pryor Mountains TMA extends east from U.S. Highway (Hwy) 310 to Bighorn Canyon National Recreation Area. Most of the access to the TMA is via U.S. Hwy 310, Wyoming State Hwy 37, Rail Bed Road, Crooked Creek Road, and through Custer Gallatin National Forest (Figure 2-1).

A comprehensive route inventory was completed to include all public and permitted routes within the TMA. A total of 245.0 miles of existing routes were identified and evaluated (Table 3-12). Through the evaluation process, 2.0 miles of proposed new route and a 1.7-mile reroutes were identified and added to the network. The route evaluation process included maintenance level, jurisdiction, and proposed use designations. A maintenance level of one through five was considered, with one representing the lowest level of maintenance and five representing the highest. The TMA only includes roads with a maintenance level of one through three and these are managed by either the counties or BLM. A total of 234.9 miles of routes on BLM-administered land and 10.1 miles of County-maintained roads are within the TMA. There are currently no recreation facilities within the TMA.

3.5.2 Environmental Consequences

Table 3-13 presents the route designations under the No Action and Proposed Action. Route designations would not affect BLM ROWs, permitted uses, County or State roads, or other valid existing rights. Restrictions would apply only to motorized and mechanized public access and recreational use. All designated routes would be available for hiking and equestrian uses. Bicycles and other mechanized uses would be permitted on open and limited routes that do not specify no mechanized use. Use of e-bikes would be consistent with existing to rules and regulations or pending updates.

Table 3-13. Route Designations, by Alternative

| Designation | No Action Alternative | Proposed Action¹ |
|---|------------------------------|------------------------------------|
| County Road, Highway, ROW | 10.1 | 10.1 |
| Open | 115.1 | 114.9 |
| Limited Non-Mechanized | 0.0 | 11.0 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 16.8 |
| Limited Administrative and Authorized Users | 119.8 | 62.9 |
| Limited OHV Width | 0.0 | 2.6 |
| Closed | 0.0 | 32.2 |
| Totals* | 245.0 | 250.4 |

Source: BLM 2020a

* Discrepancies are due to rounding.

¹ Includes proposed new routes (3.8 miles non-mechanized, 1.7 miles open).

3.5.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists. Motorized and non-motorized travel, including e-bikes would be allowed on all routes except where not currently permitted. Route proliferation would potentially continue under the No Action since routes would not be designated, and reclaiming and signing of decommissioned routes would not occur.

3.5.2.2 Proposed Action

The Proposed Action includes one proposed reroute as described in Section 2.6 and shown on Figure 2-3. The Stockman Trail would be rerouted to keep the transportation network on BLM-administered land, rather than crossing private land. The Proposed Action would also include the implementation of speed limits, proposed maintenance intensities, education, enforcement, signage, and other TMP components. It would maintain connection to USFS routes.

The Proposed Action would increase opportunities for public access by creating a route system with increased opportunity for non-motorized and non-mechanized users while still maintaining motorized access. It would implement 2.0 miles of proposed new route, 1.7 miles of reroute, designate 11 miles as non-mechanized and 16.8 miles as non-motorized with Class 1-3 e-bikes (Section 2.6 Figure 2-3, and Appendix E). The reroute of the Stockman Trail would ensure continued access by relocating the route off of private lands. Improved signage and enforcement as described in the TMP would benefit all users. Maintaining trails for non-motorized and non-mechanized users would reduce trail crowding and user conflicts.

3.6 Recreation and Visitor Services

Issue: How would route designation and implementation of the TMP affect opportunities for non-motorized and motorized public recreation opportunities and a remote recreational experience?

3.6.1 Affected Environment

BLM-administered lands in the TMA provide a broad spectrum of outdoor recreation opportunities that offer visitors a range of choices. Recreational opportunities are offered to the public on all BLM-administered lands in the TMA where legal access exists. Primary activities include hiking, camping, picnicking, fishing, OHV riding, hunting, target shooting, and wildlife and landscape viewing. The TMA is part of a larger complex of Federal lands, including Custer National Forest (managed by the USFS) and Bighorn Canyon National Recreation Area (managed by the NPS), both of which are adjacent to the TMA. These lands draw visitors from the region and the nation. Because of its proximity to other Federal lands and access to a variety of recreational opportunities, the TMA receives more visitor use than other BLM-administered lands in the BiFO. Visitor use has been increasing in the Pryor Mountains at a rate of 3 percent per year. In 3 Corners, Burnt Timber, and Sykes areas visitation increased five percent from 2017 to 2018 and twelve percent from 2018 to 2019 based on traffic counters in the area (BLM 2020b). Routes are cooperatively managed with other agencies (e.g., NPS, USFS) and they connect with the remainder of the travel network in the BiFO.

In the next ten years, population across the U.S. is projected to increase: approximately 3.5 percent from 2020 to 2025 and another 3.3 percent from 2025 to 2030 (USCB 2017). The population of Carbon County, Montana in 2018 is estimated to be 10,714 individuals, a growth of approximately 6.5 percent since 2010 (MCEC 2020). Big Horn County, Wyoming had an estimated population of 11,877 in 2018, an increase of approximately 1.8 percent from 2010 (WDAI 2020).

The Outdoor Industry Association tracks and produces reports that discuss outdoor recreation statistics across the country. The 2019 Outdoor Participation Report demonstrates a trend towards increased participation in recreation and number of annual outdoor outings per individual across the U.S. – especially in youth and young adult demographics (OIA 2019). Trail-related activities – such as road, mountain, and BMX biking; running, trail running, and hiking – are among the most popular for recreation participants (OIA 2019). In Montana specifically, it has been shown that approximately 81 percent of residents participate in outdoor recreation annually, and that they are “more likely to participate in day hiking and wildlife viewing than the average American” (OIA 2017). Access to public lands is a contributor to these recreation rates and an attraction for repeat visitors (Nickerson et al. 2019).

Given projected population increases and existing participation rates it is assumed that visitor use in the TMA would also increase accordingly.

3.6.1.1 Recreation Management Areas

A Special Recreation Management Area (SRMA) is an area with a commitment to provide specific recreational activities and opportunities. These areas require a higher level of recreation management. Each SRMA has a distinct primary set of objectives, recreation opportunities, and character settings, and a corresponding and distinguishing management strategy. The entire TMA is designated as a SRMA (BLM 2015). The Pryor Mountain SRMA is described in detail in Appendix N of the Proposed RMP/EIS. The objective of the SRMA is to manage the lands in primitive and natural landscapes concurrent with other management priorities to provide wildlife habitat; protect historic, cultural, and scenic values; balance the widest range of beneficial uses with the least resource degradation possible without risking health and safety; and provide dispersed recreation experiences. The northwest portion of the TMA is closed to target shooting seasonally due to its proximity to other Federal public lands and facilities.

BiFO's visitation data for the Pryor Mountains for 2018 (BLM 2018b) shows 17,496 visitors. In 2017, there were 16,643 visitors. These visitation levels reflect the area's close proximity to urban areas and the range of recreation activities and experiences offered. Viewing the wild horse herd is one of the Pryor Mountains' largest draws. Visitation to the area is especially heavy during late spring when foals are born and through the summer months when horses are in the high open meadows. Other recreation opportunities include hiking, backcountry camping, and wildlife viewing. Other seasonal activities include upland bird and big game hunting, cross country skiing, and snowmobiling. Motorized use is limited to designated roads. A historic cabin is located off of Sykes Ridge Road, which receives a lot of day use visits. Additionally, there are numerous caves that attract recreational users, however, no caves within the TMA are accessible to the public by road.

3.6.1.2 E-bikes

Riding e-bikes is a relatively new activity in the TMA and it is gaining in popularity among a variety of types of users, including adaptive bicycle users, the elderly, and youth. E-bikes demonstrate an advancement in technology that has the potential to increase access to recreation opportunities and areas for a variety of users. They may provide a new experience for some users who would otherwise not have the opportunity to participate. While e-bikes can be found in urban settings, development of e-mountain bikes has enabled users to access more routes with dirt, rock, or gravel surfaces.

Three classes of e-bikes are currently recognized:

- Class 1: E-bikes that are equipped with a motor that only provides assistance when the rider is pedaling and ceases to provide assistance when the speed of the bicycle reaches 20 miles per hour (mph);

- Class 2: E-bikes that have a motor that in addition to pedal assistance, can propel the bicycle without pedaling. This propulsion and pedal assistance ceases to provide assistance when the speed of the bicycle reaches 20 mph; and
- Class 3: E-bikes that have a motor that only provides assistance when the rider is pedaling and ceases to provide assistance when the speed of the bicycle reaches 28 mph.

The Federal Land Policy Management Act (FLPMA) provided the BLM its multiple-use directive (BLM 1976). For public land management, this means resources and land uses must be utilized and balanced in a way that provides for the needs of the public. As recreation evolves and uses change, adaptive management is needed to maintain and support this multiple use directive. The introduction of e-bikes represents a recreational public need, which is to be balanced with resource preservation and conservation. In addition, e-bike riders represent a new user group that seeks to recreate on the same trails as motorized enthusiasts, equestrian users, hikers, and traditional mountain bikers. Table 3.14 presents proposed e-bike status under the No Action and Proposed Action. See Section 2.6.1 for more discussion on current and future management of e-bike use in the TMA.

Table 3-14. Proposed E-bike Status under the Alternatives

| Designation | No Action Alternative Mileage | No Action Alternative E-bike Status Classes 1, 2, and 3 | Proposed Action Mileage¹ | Proposed Action E-bike Status Classes 1, 2, and 3 |
|--|--------------------------------------|--|--|--|
| County Road, Highway, ROW | 10.1 | N/A | 10.1 | N/A |
| Closed to OHV use | 0.0 | N/A | 32.2 | Not Allowed |
| Limited Non-Mechanized | 0.0 | N/A | 11.0 | Not Allowed |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | N/A | 16.8 | Allowed |
| Limited to Administrative and Authorized Users | 119.8 | N/A | 62.9 | Not Allowed (unless e-bike user has administrative and authorized access to the route) |
| Limited Width OHV | 0.0 | N/A | 2.6 | Allowed |
| Open | 115.1 | N/A | 114.9 | Allowed |

Source: BLM 2020a

* Discrepancies are due to rounding.

¹ Includes proposed new routes (3.8 miles non-mechanized, 1.7 miles open).

N/A – Not Applicable

3.6.2 Environmental Consequences

The public lands administered by the BLM provide many of the recreational and tourism opportunities in the TMA, the BiFO, and the region. All current recreational activities would still be allowed throughout the TMA on designated and permitted routes. There is a trend shifting from more primitive to more developed (rural) experiences as populations grow and motorized and mechanized recreation becomes more popular and accessible. As outdoor recreational use increases on public lands, the demand for developed recreation sites would increase accordingly.

3.6.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. All current recreational activities would continue, and existing route density of approximately 1.9 miles of route per square mile of BLM-administered land in the TMA would persist in the TMA. All designated routes would remain available for non-motorized and non-mechanized activities such as horseback riding, hiking, and game retrieval. However, the No Action Alternative would not provide routes with limitations other than for non-motorized or administrative and authorized uses. In addition, this alternative would not include implementation measures such as reroutes, improved signage, monitoring, or mitigation. Therefore, this alternative would not improve the overall recreational setting or individual experience.

3.6.2.2 Proposed Action

The Proposed Action provides a balanced recreation system for the long-term sustainable management of recreation trails and other resources. Recreation opportunities would be improved for all types of users. User conflicts would be reduced by providing some segregated routes that allow pedestrian and equestrian users to recreate on routes that are not open to motorized or mechanized uses. This alternative includes reroutes to improve public safety, access, and resource issues. Open routes are distributed throughout the TMA to provide a complete network of recreational opportunities, including recreational loops for motorized recreation. The 32.2 miles of routes designated as closed under the Proposed Action do not add to the recreational experience and primarily consist of redundant routes, lack connectivity, or adversely impact soil erosion or special status species. The closure of these routes would reduce open and limited designated route density to 1.7 miles of route per square mile of BLM-administered land. With a more purposeful network of routes and improved connectivity, this alternative would benefit a wide variety of recreationists. A total of 22.2 miles out of the 32.2 miles of closed routes have been unused and are reclaiming. These routes would also be designated as closed under the Proposed Action.

Recreation opportunities would increase for multiple types of users. Reroutes and route designations are explained in detail in Section 2.6, Proposed Action. The designation of routes as

limited to non-motorized and limited to non-mechanized use would benefit those seeking a more primitive recreational experience.

3.7 Wilderness Characteristics

Issue: How would route designations and implementation of the TMP affect wilderness characteristics?

3.7.1 Affected Environment

3.7.1.1 Wilderness Study Areas (WSAs)

There are no designated wilderness areas in the TMA. There are WSAs within the TMA, which are managed according to the Wilderness Act of 1964 until Congress acts on their designation. BLM is currently managing WSAs in accordance with BLM Manual 6330 (BLM 2012). There are no motorized or mechanized routes within WSAs. Any routes within WSAs are administrative routes. Motorized or mechanized routes are only located on the boundaries of WSAs. WSAs must have the following characteristics and often contain additional special qualities such as significant ecological, geological, educational, historical, scientific, and scenic values (BLM 2015a):

- Size - Public lands that are roadless and at least 5,000 acres in area; or areas less than 5,000 acres in area in association with contiguous roadless lands managed by another agency (in the case of the Big Horn Tack-On WSA); or that can be practicably managed to keep those characteristics in an unimpaired condition (in the case of the Burnt Timber WSA).
- Naturalness - Generally appears to have been impacted primarily by the forces of nature.
- Opportunities - Provides outstanding opportunities for solitude or primitive and unconfined types of recreation.

There are three WSAs located in the TMA (Table 3-15, Figure 3-4).

Table 3-15. Wilderness Study Areas within the TMA

| Wilderness Study Areas | Acres | Percentage of TMA |
|------------------------|---------------|-------------------|
| Big Horn Tack-On WSA | 2,694 | 3 |
| Burnt Timber WSA | 3,515 | 4 |
| Pryor Mountain WSA | 15,647 | 19 |
| Total | 21,856 | 26 |

Source: BLM 2018c

3.7.1.1.1 Big Horn Tack-On WSA

The Big Horn Tack-On WSA is a narrow strip of land approximately nine miles long and less than 0.5 mile wide, that includes 2,470 acres in Montana and 80 acres in Wyoming. The WSA is located between Sykes Ridge Road to the west and the Bighorn Canyon National Recreation Area in Wyoming to the east. This WSA is primarily in a natural state with a few dispersed, but fairly well-screened, human intrusions consisting of uranium exploration pits, a wild horse trap in the north along the west boundary road, three routes and a perimeter route, and a power line in the southeast (BLM 2015a).

3.7.1.1.2 Burnt Timber WSA

The Burnt Timber WSA encompasses 3,515 acres in an extremely rugged and isolated portion of Crooked Creek Canyon just south of the Custer Gallatin National Forest, which has remained relatively free of modern human influences. The WSA is predominantly natural and offers outstanding opportunities for solitude and primitive recreation. The major drainage, Crooked Creek, supports a genetically pure strain of native cutthroat trout (BLM 2015a).

3.7.1.1.3 Pryor Mountain WSA

The Pryor Mountain WSA encompasses 15,647 acres and contains some of the most rugged, isolated portions of the Pryor Mountains. The wide expanses and topographic screening in this area offer outstanding wilderness values. Human activity is well-distributed throughout the WSA. Vegetation and topographic screening significantly limit any detracting from the WSA's extensive natural setting (BLM 2015a). A total of 4,352 acres of the Pryor Mountain WSA are located in Big Horn County, Wyoming.

All routes located within WSAs in the TMA are designated and managed as limited to non-mechanized use, or as limited to administrative and authorized users for access to rangeland improvements or existing facilities.

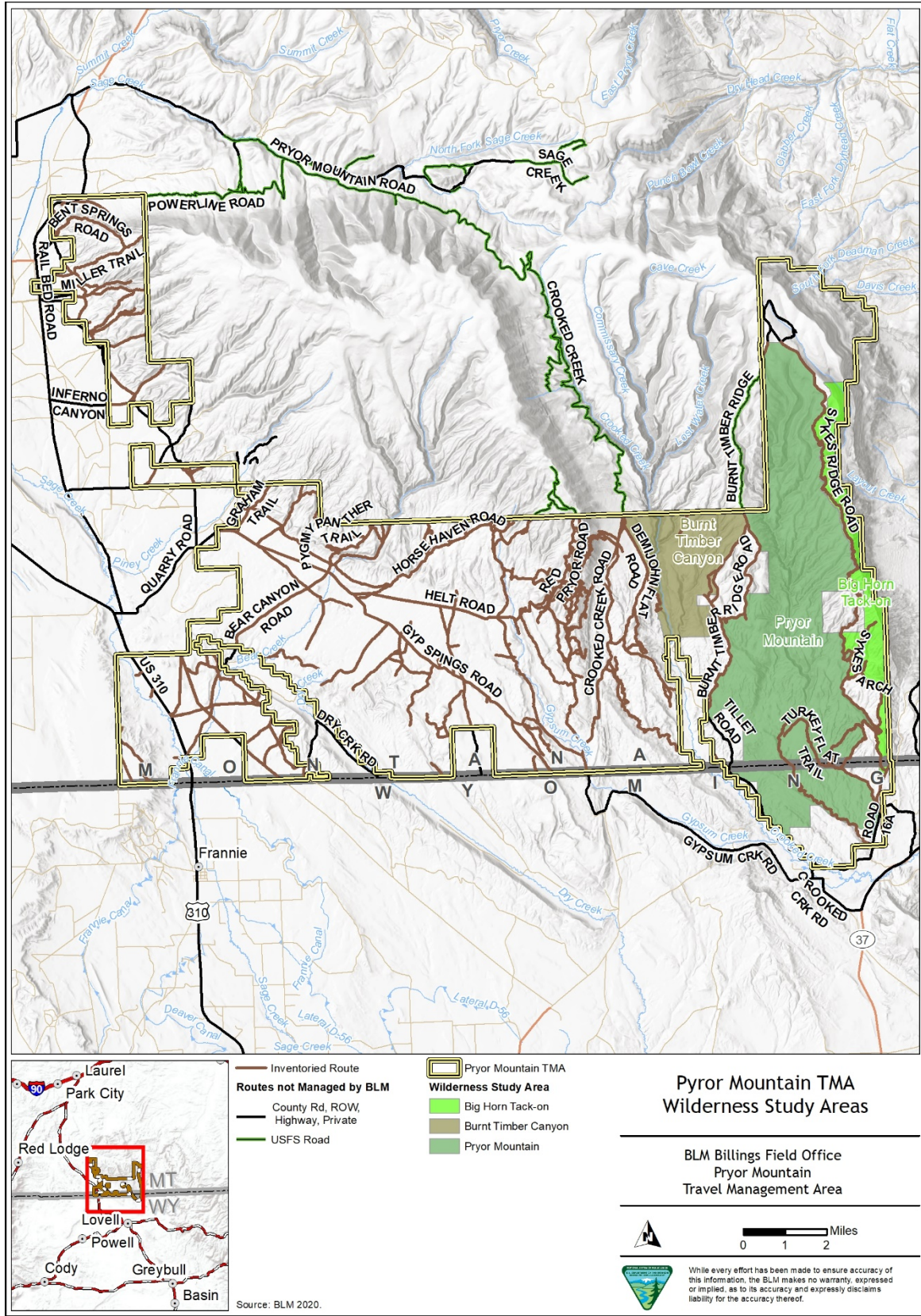


Figure 3-4. WSAs in the TMA

3.7.1.2 Lands with Wilderness Characteristics

In addition to the three managed WSAs, there are two units of non-WSA lands with wilderness characteristics within the TMA. Non-WSA lands with wilderness characteristics are those that have been inventoried and reviewed by the BLM Interdisciplinary Team (IDT) to meet the criteria of BLM Manual 6310. They have the appearance of naturalness and outstanding opportunities for solitude or primitive recreation and encompass an area of 5,000 acres, or areas less than 5,000 acres that are contiguous to designated wilderness or WSAs (BLM 2015a). The Pryor Mountain Unit encompasses 5,428 acres and includes most of the lands in the eastern portion of the TMA adjacent to the Pryor Mountain WSA. The Burnt Timber Unit encompasses 6,075 acres and includes most of the lands adjacent to the Burnt Timber WSA. Each unit accounts for seven percent of the TMA. OHV, mountain bike, and e-bike use in lands with wilderness characteristics would be limited to designated routes.

3.7.2 Environmental Consequences

3.7.2.1 Wilderness Study Areas

BLM currently manages WSAs per the Wilderness Study Areas manual 6330 (BLM 2012). Motorized and mechanized travel is not currently permitted in WSAs except authorized uses on routes designated as Limited to Administrative and Authorized Users. These routes are necessary to manage guzzlers and range improvements. Motorized routes exist on the boundaries of WSAs, but none are within them. Table 3-15 shows the miles of designated routes in WSAs for both alternatives.

Providing a designated travel network and updated maps for public use within WSAs would improve the quiet visitor experience and protect resources and wilderness qualities. Routes designated as closed or limited within the WSAs would likely experience an improvement in biological function and aesthetics for visitors. Designating non-motorized and non-mechanized routes within WSAs would increase opportunities for primitive and quiet recreation.

3.7.2.1.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. Under the No Action Alternative, no new road construction or route designation changes from ‘primitive’ to ‘maintained’ would occur or impact the characteristics of WSAs within the TMA. The 28.3 miles of existing open routes would remain unchanged (Table 3-16).

There would be no beneficial effects to WSAs or visitors from improved management actions, as described in the TMP (Appendix B).

3.7.2.1.2 Proposed Action

The Proposed Action would designate 2.0 miles of routes as non-mechanized within WSAs (Table 3-16). The non-mechanized designation would provide enhanced opportunities for primitive and quiet recreational experiences. Wildlife species would benefit from limitations on motorized use and route closures, which would further enhance naturalness and wilderness experiences in the WSAs. Table 3-16 presents miles of routes bordering or within WSAs. Most routes make up the borders of these areas, approximately 10.5 miles of the limited to administrative routes are within the WSAs.

Table 3-16. Route Designations in WSAs within the TMA

| Designation | No Action Alternative (miles) | Proposed Action (miles)¹ |
|---|--------------------------------------|--|
| County Road, Highway | 1.1 ² | 1.1 ² |
| Open | 15.0 ² | 14.3 ² |
| Limited Non-Mechanized | 0.0 | 2.0 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 0.0 |
| Limited Administrative and Authorized Users | 12.2 ³ | 12.9 ³ |
| Limited OHV Width | 0.0 | 0.0 |
| Closed | 0.0 | 0.0 |
| Totals | 28.3 | 30.3 |

Source: BLM 2020a

¹ Includes 2.0 miles of non-mechanized proposed new routes.

² Routes border but do not enter WSAs.

³ Mileage include routes bordering or within WSA.

3.7.2.2 *Lands with Wilderness Characteristics*

Managing for wilderness values is part of the BLM’s multiple-use mission. Similar to the impacts described for WSAs, formal designation of the travel network would benefit inventoried wilderness characteristics, such as naturalness and outstanding opportunities for solitude and primitive recreational experiences. These benefits would result from concentrating motorized use on routes designated as open and enhancing opportunities for primitive and quiet recreation on routes designated specifically for non-motorized use.

There are no newly proposed roads or route designation changes from ‘primitive’ to ‘maintained’ within any areas that contain wilderness characteristics. Table 3-17 presents miles of routes bordering or within lands with wilderness characteristics. Most routes make up the borders of these areas, approximately 1.3 miles of the limited to administrative routes are within the lands with wilderness characteristics.

Table 3-17. Route Designations in Lands with Wilderness Characteristics, by Alternative

| Designation | No Action Alternative | Proposed Action |
|---|-----------------------|------------------|
| County Road, Highway | 1.8 ¹ | 1.8 ¹ |
| Open | 11.6 ¹ | 9.2 ¹ |
| Limited Non-Mechanized | 0.0 | 0.0 |
| Limited Non-Motorized | 0.0 | 0.0 |
| Limited Non-Motorized and E-Bikes Class 1-3 | 0.0 | 0 |
| Limited Administrative and Authorized Users | 17.6 ² | 5.4 ² |
| Limited OHV Width | 0.0 | 0.0 |
| Closed | 0.0 | 14.6 |
| Totals³ | 31.0 | 30.9 |

Source: BLM 2018d

¹ Routes border but do not enter lands with wilderness characteristics.

² Mileage includes routes bordering or lands with wilderness characteristics.

³ Discrepancies are due to rounding.

3.7.2.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route use is expected to increase. There would be no impacts to lands with wilderness characteristics from improved management actions, as described in the TMP (Appendix B).

3.7.2.2.2 Proposed Action

The Proposed Action would reduce routes designated as open and close or place limitations on other routes (Table 3-16). Route closures would allow vegetation to passively restore and soil conditions to improve, which would enhance naturalness and scenic qualities of these areas.

3.8 Invasive, Non-native Species

Issue: How would route designation and implementation of the TMP affect the distribution and spread of invasive, non-native species?

3.8.1 Affected Environment

Invasive, non-native species and noxious weeds are highly competitive and often out-compete native vegetation, especially on disturbed soils such as roadsides and other disturbed areas. Once established, invasive and noxious weeds decrease wildlife habitat value, reduce livestock range productivity, and increase management costs (BLM 2015a). Invasive, non-native species are generally unsightly and detract from user satisfaction, visual aesthetics, and naturalness.

The State of Montana lists and prioritizes 35 state designated noxious weeds (Montana Department of Agriculture 2017). Of those:

- Priority 1A: Four species, not present or with a very limited presence in Montana, management requires eradication if detected, education and prevention;
- Priority 1B: Five species, limited presence in Montana, management requires eradication or containment and education;
- Priority 2A: Nine species, common in isolated areas of Montana, management requires eradication or containment where less abundant; and
- Priority 2B: 17 species, abundant in Montana and widespread in many counties, management requires eradication and containment where less abundant.

Invasive, non-native plant species in the TMA are managed according to the cooperative Integrated Weed Management program that was developed for all 434,321 acres of BLM-administered lands in the BiFO (BLM 2017). The 2017 PA for weed management identifies appropriate standard operating procedures; analyzes impacts of the various treatment practices; and provides guidance for monitoring, mitigation and public education. Under the PA, the BiFO cooperates with County weed boards and other bordering agencies such as the USFS and NPS on management treatment methods that include: biological control, chemical control, and physical control (BLM 2015a, BLM 2017). Most of the weed infestations in the TMA occur along the roads, where the BLM and Carbon County regularly patrol and treat as needed.

3.8.2 Environmental Consequences

Weeds are naturally spread by water, wind, birds, and other animals, but can also be spread by people and/or vehicles. Seeds can be carried in vehicle radiators, undercarriages, or tire treads or attach to clothing, shoes, or equipment. Areas where soil and vegetation have been disturbed are especially susceptible to the establishment of invasive, non-native species. Additionally, routes designated as open or limited would continue to be disturbed by vehicle and bicycle traffic (see Section 3.1 Soils), which would assist in the propagation of invasive species. Routes designated as closed would be susceptible to invasive, non-native species establishment initially, but native species would increase as soils and site conditions improve. Routes designated as limited would be less susceptible to invasive, non-native species establishment than open routes. This reduced susceptibility is due to a decrease in the frequency of use, number or size of vehicles permitted to use the route, or a change from motorized to non-motorized use. Under the No Action and Proposed Action, invasive, non-native species would be actively treated using methods provided by the Integrated Weed Management PA (BLM 2017).

3.8.2.1 No Action Alternative

Under the No Action Alternative, route access would remain as it currently exists and route usage is expected to increase. Travel through existing weed infestations by recreationists and other users would continue to pose a risk of distributing seed and plant parts in currently

uninfested areas. The No Action Alternative would not result in any substantial access changes within the TMA and current noxious weed infestations would continue and potentially increase.

3.8.2.2 Proposed Action

Under the Proposed Action, approximately 32.2 miles of routes would be closed to motorized use. Route closures alone do not necessarily improve noxious weed conditions. However, it is anticipated that closed routes would naturally revegetate with native plants and weed concentrations would diminish along closed routes with treatment efforts. Limited routes would continue to receive use, resulting in the potential for the introduction of seed or plant parts to uninfested areas via shoes, clothing, or equipment. However, the level of disturbance on limited routes would be reduced and conditions would improve as routes recover from full-sized vehicle disturbance to single-track routes.

4 CUMULATIVE EFFECTS ANALYSIS

4.1 Introduction

Cumulative effects are direct and indirect incremental effects from implementation of the alternatives, when added to other past, present, and reasonably foreseeable future actions (40 CFR Part 1508.7). Past activities are effects that are still present on the landscape. Future activities are those reasonably foreseeable future actions that may add to cumulative and social effects on the environment.

Cumulative impacts usually occur when a relationship exists between a proposed alternative and other actions that have, or are expected to occur in a similar location, time period, or involve similar actions. It is anticipated that the TMP for the Pryor Mountains TMA will be in effect for at least ten years following approval. The following analyses consider the Cumulative Impact Analysis Area (CIAA) and past, present, and reasonably foreseeable future actions that may cumulatively contribute to impacts for each resource or issue.

4.2 Physical and Temporal Boundaries of Cumulative Impacts

The BiFO boundary was used to identify past, present, and reasonably foreseeable future actions that may have a cumulative impact when considered with the TMP. The temporal boundary for the No Action Alternative is not defined. This alternative would be in effect until such time as a different alternative is approved and implemented by BLM. The temporal boundary for the Proposed Action is generally ten years but can extend beyond depending on circumstances.

4.3 Past, Present, and Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions are those actions for which there are existing decisions, funding, formal proposals, or that are probable to occur based on known opportunities or trends. Reasonably foreseeable future actions considered within the CIAA include the Pryor Mountain Wind Farm Project (currently under construction), bentonite mining in the area, a potential gypsum mine, as well as additional uses and activities that would cumulatively affect the resources analyzed in the EA including: livestock grazing and ongoing agricultural uses, wildland fire suppression, wildland and prescribed fire, fuels reduction, habitat enhancement and vegetation treatments, special designations, mineral development and exploration, oil and gas mining and operations, hunting, ROWs, recreational uses, and residential and urban development near the TMA. The use of OHVs, mountain bikes, and e-bikes is expected to increase, leading to an increase in cumulative impacts to resources from these uses. Non-mechanized recreation (hiking and equestrian uses) is also expected to increase in the TMA.

The current and proposed transportation network also affects the resources analyzed in this EA. The TMP (Appendix B) would help to address the ongoing process of resource degradation with regard to motorized and mechanized use, which, if not regulated, could have long-term impacts.

4.4 Cumulative Impacts Common to Multiple Resources

Cumulative impacts associated with the No Action and Modified Proposed alternatives would be similar for several resources, specifically: soil resources, wildlife species (Rocky Mountain bighorn sheep and greater sage-grouse), and invasive, non-native species. Cumulative impacts would be expected to increase with implementation of the No Action alternative as recreational use and other uses associated with travel on roads within and surrounding the TMA increases, impacting resources and causing an increase in conflicts among users. Conversely, adverse cumulative impacts would be reduced from current conditions with implementation of the Proposed Action as routes are closed or limited through the travel management process. Incremental beneficial impacts would result from designation and implementation of a comprehensive travel network, while minimizing effects on sensitive resources. Construction of the Pryor Mountain Wind Project is expected to be largely completed by the end of 2020; however, implementation of the Proposed Action would contribute beneficially to the long-term management of travel within the TMA and therefore potentially help offset anticipated transportation impacts from the wind project and other uses of roads in areas surrounding the TMA.

4.5 Soils

Impacts to soil resources within the TMA due to implementation of the TMP would be primarily beneficial compared to the No Action Alternative. Soil erosion from projects that occur outside the TMA but within the CIAA, could add to soil erosion or loss of topsoil within the TMA, particularly in areas already prone to erosion. Past and existing actions that affect soil compaction, stability, and quality include livestock grazing, mineral development, ROWs, and recreational OHV use. Reasonably foreseeable future actions within the TMA include construction and maintenance of new roads, improvement and maintenance of existing roads, potential mining projects in the area, ROWs (such as powerlines and pipelines), and range improvements. Implementation of the TMP would contribute only incremental cumulative impacts or even reduce adverse cumulative impacts to soils through route designation and implementation of monitoring to ensure that the routes are being used as intended. The No Action alternative would continue use within the TMA without implementation of a travel network, resulting in route proliferation and additional pressure on resources within the TMA.

4.6 Wildlife (Rocky Mountain Bighorn Sheep and Greater Sage-Grouse)

The designation of routes as closed allows for rehabilitation of surface disturbances; therefore, the Proposed Action would reduce disturbance to wildlife habitat compared to the No Action Alternative. Past and present actions such as livestock grazing and the current transportation network have fragmented, degraded and removed wildlife habitat, and caused disturbance through noise and human activity. Reasonable foreseeable future actions such as new roads, potential mining projects in the area, ROWs (e.g., powerlines and pipelines), and range

improvements would contribute cumulative impacts to bighorn sheep and greater sage-grouse and their habitat through vegetation removal and surface disturbance. However, designation of a route system under the Proposed Action, and other BLM travel management planning in the CIAA, would reduce existing levels of disturbance and habitat fragmentation and loss by closing or limiting route use and restoring previous disturbance. Management of designated routes would improve habitat by maintaining proper route width and reducing impacts to vegetation. Seasonal route closures under the Proposed Action would benefit bighorn sheep and greater sage-grouse. Habitat loss, degradation, and fragmentation would be decreased when routes are closed or use is limited.

4.7 Cultural Resources

Past, current, and future use of the TMA for recreation, ranching, hunting, and vegetation management have negligible impacts on cultural resources within the CIAA. In the past, main impacts to cultural resources were due to route proliferation, which would continue under the No Action Alternative. Implementing the Proposed Action should reduce route proliferation. All other reasonably foreseeable future actions would require cultural inventories and any anticipated impacts would be reviewed at that time. Implementation of the Proposed Action would reduce these impacts and any cumulative effects would be negligible.

4.8 Transportation and Access

Past, present, and reasonably foreseeable future actions that may impact the transportation network would include new road construction, ROWs, and range improvements, which would create new routes within the TMA. In general, new routes created for projects in the TMA would be temporary routes or limited to authorized users. These routes would be closed and decommissioned after the project is complete. Similarly, temporary routes may be created for livestock grazing management and would be subject to the grazing permit requirements. Cumulative impacts to access and transportation from implementation of the Proposed Project are expected to be negligible, with benefits to users from maintenance of a comprehensive travel network.

4.9 Recreation and Visitor Services

Past, present, and reasonably foreseeable future actions such as new road construction within the TMA would change landscape characteristics, existing conditions on transportation systems, and wildlife viewing potential, which would contribute to an overall change in the setting for recreation users. Implementation of the Proposed Action would enhance the recreation experience and would not result in any adverse cumulative impacts. Continued route proliferation and conflicting uses within the TMA under the No Action Alternative could result in impacts to recreation when considered in the context of other projects and uses.

4.10 Invasive, Non-native Species

Past and present activities such as livestock grazing, mineral development, ROWs and recreational OHV use have impacted vegetative cover within the TMA. Impacts from the Proposed Action would be reduced from current conditions as routes are closed through the travel management planning process. Reasonably foreseeable future actions within the TMA include construction and maintenance of new roads, improvement and maintenance of existing roads on public lands, potential mining projects in the area, ROWs (e.g., powerlines and pipelines), and range improvements. During construction, vegetation would be cleared, mowed, or trampled. The BLM has BMPs and stipulations to reduce impacts to vegetation from reasonably foreseeable future actions. Implementation of the Proposed Action would reduce cumulative impacts resulting from these activities, while the No Action Alternative would result in continued pressure on resources.

5 LIST OF PREPARERS

The table below shows all BLM staff and Logan Simpson staff that were involved and participated in scoping, route evaluation, and preparation of the TMP and EA. Some of the individuals listed in each table no longer work in those positions; titles listed are the individual's position at the time of their involvement, as noted.

Table 5-1. List of Preparers

| Name | Organization | Role |
|--------------------|---------------------|--|
| Jennifer Alexander | BLM (BiFO) | Project Contact, Outdoor Recreation Specialist |
| Jennifer Macy | BLM (BiFO) | Archaeologist, Environmental Coordinator |
| David Lefevre | BLM (BiFO) | Field Office Manager |
| Shane Trautner | BLM (BiFO) | Range, Vegetation, Soil Resources Specialist |
| Jason Sprung | BLM (BiFO) | GIS Lead |
| Larry Padden | BLM (BiFO) | Natural Resource Specialist |
| Paul Morey | BLM (BiFO) | Wildlife and Resources Specialist |
| Stacie Thompson | BLM (BiFO) | Range Management Specialist |
| Bruce Meighen | Logan Simpson | Contract Manager |
| Tom Keith | Logan Simpson | Senior NEPA Specialist |
| Erin Bibeau | Logan Simpson | Project Manager/Senior Environmental Planner |
| Kristina Kachur | Logan Simpson | Environmental Planner, Recreation Specialist |
| Julie Capp | Logan Simpson | Environmental Planner, Senior Wildlife Biologist |
| Andrew Grinstead | Logan Simpson | Environmental Planner, Vegetation Specialist |
| Casey Smith | Logan Simpson | GIS Lead |
| Brian Taylor | Logan Simpson | GIS Specialist |